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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549**

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**FORM 20-F**

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(Mark One)

REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR (g) OF THE SECURITIES EXCHANGE ACT OF 1934

**OR**

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2023.

**OR**

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

**OR**

SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Date of event requiring this shell company report \_\_\_\_\_

For the transition period from \_\_\_\_\_ to \_\_\_\_\_

**Commission file number: 001-35729**

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**JOYY INC.**

(Exact name of Registrant as specified in its charter)

N/A

(Translation of Registrant's name into English)

**Cayman Islands**

(Jurisdiction of incorporation or organization)

**30 Pasir Panjang Road #15-31A Mapletree Business City,  
Singapore 117440**

(Address of principal executive offices)

**David Xueling Li,**

**Chief Executive Officer,**

**Tel: +65 63519330, E-mail: lxl@joyy.com,**

**30 Pasir Panjang Road #15-31A Mapletree Business City,  
Singapore 117440**

(Name, Telephone, E-mail and/or Facsimile number and Address of Company Contact Person)

Securities registered or to be registered pursuant to Section 12(b) of the Act:

<u>Title of Each Class</u>	<u>Trading symbol(s)</u>	<u>Name of Exchange on Which Registered</u>
American depositary shares (each representing 20 Class A common shares, par value US\$0.00001 per share)	YY	The Nasdaq Stock Market LLC
Class A common shares, par value US\$0.00001 per share*		The Nasdaq Stock Market LLC

\* Not for trading, but only in connection with the listing on The Nasdaq Stock Market LLC of the American depositary shares ("ADSs").

**Securities registered or to be registered pursuant to Section 12(g) of the Act:**

None

(Title of Class)

**Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act:**

None

(Title of Class)

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Indicate the number of outstanding shares of each of the Issuer’s classes of capital or common stock as of the close of the period covered by the annual report. 890,843,639 Class A common shares, par value US\$0.00001 per share, and 326,509,555 Class B common shares, par value US\$0.00001 per share, were outstanding as of December 31, 2023.

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes  No

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934. Yes  No

Note—Checking the box above will not relieve any registrant required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 from their obligations under those Sections.

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes  No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes  No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or an emerging growth company. See definition of “large accelerated filer,” “accelerated filer,” and “emerging growth company” in Rule 12b-2 of the Exchange Act.

Large accelerated filer  Accelerated filer   
Non-accelerated filer  Emerging growth company

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards† provided pursuant to Section 13(a) of the Exchange Act.

† The term “new or revised financial accounting standard” refers to any update issued by the Financial Accounting Standards Board to its Accounting Standards Codification after April 5, 2012.

Indicate by check mark whether the registrant has filed a report on and attestation to its management’s assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements.

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant’s executive officers during the relevant recovery period pursuant to §240.10D-1(b).

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

U.S. GAAP  International Financial Reporting Standards as issued by the International Accounting Standards Board  Other

If “Other” has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow. Item 17   
Item 18

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes  No

(APPLICABLE ONLY TO ISSUERS INVOLVED IN BANKRUPTCY PROCEEDINGS DURING THE PAST FIVE YEARS)

Indicate by check mark whether the registrant has filed all documents and reports required to be filed by Sections 12, 13 or 15(d) of the Securities Exchange Act of 1934 subsequent to the distribution of securities under a plan confirmed by a court. Yes  No

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## INTRODUCTION

Unless otherwise indicated and except where the context otherwise requires, references in this annual report on Form 20-F to:

- “active user” for any period is measured by the number of registered user accounts, as defined below, that has had log-on activity at least once during the given period;
- “BIGO” refers to our core business segment which primarily includes our social entertainment platforms Bigo Live, Likee and imo, among others. “All other” segment primarily includes our social entertainment platform Hago, our smart commerce platform Shopline and certain audio live streaming platforms, among others;
- “monthly active user” for any period is calculated by dividing (i) the sum of active users for each month of such period by (ii) the number of months in such period;
- “paying user” for any period means a registered user account that has purchased virtual items or other products and services on Bigo Live, Likee or imo at least once during the period. A paying user is not necessarily a unique user, however, as a unique user may set up multiple paying user accounts on our platforms; thus, the number of paying users referred to in this annual report may be higher than the number of unique users who are purchasing virtual items or other products and services;
- “registered user account” means a user account that (i) has been registered on one of our social entertainment platforms (primarily including Bigo Live, Likee, imo and Hago), and (ii) has had log-on activity at least once since registration. We calculate registered user accounts for any period as the cumulative number of accounts on our social entertainment platforms that, by the end of the period, had log-on activity at least once after registration. Each individual user may have more than one registered user account, and consequently, the number of registered user accounts we present in this annual report may overstate the number of unique individuals who are our registered users;
- “US\$,” “U.S. dollars,” “\$,” and “dollars” refer to the legal currency of the United States;
- “S\$” are to Singapore dollars, the legal currency of Singapore;
- “RMB” and “Renminbi” refer to the legal currency of mainland China; and
- “we,” “us,” “our company,” “the Company,” and “our” refer to JOYY Inc., a Cayman Islands company, its subsidiaries, and, in the context of describing our operations and consolidated financial statements, also include the variable interest entities, or the VIEs, and the subsidiaries of the variable interest entities in regions in which we do not have any equity ownership but whose financial results have been consolidated based solely on contractual arrangements in accordance with U.S. GAAP.

Our reporting currency is U.S. dollars since a majority of our revenues and expenses are denominated in U.S. dollars.

On November 16, 2020, we entered into definitive agreements with affiliates of Baidu, Inc. (Nasdaq: BIDU; HKEX: 9888), or Baidu, subsequently amended on February 7, 2021. Pursuant to the agreements, Baidu would acquire JOYY’s video-based entertainment live streaming business in mainland China, which we refer to as YY Live, including the YY mobile app, the YY.com website and the YY PC app, among others, for an aggregate purchase price of approximately US\$3.6 billion in cash, subject to certain adjustments. Subsequently, the sale was substantially completed as of February 8, 2021, with certain matters remaining to be completed, including necessary regulatory approvals from government authorities. As a result, YY Live’s historical results were presented in our consolidated financial statements as discontinued operations and we ceased consolidation of YY Live’s business since February 8, 2021. On January 1, 2024, we received a written notice from an affiliate of Baidu, purporting to terminate the share purchase agreement. Baidu asserted in the written notice that it has and exercised the right to terminate the referenced share purchase agreement and effectively cancel the transaction. We are currently in discussion with Baidu on the next steps following the termination of the share purchase agreement. We are also seeking legal advice and will consider all options at our disposal in response to Baidu’s written notice and expressly reserve all rights. From January 1, 2024 to the date of this annual report, we have not obtained control of YY Live and have not consolidated YY Live.

The financial information and other relevant information disclosed in this annual report is presented on a continuing operations basis, unless otherwise specifically stated. For the avoidance of confusion, the continuing operations for the year ended December 31, 2021, 2022 and 2023 as presented in this annual report primarily consisted of the BIGO segment (primarily including Bigo Live, Likee and imo) and the All other segment, and did not include YY Live.

## FORWARD-LOOKING STATEMENTS

This annual report contains forward-looking statements that involve risks and uncertainties. All statements other than statements of historical facts are forward-looking statements. These forward-looking statements are made under the “safe harbor” provisions of the U.S. Private Securities Litigation Reform Act of 1995. These statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from those expressed or implied by the forward-looking statements.

You can identify these forward-looking statements by words or phrases such as “may,” “will,” “expect,” “is expected to,” “anticipate,” “aim,” “estimate,” “intend,” “plan,” “believe,” “is/are likely to” or other similar expressions. We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our financial condition, results of operations, business strategy and financial needs. These forward-looking statements include, but are not limited to, statements about:

- our growth strategies;
- our ability to retain and increase our user base and expand our product and service offerings;
- our ability to monetize our platforms;
- our future business development, results of operations and financial condition;
- competition from companies in a number of industries, including companies that provide online voice and video communications services, social networking services, online games, and smart commerce solutions;
- expected changes in our revenues and certain cost or expense items;
- global economic, political, social and business conditions and their impact on the markets where we operate;
- expected growth and trends of the markets where we operate;
- our ability to continue developing new technologies and/or upgrading our existing technologies;
- our ability to expand and/or enhance our global localized operational network; and
- assumptions underlying or related to any of the foregoing.

You should thoroughly read this annual report and the documents that we refer to herein with the understanding that our actual future results may be materially different from and/or worse than what we expect. Other sections of this annual report, including “Item 3. Key Information—D. Risk Factors” and “Item 5. Operating and Financial Review and Prospects” sections, discuss factors which could adversely impact our business and financial performance. Moreover, we operate in an evolving environment. New risk factors emerge from time to time and it is not possible for our management to predict all risk factors, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements. We qualify all of our forward-looking statements by these cautionary statements.

You should not rely upon forward-looking statements we make as predictions of future events. The forward-looking statements made in this annual report relate only to events or information as of the date on which the statements are made in this annual report. We undertake no obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by applicable law.

**PART I**

**ITEM 1. IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISORS**

Not applicable.

**ITEM 2. OFFER STATISTICS AND EXPECTED TIMETABLE**

Not applicable.

**ITEM 3. KEY INFORMATION**

**Our Holding Company Structure and Contractual Arrangements with the Variable Interest Entities**

JOYY Inc. is a Cayman Islands holding company that does not have substantive operations on its own. We conduct our operations primarily through (i) our subsidiaries in Singapore, the United States, the United Kingdom, and other jurisdictions for a majority of our global business; and (ii) the variable interest entities, or the VIEs, with which we have maintained contractual arrangements, and their subsidiaries for some of our remaining business in mainland China. Laws and regulations of mainland China prohibit or restrict foreign investment in certain internet-related business, value-added telecommunication services and other-related businesses. Accordingly, we operate these businesses in mainland China through the variable interest entities, the structure of which is used to provide investors with exposure to foreign investment in companies based in mainland China where laws and regulations prohibit or restrict direct foreign investment in certain operating companies, and rely on contractual arrangements among our subsidiaries and the variable interest entities in mainland China as well as their shareholders to direct the business operations of the variable interest entities. Revenues contributed by the variable interest entities and their subsidiaries accounted for 17.1%, 19.8% and 13.3% of our total net revenues for the year ended December 31, 2021, 2022 and 2023, respectively. As used in this annual report, “we,” “us,” “our company” and “our” refers to JOYY Inc., its subsidiaries, and, in the context of describing our operations in mainland China and consolidated financial information, also include the variable interest entities and their subsidiaries, primarily including Guangzhou Huaduo Network Technology Co., Ltd., or Guangzhou Huaduo, and Guangzhou BaiGuoYuan Network Technology Co., Ltd, or Guangzhou BaiGuoYuan. Uncertainties remain as to whether YY Live will be returned to us for re-consolidation due to Baidu’s purported termination of the share purchase agreement in connection with the sale of YY Live. If revenue contribution by the variable interest entities increases due to the re-consolidation of YY Live, we will be exposed to additional risks relating to heightened reliance on the variable interest entities. Investors in our ADSs are purchasing equity interest in a holding company incorporated in the Cayman Islands that holds equity interests in its subsidiaries in various jurisdictions. JOYY Inc. does not hold any equity interest in the variable interest entities in mainland China, so investments in our ADSs would not render the investors any equity interest in the variable interest entities.

A series of contractual agreements, including voting rights proxy agreements, exclusive service agreements, equity interest pledge agreements and exclusive option agreements, have been entered into by and among our subsidiaries and the variable interest entities in mainland China as well as their respective shareholders. Terms contained in each set of contractual arrangements with the variable interest entities and their respective shareholders are substantially similar. As a result of the contractual arrangements, we are considered the primary beneficiary of these companies, and we have consolidated the financial results of these companies in our consolidated financial statements under U.S. GAAP for accounting purposes. For more details of these contractual arrangements, see “Item 7. Major Shareholders and Related Party Transactions—B. Related Party Transactions—VIE Structure and the Contractual Arrangements.”

However, the contractual arrangements may not be as effective as direct ownership in providing us with control over the variable interest entities and we may incur substantial costs to enforce the terms of the arrangements. If the variable interest entities or the nominee shareholders fail to perform their respective obligations under the contractual arrangements, we could be limited in our ability to enforce the contractual arrangements. Meanwhile, there are very few precedents as to whether contractual arrangements would be judged to form effective control over the variable interest entities through the contractual arrangements, or how contractual arrangements in the context of a variable interest entity should be interpreted or enforced by the courts of mainland China. Furthermore, if we are unable to direct the operations of the variable interest entities and to obtain economic benefits from them through contractual arrangements, we would not be able to continue to consolidate the financial results of these entities in our financial statements. See “Item 3. Key Information—D. Risk Factors—Risks Related to Our Corporate Structure—We rely on contractual arrangements with the variable interest entities and their shareholders for some of our operation in mainland China, which may not be as effective as direct ownership. If the variable interest entities and their shareholders fail to perform their obligations under these contractual arrangements, we may have to resort to litigation or other legal proceedings to enforce our rights, which may be time-consuming, unpredictable, expensive and damaging to our operations and reputation.”

There are also substantial uncertainties regarding the interpretation and application of current and future laws, regulations and rules of mainland China regarding the status of the rights of our Cayman Islands holding company with respect to its contractual arrangements with the variable interest entities and their shareholders. It is uncertain whether any new laws or regulations of mainland China relating to variable interest entity structure will be adopted or what they would provide if adopted. If we or any of the variable interest entities is found to be in violation of any existing or future laws or regulations of mainland China, or fail to obtain or maintain any of the required permits or approvals, the relevant regulatory authorities of mainland China would have broad discretion to take action in dealing with such violations or failures. See “Item 3. Key Information—D. Risk Factors—Risks Related to Our Corporate Structure—If the mainland China’s government finds that the structure we have adopted for our business operations in mainland China does not comply with laws and regulations of mainland China, or if these laws or regulations or interpretations of existing laws or regulations change in the future, we could be subject to severe penalties, including the shutting down of our platforms and our business operations currently operated in mainland China” and “Item 3. Key Information—D. Risk Factors—Risks Related to Our Corporate Structure—If the variable interest entities fail to obtain and maintain the requisite licenses and approvals required under the complex regulatory environment for internet-based businesses in mainland China, our business, financial condition and results of operations in mainland China may be adversely affected.”

Our corporate structure is subject to risks associated with our contractual arrangements with the variable interest entities. If the mainland China’s government deems that our contractual arrangements with the variable interest entities do not comply with regulatory restrictions of mainland China on foreign investment in the relevant industries, or if these regulations or the interpretation of existing regulations change or are interpreted differently in the future, we could be subject to severe penalties or be forced to relinquish our interests in those operations. Our holding company, our subsidiaries and the consolidated variable interest entities in mainland China, and investors of our company face uncertainty about potential future actions by the mainland China’s government that could affect the enforceability of the contractual arrangements with the variable interest entities and, consequently, significantly affect the financial performance of the variable interest entities and our company as a whole. For a detailed description of the risks associated with our corporate structure, please refer to risks disclosed under “Item 3. Key Information—D. Risk Factors—Risks Related to Our Corporate Structure.”

These risks could result in a material adverse change in our operations and the value of our ADSs, significantly limit or completely hinder our ability to continue to offer securities to investors, or cause the value of such securities to significantly decline or become worthless. For a detailed description of risks related to doing business in multiple jurisdictions, please refer to risks disclosed under “Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in Jurisdictions We Operate.”

#### **Permissions and Approvals Required from the Authorities of Mainland China for Our Operations**

We currently operate in several key markets across the globe, such as North America, Europe, the Middle East, Southeast Asia, Eastern Pacific regions, and others. We face various risks and uncertainties related to doing business in multiple jurisdictions across the globe. In particular, for our operations in mainland China, we are subject to complex and evolving laws and regulations of mainland China to the extent applicable.

We generated 16.8%, 19.7% and 15.3% of our total net revenues from mainland China for the year ended December 31, 2021, 2022 and 2023, respectively. We conduct the mainland China portion of our business primarily through our subsidiaries and the variable interest entities in mainland China and are therefore subject to the laws and regulations of mainland China to the extent applicable. As of the date of this annual report, our subsidiaries and the variable interest entities in mainland China have obtained the requisite licenses and permits from the mainland China's government authorities that are material for the continuing business operations of our holding company, our subsidiaries and the variable interest entities in mainland China, including, among others, the Internet Culture Operation License, the Value-added Telecommunications Business Operation License (ICP License), the Radio and Television Program Production and Operating Permit and the License for Online Transmission of Audio-Visual Programs. Given the uncertainties of interpretation and implementation of relevant laws and regulations and the enforcement practice by relevant mainland China's government authorities, we may be required to obtain additional licenses, permits, filings or approvals for the functions and services of our platform in the future. For more detailed information, see "Item 3. Key Information—D. Risk Factors—Risks Related to Our Corporate Structure—If the variable interest entities fail to obtain and maintain the requisite licenses and approvals required under the complex regulatory environment for internet-based businesses in mainland China, our business, financial condition and results of operations in mainland China may be adversely affected."

The China Securities Regulatory Commission, or the CSRC, promulgated the Trial Administrative Measures of the Overseas Securities Offering and Listing by Domestic Companies, or the Overseas Listing Trial Measures, and five relevant guidelines on February 17, 2023, which came into effect on March 31, 2023. The Overseas Listing Trial Measures regulate both direct and indirect overseas offering and listing by domestic company in mainland China by adopting a filing-based regulatory regime. For details of the Overseas Listing Trial Measures, see "Item 4. Information on the Company—B. Business Overview—Regulations in Multiple Jurisdictions Where We Operate—Mainland China Regulations—Regulations on Overseas Listing by Domestic Companies." Given the interpretation and implementation of the Overseas Listing Trial Measures and our global operations, we could not rule out the possibility that we may be required to file the relevant documents with the CSRC in connection with our future offerings and listings outside mainland China.

In addition, on December 28, 2021, the Cyberspace Administration of China, or the CAC, and several other administrations jointly promulgated the Measures for Cybersecurity Review, which came into effect on February 15, 2022, superseding and replacing the cybersecurity review measures that had been in effect since June 2020. The Measures for Cybersecurity Review provide that (i) a "network platform operator" holding over one million users' personal information shall apply for a cybersecurity review when listing their securities "in a foreign country" (ii) a critical information infrastructure operator that intends to purchase internet products and services that affect or may affect national security should apply for a cybersecurity review, and (iii) a "network platform operator" carrying out data processing activities that affect or may affect national security should apply for a cybersecurity review. The Measures for Cybersecurity Review do not provide the exact scope of "network platform operator" or the criteria for determining which circumstance falls within the definition of "holding over one million users' personal information." Furthermore, on November 14, 2021, the CAC commenced to publicly solicit comments on the Regulations on the Administration of Cyber Data Security (Draft for Comments). This draft regulation provides that, among others, data processors that handle personal information of more than one million people contemplating to list its securities on a foreign stock exchange should apply for cybersecurity review. As a result, if the draft regulation is promulgated as it is, it is possible that we may be required to go through cybersecurity review by the CAC.

It remains unclear as to how mainland China regulations may further evolve, how mainland China's governmental authorities will regulate overseas listing in general and whether we will be required to obtain any specific regulatory approvals from, or complete any filing procedures with, the CSRC, the CAC or any other mainland China's governmental authorities for our offerings outside mainland China. Therefore, there can be no assurance that we will not be required to apply for a cybersecurity review pursuant to the Measures for Cybersecurity Review or a data security assessment pursuant to the Measures for Security Assessment of Cross-Border Data Transfer. To the extent any cybersecurity review or data security assessment is required, we cannot assure you that we will be able to complete it in a timely manner, or at all, and such approvals may be rescinded even if obtained. As of the date of this annual report, we have not been subject to any cybersecurity review under the Measures for Cybersecurity Review or data security assessment pursuant to the Measures for Security Assessment of Cross-Border Data Transfer.

If we fail to obtain the relevant approval or complete other filing or review procedures for our operations and/or any future offshore offering or listing, we may face sanctions by the CSRC or other regulatory authorities of mainland China, which may include warnings, fines, suspension of business to rectify, revocation of licenses, cancellation of filings, shutdown of our platform or even criminal liability, limitations on our operating privileges in mainland China, restrictions on or prohibition of the payments or remittance of dividends by our subsidiaries in mainland China, restrictions on or delays to our future financing transactions outside mainland China, or other actions that could have a material and adverse effect on our business, financial condition, results of operations, reputation and prospects, as well as the trading price of our ADSs. For more detailed information, see “Item 3. Key Information—D. Risk Factors—Risks Related to Our Business and Industry—Our business is subject to complex and evolving laws and regulations across the globe regarding cybersecurity, information security, privacy and data protection. Many of these laws and regulations are subject to interpretation, and any failure or perceived failure to comply with these laws and regulations could result in claims, changes to our business practices, negative publicity, legal proceedings, increased cost of operations, or declines in user growth or engagement, or otherwise harm our business” and “Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in Jurisdictions We Operate—The approval of and the filing with the CSRC or other government authorities of mainland China may be required in connection with our offerings and financing activities outside mainland China in the future under the laws of mainland China, and, if required, we cannot predict whether or for how long we will be able to obtain such approval or complete such filing”

For our operations in mainland China, we also face risks associated with oversight on cybersecurity and data privacy and anti-monopoly regulatory actions. These may impact our ability to conduct certain businesses, accept foreign investments, or list on a United States or other foreign exchange. Implementation of industry-wide regulations, including data security or anti-monopoly related regulations, in this nature may cause the value of such securities to significantly decline or become worthless. Risks and uncertainties arising from the legal system in mainland China, including risks and uncertainties regarding the enforcement of laws and quickly evolving rules and regulations in mainland China, could result in a material adverse change in our operations in mainland China and the value of our ADSs.

#### **Cash and Asset Flows through Our Organization**

JOYY Inc. is a holding company with no material operations of its own. We conduct our operations primarily through our subsidiaries, the variable interest entities and their subsidiaries incorporated under the laws of various jurisdictions where we have business presence. As a result, JOYY Inc.’s ability to pay dividends depends upon dividends paid by our subsidiaries, which may be subject to restrictions imposed by the applicable laws and regulations in these jurisdictions. In certain jurisdictions, such as Singapore, there are currently no foreign exchange regulations which regulate the ability of our subsidiaries in these jurisdictions to distribute dividends to us. However, the relevant regulations may change and the ability of these subsidiaries to distribute dividends to us may be restricted in the future. As for the jurisdiction of mainland China, under the laws and regulations thereof, if our existing subsidiaries in mainland China or any newly formed ones incur debt on their own behalf in the future, the instruments governing their debt may restrict their ability to pay dividends to us. In addition, our wholly foreign-owned subsidiaries in mainland China are permitted to pay dividends to us only out of their retained earnings, if any, as determined in accordance with PRC accounting standards and regulations. Under the laws and regulations of mainland China, each of our subsidiaries and the variable interest entities in mainland China is required to make appropriations to certain statutory reserve funds or may make appropriations to certain discretionary funds, which are not distributable as cash dividends except in the event of a solvent liquidation of the companies. For more details, see “Item 5. Operating and Financial Review and Prospects—Liquidity and Capital Resources—Holding Company Structure.”

We have established stringent controls and procedures for cash flows within our organization. Each transfer of cash between our Cayman Islands holding company and our subsidiaries, the variable interest entities or the subsidiaries of the variable interest entities is subject to internal approval. The cash inflows of the Cayman Islands holding company were primarily generated from the proceeds we received from our public offerings of common shares, our offerings of convertible senior notes and other financing activities.

Under the laws and regulations of mainland China, JOYY Inc. may provide funding to its subsidiaries in mainland China only through capital contributions or loans, and to the variable interest entities only through loans, subject to satisfaction of applicable government registration and approval requirements. Currently, there is no statutory limit to the amount of funding that we can provide to our subsidiaries in mainland China through capital contributions. However, the maximum amount we can loan to our subsidiaries and the variable interest entities in mainland China is subject to statutory limits. According to the current laws and regulations of mainland China, we can provide funding to our subsidiaries in mainland China through loans of up to either (i) the amount of the difference between the respective registered total investment amount and registered capital of each of our subsidiaries in mainland China, or (ii) two times, or the then applicable statutory multiple, the amount of their respective net assets, calculated in accordance with PRC GAAP, at our election. We may also fund the variable interest entities through cross-border loans and the maximum amount would be their respective limits calculated based on net assets. Increasing the difference between the respective registered total investment amount and registered capital of our subsidiaries in mainland China is subject to governmental procedures and may require a subsidiary in mainland China to increase its registered capital at the same time. If we choose to make a loan to an entity in mainland China based on its limit calculated based on net assets, the maximum amount we would be able to loan to the relevant entity in mainland China would depend on the relevant entity's net assets and the applicable statutory multiple at the time of calculation. For details, see "Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in Jurisdictions We Operate—Regulations of mainland China in relation to offshore investment activities by mainland China residents and direct investment and loans by offshore holding companies to entities in mainland China may delay or limit our ability to effectively use the proceeds of our offshore financing activities."

For the years ended December 31, 2021, 2022 and 2023, JOYY Inc., through its intermediate holding companies, provided capital contributions of US\$7.8 million, US\$8.7 million and US\$20.0 million, respectively, to our subsidiaries in mainland China.

For the years ended December 31, 2021, 2022 and 2023, JOYY Inc. did not provide any loan to our intermediate holding companies and subsidiaries, and received repayments of US\$723.3 million, US\$365.5 million and US\$622.2 million, respectively.

For the years ended December 31, 2021, 2022 and 2023, cash paid by the variable interest entities to our subsidiaries for the settlement of technical support fees and software transactions were US\$114.6 million, US\$109.7 million and US\$86.1 million, respectively. For the years ended December 31, 2021, 2022 and 2023, cash received by the variable interest entities from our subsidiaries were US\$129.4 million, US\$9.7 million and US\$14.5 million, respectively, as the revenues earned from our subsidiaries. In the future, to the extent there is any fee owed to our subsidiaries in mainland China under the contractual arrangements with the variable interest entities, the variable interest entities intend to settle it.

For the years ended December 31, 2021, 2022 and 2023, the variable interest entities' cash flows for investing activities provided to our subsidiaries were net cash outflows of US\$35.6 million, US\$194.1 million and US\$129.1 million, respectively. For the years ended December 31, 2021, 2022 and 2023, the variable interest entities' cash flows for financing activities provided by our subsidiaries were net cash inflows of US\$5.4 million, US\$32.8 million and US\$0.5 million, respectively.

For the years ended December 31, 2021, 2022 and 2023, no assets other than cash were transferred between the Cayman Islands holding company and a subsidiary, a variable interest entity or its subsidiary within our corporate structure, and no subsidiaries paid dividends or made other distributions to JOYY Inc. For details of the financial position, cash flows and results of operations of the variable interest entities, see "—Financial Information Related to the Variable Interest Entities" and Note 4(a) to our audited consolidated financial statements included elsewhere in this annual report.

Under laws and regulations of mainland China, our subsidiaries and the variable interest entities in mainland China are subject to certain restrictions with respect to paying dividends or otherwise transferring any of their net assets to us. Remittance of dividends by a wholly foreign-owned enterprise out of mainland China is also subject to examination by the banks designated by the State Administration of Foreign Exchange, or SAFE. Current regulations of mainland China permit our subsidiaries in mainland China to pay dividends to us only out of their accumulated after-tax profits upon satisfaction of relevant statutory condition and procedures, if any, determined in accordance with PRC accounting standards and regulations. In addition, each of our subsidiaries in mainland China is required to set aside at least 10% of its accumulated profits each year, if any, to fund certain reserve funds until the total amount set aside reaches 50% of its registered capital. As of December 31, 2023, appropriations to statutory reserves amounting to US\$37.7 million were made by our subsidiaries in mainland China and the variable interest entities. These reserves are not distributable as cash dividends. Furthermore, if our subsidiaries and the variable interest entities in mainland China incur debt on their own behalf in the future, the instruments governing the debt may restrict their ability to pay dividends or make other payments to us, which may restrict our ability to satisfy our liquidity requirements. In addition, the PRC Enterprise Income Tax Law and its implementation rules provide that withholding tax rate of 10% will be applicable to dividends payable by companies in mainland China to non-mainland-China-resident enterprises unless otherwise exempted or reduced according to treaties or arrangements between the mainland China's central government and governments of other countries or regions where the non-mainland-China-resident enterprises are incorporated. For details, see "Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in Jurisdictions We Operate—Our subsidiaries and the variable interest entities in mainland China are subject to restrictions on paying dividends or making other payments to us, which may restrict our ability to satisfy our liquidity requirements." As of the date of this annual report, the majority of our revenue and operating cash are currently generated from subsidiaries outside of mainland China, and our reliance on dividends from subsidiaries in mainland China is limited. However, uncertainties remain as to whether YY Live will be returned to us for re-consolidation due to Baidu's purported termination of the share purchase agreement in connection with the sale of YY Live. If revenue contribution by business operations in mainland China increases due to the re-consolidation of YY Live, we will be exposed to additional risks relating to heightened reliance on our subsidiaries and the variable interest entities in mainland China.

For the years ended December 31, 2021, 2022 and 2023, JOYY Inc. declared and distributed cash dividends in accordance with its three-year quarterly dividend policies adopted in 2020. The quarterly dividend policies both expired and we paid dividends in a net aggregate amount of US\$454.8 million in accordance with these quarterly dividend policies. See "Item 8. Financial Information—A. Consolidated Statements and Other Financial Information—Dividend Policy." For the material Cayman Islands, Singapore, mainland China and U.S. federal income tax consequences of an investment in our ADSs or common shares, see "Item 10. Additional Information—E. Taxation."

#### **Financial Information Related to the Variable Interest Entities**

The following table presents the condensed consolidating schedule of financial information of JOYY Inc., the variable interest entities, the primary beneficiaries of the variable interest entities, and other equity subsidiaries for the periods and as of the dates presented.

**Selected Condensed Consolidating Statements of Operations and Comprehensive Income (Loss) Data**

	For the Year Ended December 31, 2023					
	JOYY Inc.	Equity Subsidiaries	Primary Beneficiaries of VIEs (US\$ in thousands)	VIEs and VIEs' Subsidiaries	Eliminations	Consolidated
Inter-company revenues <sup>(1)</sup>	—	11,049	206,984	54,280	(272,313)	—
Third-party revenues	—	1,966,201	264	301,405	—	2,267,870
<b>Total revenue</b>	<b>—</b>	<b>1,977,250</b>	<b>207,248</b>	<b>355,685</b>	<b>(272,313)</b>	<b>2,267,870</b>
Total cost and operating expenses	(2,423)	(1,987,387)	(177,582)	(354,306)	279,115	(2,242,583)
Share of income of subsidiaries/VIEs <sup>(2)</sup>	231,834	109,238	22,974	—	(364,046)	—
Others, net	74,208	142,958	56,231	12,044	(22,751)	262,690
<b>Income before income tax</b>	<b>303,619</b>	<b>242,059</b>	<b>108,871</b>	<b>13,423</b>	<b>(379,995)</b>	<b>287,977</b>
Income tax (expense) benefits	—	(23,556)	367	4,333	—	(18,856)
Share of (loss) income in equity method investments, net of income taxes	(1,803)	(112)	—	5,212	—	3,297
<b>Net income from continuing operations</b>	<b>301,816</b>	<b>218,391</b>	<b>109,238</b>	<b>22,968</b>	<b>(379,995)</b>	<b>272,418</b>
Net loss from continuing operations attributable to the non-controlling interest shareholders and the mezzanine equity classified non-controlling interest shareholders	—	29,392	—	6	—	29,398
<b>Net income from continuing operations attributable to controlling interest of JOYY Inc.</b>	<b>301,816</b>	<b>247,783</b>	<b>109,238</b>	<b>22,974</b>	<b>(379,995)</b>	<b>301,816</b>
Net income from discontinued operations attributable to controlling interest of JOYY Inc.	—	—	—	—	—	—
<b>Net income attributable to controlling interest of JOYY Inc.</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>301,816</b>

	For the Year Ended December 31, 2022					
	JOYY Inc.	Equity Subsidiaries	Primary Beneficiaries of VIEs (US\$ in thousands)	VIEs and VIEs' Subsidiaries	Eliminations	Consolidated
Inter-company revenues <sup>(1)</sup>	—	20,524	221,628	54,587	(296,739)	—
Third-party revenues	—	1,930,532	2,328	478,656	—	2,411,516
<b>Total revenue</b>	<b>—</b>	<b>1,951,056</b>	<b>223,956</b>	<b>533,243</b>	<b>(296,739)</b>	<b>2,411,516</b>
Total cost and operating expenses	(3,212)	(1,908,859)	(221,141)	(547,931)	302,857	(2,378,286)
Share of income of subsidiaries/VIEs <sup>(2)</sup>	586,900	62,332	37,360	—	(686,592)	—
Others, net	(12,963)	562,107	22,149	45,801	(15,750)	601,344
<b>Income before income tax</b>	<b>570,725</b>	<b>666,636</b>	<b>62,324</b>	<b>31,113</b>	<b>(696,224)</b>	<b>634,574</b>
Income tax (expense) benefits	—	(27,178)	8	(7,405)	—	(34,575)
Share of (loss) income in equity method investments, net of income taxes	(441,834)	(70,255)	—	13,658	—	(498,431)
<b>Net income from continuing operations</b>	<b>128,891</b>	<b>569,203</b>	<b>62,332</b>	<b>37,366</b>	<b>(696,224)</b>	<b>101,568</b>
Net loss (income) from continuing operations attributable to the non-controlling interest shareholders and the mezzanine equity classified non-controlling interest shareholders	—	27,329	—	(6)	—	27,323
<b>Net income from continuing operations attributable to controlling interest of JOYY Inc.</b>	<b>128,891</b>	<b>596,532</b>	<b>62,332</b>	<b>37,360</b>	<b>(696,224)</b>	<b>128,891</b>
Net income from discontinued operations attributable to controlling interest of JOYY Inc.	—	—	—	—	—	—
<b>Net income attributable to controlling interest of JOYY Inc.</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>128,891</b>

	For the Year Ended December 31, 2021					
	<u>JOYY Inc.</u>	<u>Equity Subsidiaries</u>	<u>Primary Beneficiaries of VIEs (US\$ in thousands)</u>	<u>VIEs and VIEs' Subsidiaries</u>	<u>Eliminations</u>	<u>Consolidated</u>
Inter-company revenues <sup>(1)</sup>	—	13,995	239,595	109,618	(363,208)	—
Third-party revenues	—	2,170,655	925	447,471	—	2,619,051
<b>Total revenue</b>	<u>—</u>	<u>2,184,650</u>	<u>240,520</u>	<u>557,089</u>	<u>(363,208)</u>	<u>2,619,051</u>
Total cost and operating expenses	—	(2,176,663)	(264,414)	(701,686)	391,694	(2,751,069)
Share of loss of subsidiaries/VIEs <sup>(2)</sup>	(117,603)	(134,745)	(104,447)	—	356,795	—
Others, net	(6,068)	26,408	18,016	22,680	(6,607)	54,429
<b>Loss before income tax</b>	<u>(123,671)</u>	<u>(100,350)</u>	<u>(110,325)</u>	<u>(121,917)</u>	<u>378,674</u>	<u>(77,589)</u>
Income tax (expense)	—	(13,222)	(8,289)	(4,234)	—	(25,745)
Share of income (loss) in equity method investments, net of income taxes	7,811	(37,887)	—	3,859	—	(26,217)
<b>Net loss from continuing operations</b>	<u>(115,860)</u>	<u>(151,459)</u>	<u>(118,614)</u>	<u>(122,292)</u>	<u>378,674</u>	<u>(129,551)</u>
Net loss from continuing operations attributable to the non-controlling interest shareholders and the mezzanine equity classified non-controlling interest shareholders	—	11,977	—	1,714	—	13,691
<b>Net loss from continuing operations attributable to controlling interest of JOYY Inc.</b>	<u>(115,860)</u>	<u>(139,482)</u>	<u>(118,614)</u>	<u>(120,578)</u>	<u>378,674</u>	<u>(115,860)</u>
Net income from discontinued operations attributable to controlling interest of JOYY Inc.	—	—	—	—	—	35,567
<b>Net loss attributable to controlling interest of JOYY Inc.</b>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>(80,293)</u>

Notes:

- (1) Represents the elimination of the intercompany transaction and service charge at the consolidation level. The VIEs recognized inter-company cost of revenues and operating expenses in the amounts of US\$35.9 million, US\$55.8 million and US\$25.8 million for the years ended December 31, 2021, 2022 and 2023, respectively, for technical support services.
- (2) Represents the elimination of investments among JOYY Inc., the primary beneficiaries of VIEs, the other subsidiaries, and VIEs and their subsidiaries that we consolidate.

**Selected Condensed Consolidating Balance Sheets Data**

	<b>As of December 31, 2023</b>					
	<b>JOYY Inc.</b>	<b>Equity Subsidiaries</b>	<b>Primary Beneficiaries of VIEs (US\$ in thousands)</b>	<b>VIEs and VIEs' subsidiaries</b>	<b>Eliminations</b>	<b>Consolidated</b>
<b>Assets</b>						
Cash and cash equivalents	99,074	815,095	89,305	60,482	—	1,063,956
Restricted cash	—	314,514	1,239	3,497	—	319,250
Short-term deposits	—	1,596,592	18,355	355,399	—	1,970,346
Restricted short-term deposits	—	57,243	—	—	—	57,243
Short-term investments	87,331	179,044	—	8,471	—	274,846
Accounts receivable	—	129,029	22	1,649	—	130,700
Prepayments and other current assets	344	159,357	4,015	91,773	—	255,489
Amounts due from Group companies <sup>(1)</sup>	428,813	70,554	470,477	822,281	(1,792,125)	—
Investments in subsidiaries/VIEs <sup>(2)</sup>	4,957,710	2,335,728	1,900,940	—	(9,194,378)	—
Long-term investments	—	143,888	—	400,654	—	544,542
Long-term deposits	—	130,000	—	—	—	130,000
Property, plant and equipment, net	—	23,902	74,752	292,032	(5)	390,681
Land use rights, net	—	—	—	316,070	—	316,070
Intangible assets, net	—	336,826	4,063	40,436	(47,610)	333,715
Goodwill	—	2,649,281	—	—	—	2,649,281
Other assets	—	23,839	5,098	18,809	—	47,746
<b>Total assets</b>						<b>8,483,865</b>
<b>Liabilities and shareholders' equity</b>						
<b>Liabilities</b>						
Convertible bonds	405,603	—	—	—	—	405,603
Deferred tax liabilities	—	43,515	—	10,440	—	53,955
Accounts payable	—	19,831	91	46,833	—	66,755
Deferred revenue	—	74,849	216	11,540	—	86,605
Income taxes payable	8,977	51,673	3,963	21,487	—	86,100
Accrued liabilities and other current liabilities	2,006	2,273,579	36,301	69,303	—	2,381,189
Amounts due to Group companies <sup>(1)</sup>	—	1,328,466	186,997	285,047	(1,800,510)	—
Other liabilities	—	24,010	4,970	62,529	—	91,509
<b>Total liabilities</b>						<b>3,171,716</b>
<b>Mezzanine equity</b>	—	22,133	—	—	—	22,133
<b>Shareholders' equity</b>						
<b>Total JOYY Inc.'s shareholders' equity</b>	5,156,686	4,996,940	2,335,728	1,900,940	(9,233,608)	5,156,686
Non-controlling interests	—	129,896	—	3,434	—	133,330
<b>Total shareholders' equity</b>	5,156,686	5,126,836	2,335,728	1,904,374	(9,233,608)	5,290,016
<b>Total liabilities, mezzanine equity and shareholders' equity</b>						<b>8,483,865</b>

As of December 31, 2022						
	JOYY Inc.	Equity Subsidiaries	Primary Beneficiaries of VIEs	VIEs and Subsidiaries	Eliminations	Consolidated
	(US\$ in thousands)					
<b>Assets</b>						
Cash and cash equivalents	40,369	890,731	35,852	247,497	—	1,214,449
Restricted cash	—	297,131	—	6,239	—	303,370
Short-term deposits	50,000	1,933,877	14,358	362,310	—	2,360,545
Restricted short-term deposits	—	47,741	—	—	—	47,741
Short-term investments	86,150	196,675	43,707	36,108	—	362,640
Accounts receivable	—	112,075	22	5,830	—	117,927
Prepayments and other current assets	15,663	136,122	6,560	77,838	—	236,183
Amounts due from Group companies <sup>(1)</sup>	1,051,001	2,882	363,235	476,689	(1,893,807)	—
Investments in subsidiaries/VIEs <sup>(2)</sup>	4,631,368	2,302,101	1,916,108	—	(8,849,577)	—
Long-term investments	168,230	136,913	—	355,261	—	660,404
Property, plant and equipment, net	—	40,258	81,362	221,614	(33)	343,201
Land use rights, net	—	—	—	330,005	—	330,005
Intangible assets, net	—	375,249	5,861	49,016	(31,826)	398,300
Goodwill	—	2,649,307	—	—	—	2,649,307
Other assets	—	28,948	6,255	12,378	—	47,581
<b>Total assets</b>						<b>9,071,653</b>
<b>Liabilities and shareholders' equity</b>						
<b>Liabilities</b>						
Convertible bonds	836,260	—	—	—	—	836,260
Deferred tax liabilities	—	52,009	—	12,253	—	64,262
Accounts payable	—	26,333	81	29,586	—	56,000
Deferred revenue	—	75,364	335	20,080	—	95,779
Income taxes payable	12,986	29,387	10,376	25,354	—	78,103
Accrued liabilities and other current liabilities	15,308	2,217,220	42,172	85,302	—	2,360,002
Amounts due to Group companies <sup>(1)</sup>	—	1,736,600	89,509	67,698	(1,893,807)	—
Other liabilities	10	29,996	28,746	19,763	—	78,515
<b>Total liabilities</b>						<b>3,568,921</b>
<b>Mezzanine equity</b>						
	—	91,366	—	—	—	91,366
<b>Shareholders' equity</b>						
<b>Total JOYY Inc.'s shareholders' equity</b>	5,178,217	4,663,227	2,302,101	1,916,108	(8,881,436)	5,178,217
Non-controlling interests	—	228,508	—	4,641	—	233,149
<b>Total shareholders' equity</b>	<b>5,178,217</b>	<b>4,891,735</b>	<b>2,302,101</b>	<b>1,920,749</b>	<b>(8,881,436)</b>	<b>5,411,366</b>
<b>Total liabilities, mezzanine equity and shareholders' equity</b>						<b>9,071,653</b>

Notes:

- (1) Represents the elimination of intercompany balances among JOYY Inc., the primary beneficiaries of VIEs, the other subsidiaries, and the VIEs and their subsidiaries that we consolidate.
- (2) Represents the elimination of investments among JOYY Inc., the primary beneficiaries of VIEs, the other subsidiaries, and VIEs and their subsidiaries that we consolidate.

**Selected Condensed Consolidating Cash Flows Data**

	<b>For the Year Ended December 31, 2023</b>					
	<b>JOYY Inc.</b>	<b>Equity Subsidiaries</b>	<b>Primary Beneficiaries of VIEs</b>	<b>VIEs and VIEs' Subsidiaries</b>	<b>Eliminations</b>	<b>Consolidated</b>
	(US\$ in thousands)					
Net cash (used in) provided by transactions with external parties	(656)	450,433	(213,163)	58,965	—	295,579
Net cash (used in) provided by transactions with intra-Group entities	—	(20,026)	51,914	(31,888)	—	—
<b>Net cash (used in) provided by continuing operating activities<sup>(1)</sup></b>	<b>(656)</b>	<b>430,407</b>	<b>(161,249)</b>	<b>27,077</b>	<b>—</b>	<b>295,579</b>
Net cash provided by (used in) transactions with external parties	269,313	190,691	42,729	(82,360)	—	420,373
Net cash provided by (used in) transactions with intra-Group entities	—	(644,513)	77,255	(129,111)	696,369	—
<b>Net cash provided by (used in) continuing investing activities<sup>(1)</sup></b>	<b>269,313</b>	<b>(453,822)</b>	<b>119,984</b>	<b>(211,471)</b>	<b>696,369</b>	<b>420,373</b>
Net cash (used in) provided by transactions with external parties	(832,140)	(22,230)	15,456	(2,831)	—	(841,745)
Net cash provided by (used in) transactions with intra-Group entities	622,188	(7,477)	81,141	517	(696,369)	—
<b>Net cash (used in) provided by continuing financing activities<sup>(1)</sup></b>	<b>(209,952)</b>	<b>(29,707)</b>	<b>96,597</b>	<b>(2,314)</b>	<b>(696,369)</b>	<b>(841,745)</b>
	<b>For the Year Ended December 31, 2022</b>					
	<b>JOYY Inc.</b>	<b>Equity Subsidiaries</b>	<b>Primary Beneficiaries of VIEs</b>	<b>VIEs and VIEs' Subsidiaries</b>	<b>Eliminations</b>	<b>Consolidated</b>
	(US\$ in thousands)					
Net cash (used in) provided by transactions with external parties	(3,949)	456,134	(230,750)	95,059	—	316,494
Net cash (used in) provided by transactions with intra-Group entities	—	(12,588)	59,743	(47,155)	—	—
<b>Net cash (used in) provided by continuing operating activities<sup>(1)</sup></b>	<b>(3,949)</b>	<b>443,546</b>	<b>(171,007)</b>	<b>47,904</b>	<b>—</b>	<b>316,494</b>
Net cash provided by (used in) transactions with external parties	49,963	(521,706)	3,858	(42,399)	—	(510,284)
Net cash used in transactions with intra-Group entities	—	(372,005)	(44,222)	(194,107)	610,334	—
<b>Net cash provided by (used in) continuing investing activities<sup>(1)</sup></b>	<b>49,963</b>	<b>(893,711)</b>	<b>(40,364)</b>	<b>(236,506)</b>	<b>610,334</b>	<b>(510,284)</b>
Net cash (used in) provided by transactions with external parties	(371,740)	17,045	32,032	754	—	(321,909)
Net cash provided by transactions with intra-Group entities	365,480	106,413	105,688	32,753	(610,334)	—
<b>Net cash (used in) provided by continuing financing activities<sup>(1)</sup></b>	<b>(6,260)</b>	<b>123,458</b>	<b>137,720</b>	<b>33,507</b>	<b>(610,334)</b>	<b>(321,909)</b>

For the Year Ended December 31, 2021						
	JOYY Inc.	Equity Subsidiaries	Primary Beneficiaries of VIEs	VIEs and VIEs' Subsidiaries	Eliminations	Consolidated
	(US\$ in thousands)					
Net cash provided by (used in) transactions with external parties	—	393,061	(400,649)	153,715	—	146,127
Net cash (used in) provided by transactions with intra-Group entities	—	(302,728)	225,409	77,319	—	—
<b>Net cash provided by (used in) continuing operating activities <sup>(1)</sup></b>	—	90,333	(175,240)	231,034	—	146,127
<b>Net cash (used in) provided by discontinued operating activities</b>	—	(1,404)	37,207	28,486	—	64,289
<b>Net cash provided by (used in) operating activities</b>	—	<b>88,929</b>	<b>(138,033)</b>	<b>259,520</b>	—	<b>210,416</b>
Net cash (used in) provided by transactions with external parties	(104,264)	(978,039)	65,334	170,112	—	(846,857)
Net cash (used in) provided by transactions with intra-Group entities	—	(758,196)	47,051	(35,559)	746,704	—
<b>Net cash (used in) provided by continuing investing activities <sup>(1)</sup></b>	(104,264)	(1,736,235)	112,385	134,553	746,704	(846,857)
<b>Net cash provided by (used in) discontinued investing activities</b>	—	1,831,847	(11,403)	(183,994)	—	1,636,450
<b>Net cash (used in) provided by investing activities</b>	<b>(104,264)</b>	<b>95,612</b>	<b>100,982</b>	<b>(49,441)</b>	<b>746,704</b>	<b>789,593</b>
Net cash (used in) provided by transactions with external parties	(620,839)	5,508	(11,007)	(97,198)	—	(723,536)
Net cash provided by (used in) transactions with intra-Group entities	723,302	60,137	(42,113)	5,378	(746,704)	—
<b>Net cash provided by (used in) continuing financing activities <sup>(1)</sup></b>	102,463	65,645	(53,120)	(91,820)	(746,704)	(723,536)
<b>Net cash used in discontinued financing activities</b>	—	—	—	—	—	—
<b>Net cash provided by (used in) financing activities</b>	<b>102,463</b>	<b>65,645</b>	<b>(53,120)</b>	<b>(91,820)</b>	<b>(746,704)</b>	<b>(723,536)</b>

Note:

(1) Represents the elimination of the net cash provided by (used in) operating activities, investing activities and financing activities of JOYY Inc., the primary beneficiaries of VIEs, the other subsidiaries, and the VIEs and their subsidiaries that we consolidate. For the years ended December 31, 2021, 2022 and 2023, cash paid by the VIEs to our subsidiaries for the settlement of technical support fees in operating activities were US\$52.1 million, US\$56.8 million and US\$45.1 million, respectively.

**A. Reserved**

**B. Capitalization and Indebtedness**

Not applicable.

**C. Reasons for the Offer and Use of Proceeds**

Not applicable.

## **D. Risk Factors**

### **Summary of Risk Factors**

An investment in our ADSs is subject to a number of risks, including risks related to our business and industry, risks related to doing business in jurisdictions we operate, risks related to our corporate structure and risks related to our ADSs. The following summarizes some, but not all, of these risks. Please carefully consider all of the information discussed in “Item 3. Key Information—D. Risk Factors” in this annual report for a more thorough description of these and other risks.

### **Risks Related to Our Business and Industry**

- We are subject to risks associated with operating in a rapidly developing industry and an evolving market.
- If we fail to effectively manage our growth or implement our business strategies, our business and results of operations may be materially and adversely affected.
- We face risks associated with the sale of YY Live to Baidu.
- We have a limited operating history for some of our businesses, and you should consider our prospects in light of the risks and uncertainties which early-stage companies in evolving industries globally may be exposed to or encounter, including possible volatility in the trading prices of our ADSs.
- We generate a substantial majority of our revenue from live streaming services. If our live streaming revenue declines in the future, our results of operations may be materially and adversely affected.
- We may face significant risks related to the content, information, communications and other activities on our platforms.
- The revenue model for each of our live streaming and our membership program may not remain effective, which may affect our ability to retain existing users and attract new users and materially and adversely affect our business, financial condition and results of operations.
- We generate a portion of our revenues from online advertising. If we fail to attract more advertisers to our platforms or if advertisers are less willing to advertise with us, our revenues may be adversely affected.
- Changes in global or regional economic, geopolitical or social conditions, as well as changes in government policies, could materially and adversely affect our business, financial condition and results of operations.
- Our business is subject to complex and evolving laws and regulations across the globe regarding cybersecurity, information security, privacy and data protection. Many of these laws and regulations are subject to change and uncertain interpretation, and any failure or perceived failure to comply with these laws and regulations could result in claims, changes to our business practices, negative publicity, legal proceedings, increased cost of operations, or declines in user growth or engagement, or otherwise harm our business.
- We face competition in several major aspects of our business. If we fail to compete effectively, we may lose users, advertisers and merchants which could materially and adversely affect our business, financial condition and results of operations.

### **Risks Related to Doing Business in Jurisdictions We Operate**

- We are subject to the risks of doing business globally.
- We have limited experience in international markets. If we fail to meet the challenges presented by our increasingly globalized operations, our business, financial condition and results of operations may be materially and adversely affected.

- We face risks and uncertainties to comply with the laws, regulations and rules in various aspects in multiple jurisdictions across the globe. Failure to comply with such applicable laws, regulations and rules may subject our global operations to strict scrutiny by local authorities, which in turn may materially and adversely affect our globalized operations.
- Fluctuations in foreign currency exchange rates may adversely affect our operational and financial results, which we report in U.S. dollars.
- The approval of and the filing with the CSRC or other government authorities of mainland China may be required in connection with our offerings and financing activities outside mainland China in the future under the laws of mainland China, and, if required, we cannot predict whether or for how long we will be able to obtain such approval or complete such filing.

#### **Risks Related to Our Corporate Structure**

- If the mainland China's government finds that the structure we have adopted for our business operations in mainland China does not comply with laws and regulations of mainland China, or if these laws or regulations or interpretations of existing laws or regulations change in the future, we could be subject to severe penalties, including the shutting down of our platforms and our business operations currently operated in mainland China.
- We rely on contractual arrangements with the variable interest entities and their shareholders for some of our operation in mainland China, which may not be as effective as direct ownership. If the variable interest entities and their shareholders fail to perform their obligations under these contractual arrangements, we may have to resort to litigation or other legal proceedings to enforce our rights, which may be time-consuming, unpredictable, expensive and damaging to our operations and reputation.
- The shareholders of the variable interest entities may have potential conflicts of interest with us, and if any such conflicts of interest are not resolved in our favor, our business may be materially and adversely affected.

#### **Risks Related to Our ADSs**

- The trading prices of our ADSs are likely to be volatile, which could result in substantial losses to investors.
- We may be named as a defendant in putative shareholder class action lawsuits and may be subject to the SEC or third-party investigations which could have a material adverse impact on our business, financial condition, results of operation, cash flows and reputation.
- We believe that we were a passive foreign investment company, or PFIC, for United States federal income tax purposes for the taxable year ended December 31, 2023, which could subject United States holders of our ADSs or Class A common shares to significant adverse United States income tax consequences.
- Our dual class common share structure with different voting rights will limit your ability to influence corporate matters and could discourage others from pursuing any change of control transactions that holders of our Class A common shares and ADSs may view as beneficial.

## **Risks Related to Our Business and Industry**

### ***We are subject to risks associated with operating in a rapidly developing industry and an evolving market.***

Many of the elements of our business are unique, evolving and relatively unproven. Our business and prospects depend on continuing development of the online social entertainment and smart commerce solution industries of the world. The market for our services is rapidly developing and evolving, and is subject to significant challenges. The success of our business heavily relies on the size and engagement level of our user base, and our ability to successfully monetize our user base and products and services. Developing and integrating new content and services could be expensive and time-consuming, and our efforts in those aspects may not yield the benefits we expect to achieve in a timely manner, or at all. We cannot assure you that we will continue to succeed in the industry or the industry will continue to grow as rapidly as it did in the past.

As users are facing a growing number of entertainment or smart commerce solution options that directly or indirectly compete with online social entertainment and smart commerce solution services that we offer, these services may not maintain or see increases in their current popularity. Growth of the online social entertainment and smart commerce solution industries is affected by numerous factors, such as quality, user experience, technological innovations, development of internet and internet-based services, regulatory environment, and macroeconomic environment. If the services that we offer lose their popularity due to changing social trends and consumer preferences, or if the global online social entertainment or smart commerce solution market does not grow as quickly as expected, our results of operation and financial condition may be materially and adversely affected.

### ***If we fail to effectively manage our growth or implement our business strategies, our business and results of operations may be materially and adversely affected.***

We believe that our continued growth will depend on our ability to develop new sources of revenue, increase monetization, attract new users, retain and expand paying users, encourage additional purchases by our paying users, continue developing innovative products, services and technologies in response to user demand, increase brand awareness through marketing and promotional activities, react to changes in user access to and use of the internet, expand into new market segments, integrate new devices, platforms and operating systems, develop new advertising and promotion methods, attract new advertisers and retain existing advertisers, attract new merchants, retain and increase revenues from existing merchants, and take advantage of any growth in the relevant markets. We cannot assure you that we will achieve any of the above or achieve any of the above in a cost-effective manner.

To manage our growth and maintain profitability, we anticipate that we will need to continue to implement, from time to time, a variety of new and upgraded operational and financial systems, procedures and controls on an as-needed basis. We will also need to further expand, train, manage and motivate our workforce and manage our relationships with users, performers, third-party game developers, advertisers, media platforms, merchants, app developers, payment processors, shipping companies and other business partners. All of these endeavors involve risks and will require substantial management efforts and skills and significant additional expenditures. We cannot assure you that we will be able to effectively manage our growth or implement our future business strategies, and failure to do so may materially and adversely affect our business and results of operations.

### ***We face risks associated with the sale of YY Live to Baidu.***

On November 16, 2020, we entered into definitive agreements with affiliates of Baidu, subsequently amended on February 7, 2021, pursuant to which Baidu agreed to acquire our video-based entertainment live streaming business in mainland China, which we refer to as YY Live, including the YY mobile app, the YY.com website, and the YY PC app, among others, for an aggregate purchase price of approximately US\$3.6 billion in cash, subject to certain adjustments. The acquisition was substantially completed as of February 8, 2021, with certain matters remaining to be completed, including necessary regulatory approvals from government authorities. As a result, YY Live's historical results were presented in our consolidated financial statements as discontinued operations and we ceased consolidation of YY Live's business since February 8, 2021. In April 2022, we and Baidu agreed to extend the long stop date, which is the closing deadline of the proposed acquisition, indefinitely until the extension is properly terminated by either party.

On January 1, 2024, we received a written notice from an affiliate of Baidu, purporting to terminate the share purchase agreement. Baidu asserted in the written notice that it has and exercised the right to terminate the referenced share purchase agreement and effectively cancel the transaction.

We are currently in discussion with Baidu on the next steps following the termination of the share purchase agreement. We are also seeking legal advice and will consider all options at our disposal in response to Baidu's written notice and expressly reserve all rights. From January 1, 2024 to the date of this annual report, we have not obtained control of YY Live and have not consolidated YY Live. Baidu previously paid an aggregate amount of US\$1.9 billion to us in our designated accounts and deposited an aggregate of US\$1.6 billion into Baidu's escrow accounts, in accordance with the terms and schedule set forth in the share purchase agreement. As of the date of this annual report, the possession status of these funds remained unchanged.

Given the current circumstances, we cannot predict how the situation may further evolve and develop. Substantial uncertainties remain as to how things may develop or evolve, in particular, as to whether YY Live will be returned to us for re-consolidation and whether we could retain the paid consideration and receive the remaining deposits. Our business prospects, results of operations and financial conditions may be materially and adversely affected by any further developments.

***We have a limited operating history for some of our businesses, and you should consider our prospects in light of the risks and uncertainties which early-stage companies in evolving industries globally may be exposed to or encounter, including possible volatility in the trading prices of our ADSs.***

We have a limited operating history upon which to evaluate the viability and sustainability of our businesses. Our historical results may not be indicative of our future performance. Many of our global social entertainment platforms (such as Bigo Live, Likee and Hago) were launched after 2016. In 2019, we acquired BIGO, which is now our core business segment, and has been evolving constantly to further expand our global business. Also, Shopline was established in 2013 and started to be consolidated by us from September 2022. As a result of our relatively short history and introduction of new businesses, our historical results of operations may not provide a meaningful basis for evaluating our business, financial performance and future prospects. We may not be able to achieve similar growth rates in future periods as we had witnessed historically. Accordingly, you should not rely on our results of operations for any prior periods as an indication of our future performance. We may again incur net losses and experience adverse impact on our results of operations brought on by our new businesses in the future and you should consider our prospects in light of the risks and uncertainties which early-stage companies in evolving industries globally with limited operating history may be exposed to or encounter, including risks associated with being a public company with global business operations. See “—Risks Related to Our ADSs—The trading prices of our ADSs are likely to be volatile, which could result in substantial losses to investors.”

Although our core business segment BIGO has started to generate profit since 2021, the consolidation of Shopline's financial results starting from September 6, 2022 adversely affected our financial results in 2022 as Shopline has been incurring net losses and may continue to have similar impact on our results of operations in the future. In 2023, we recognized net operating income of US\$28.8 million, with the BIGO segment achieving net operating income of US\$230.1 million, partially offset by net operating loss generated by the All other segment of US\$201.3 million.

Our profitability is also affected by other factors beyond our control, such as the continual development of the industries in which we operate in multiple countries, changes in the macroeconomic and regulatory environment or competitive dynamics and our inability to respond to these changes in a timely and effective manner. We may incur significant costs and expenses in many aspects of our business, such as sales and marketing expenses to acquire users, merchants or advertisers and raise our brand awareness, as well as research and development costs to update existing services, launch new services, and rising bandwidth costs to support our social entertainment and smart commerce solution functions, grow our user base and generally expand our business operations. The continued success of our business depends on our ability to identify which services will appeal to our user base and to offer such services on commercially acceptable terms. Our ability to finance our planned expansion also depends in part on our ability to convert active users into paying users and increase the average revenue per paying user, or ARPU, and successfully compete in a very competitive market. We may incur net losses in the future.

***We generate a substantial majority of our revenues from live streaming services. If our live streaming revenues decline in the future, our results of operations may be materially and adversely affected.***

Historically, a substantial majority of our revenues are from live streaming services, membership subscription fees and advertisement. For the year ended December 31, 2023, revenues from live streaming constituted 87.3% of our total net revenues. While we have been exploring and diversifying our revenue streams, we expect that the majority of our revenues will continue to be contributed from live streaming services in the near future. Any decline in live streaming revenues may materially and adversely affect our results of operations. See “—The revenue model for each of our live streaming and our membership program may not remain effective, which may affect our ability to retain existing users and attract new users and materially and adversely affect our business, financial condition and results of operations.”

***We may face significant risks related to the content, information, communications and other activities on our platforms.***

Our live streaming, short video and video communication platforms enable users to exchange information, generate and distribute content, advertise products and services, conduct business and engage in various other online activities. However, because a majority of the communications on our platforms are conducted in real time, we are unable to verify the sources of all information posted thereon or examine the content generated by users before it is posted. Even though we have implemented content moderation system, there can be no assurance that it will be effective at all times in preventing misconduct by our platform users. For a description of how content can be accessed on or through our platforms, and what measures we take to lessen the likelihood that we will be held liable for the nature of such content, see “Item 4. Information on the Company—B. Business Overview—Technology,” “Item 4. Information on the Company—B. Business Overview—Intellectual Property,” and “—Risks Related to Our Business and Industry—We have been and may be subject to intellectual property infringement, misappropriation or other claims or allegations in multiple jurisdictions, which could result in our payment of substantial damages, penalties and fines, removal of relevant content from our website or seeking license arrangements which may not be available on commercially reasonable terms.”

Because we do not have full control over how and what users will use our platform to communicate, our platform may be misused by individuals or groups of individuals to engage in immoral, disrespectful, fraudulent or illegal activities. Even though we seek to detect on a timely basis spam accounts through which illegal or inappropriate content is streamed or posted or illegal or fraudulent activities are conducted, there is no guarantee that such incidents would not occur. Media reports and internet forums have covered some of these incidents, which have in some cases generated negative publicity about our platforms and brand. We have implemented control procedures to detect and block illegal or inappropriate content and illegal or fraudulent activities conducted through the misuse of our platforms, but such procedures may not prevent all such content from being broadcasted or posted or activities from being carried out. If we fail to timely and effectively manage and discipline such misconduct or misuse, it may materially and adversely impact our brand image, business, financial condition, and results of operations. Moreover, as we have limited control over real-time and offline behavior of our users, to the extent such behavior is associated with our platforms, our ability to protect our brand image and reputation may be limited. Our business and the public perception of our brand may be materially and adversely affected by misuse of our platforms. In addition, if any of our users suffers or alleges to have suffered physical, financial or emotional harm following contact initiated on our platforms or after watching unsettling or inappropriate content that our content monitoring system fails to filter out, we may face civil lawsuits or other liabilities initiated by the affected viewer, or governmental or regulatory actions against us. In response to allegations of illegal or inappropriate activities conducted through our platforms or any negative media coverage about us, government authorities may intervene and hold us liable for non-compliance with relevant laws and regulations concerning the dissemination of information on the internet and subject us to administrative penalties or other sanctions, such as requiring us to restrict or discontinue some of the features and services provided on our website and mobile application, or even revoke our licenses or permits to provide internet content service. We endeavor to ensure all users are compliant with relevant regulations, but we cannot guarantee that all users will comply with all the relevant laws and regulations. Therefore, we may be subject to investigations or subsequent penalties if content displayed on our platform is deemed to be illegal or inappropriate under relevant laws and regulations. As a result, our business may suffer and our user base, revenues and profitability may be materially and adversely affected.

In addition, it is possible that users may engage in illegal, obscene or incendiary conversations or activities, including the publishing of inappropriate, infringing or illegal content on our platforms that may be deemed unlawful. If any content on our platforms is considered or deemed illegal, obscene, infringing or incendiary, or if appropriate licenses and third-party consents have not been obtained, allegations or claims may be brought against us for defamation, libel, negligence, copyright, patent or trademark infringement, other unlawful activities or based on other theories. For example, we have occasionally received fines for certain inappropriate materials placed by third parties on our platforms, and may be subject to similar fines and penalties in the future. In September 2021, Hello, our real-time voice interactive platform operated in mainland China was temporarily removed from the app store at the request of the Office of the Central Cyberspace Affairs Commission and was re-launched in June 2022 after rectification. After comprehensive evaluation of all relevant factors, in April 2023, we voluntarily ceased operations of certain real-time voice interactive platforms operated in mainland China. We also may face liability for copyright or trademark infringement, fraud, and other claims based on the nature and content of the materials that are delivered, shared or otherwise accessed through or published on our platforms. Defending any such actions could be costly and involve significant time and attention of our management and other resources. If they find that we have not adequately managed the content on our platforms, or if any of our platforms fails to comply with any of such provisions, jurisdictional authorities in various regions may impose legal sanctions on us, including, interviews held by relevant cyberspace authorities, warnings, information update suspension, and in serious cases, suspending or revoking the licenses necessary to operate our platforms, restriction from engaging in internet information services, online behavior restrictions or industry bans.

As our international operations continue to expand, we face significant challenges to ensure the content and communications on our platform are compliant with local jurisdiction's regulatory framework and social environment, many of which could be substantially different from each other due to the differences in, among others, the legal system, political environment, culture and religion. Such differences may impose more stringent requirements and restrictions to the content we presented. In addition, the regulatory framework for live streaming, short video or video communication and smart commerce solution business is still developing and remains uncertain in several countries where we have operations, including, but not limited to, countries such as Saudi Arabia, Indonesia, India and mainland China. New laws and regulations may also be adopted from time to time to address new issues that come to the government authorities' attention. Considerable uncertainties still exist with respect to the interpretation and implementation of existing and future laws and regulations governing our business activities in these areas. In addition, we may be required to impose more stringent content monitoring measures, be in compliance with relevant content regulatory regime, obtain relevant licenses or permits or renew or expand the coverage of our existing licenses, and we cannot assure you that we will be able to timely obtain or maintain all the required licenses or permits or make any necessary filings applicable in the future, or comply with other relevant regulatory requirements. If we fail to obtain, hold or maintain any of the required licenses or permits or make the necessary filings on time or at all, or fail to comply with other regulatory requirements, we may be subject to various penalties, including fines, discontinuation restriction of our operations as well as reputation damage. Cultural differences may also impose additional challenges to our efforts in content control. Therefore, such different and possibly more stringent regulatory and cultural environments may increase the risk exposure to our daily operations in multiple jurisdictions across the globe. We have experienced incidents in the past where our application was temporarily suspended in certain markets due to inappropriate content being displayed on our platform. We have also received claims in connection with intellectual property infringement and entered into settlement or license agreements with third parties or are in the process of negotiating such agreements with third parties to resolve such claims. Such incidents or similar incidents related to our failure to comply with laws, regulations and rules in multiple jurisdictions across the globe could materially and adversely affect our business, results of operations, global reputation and global growth efforts. Requirements of entering into license or settlement agreements may also significantly increase our costs of operations and adversely affect our business results. In addition, each jurisdiction may have a different regulatory framework, implementation and enforcement for live streaming or short video or video communication business or smart commerce solution business, which may substantially increase our compliance costs to obtain, maintain or renew requisite licenses and permits or fulfill any required administrative procedures.

***The revenue model for each of our live streaming and our membership program may not remain effective, which may affect our ability to retain existing users and attract new users and materially and adversely affect our business, financial condition and results of operations.***

We offer live streaming services to our users through multiple platforms using a virtual items-based revenue model whereby users can make real-time broadcast to share life moments, show their talents, interact and send virtual gifts, and enjoy fun live sessions with people worldwide. We have generated, and expect to continue to generate, a substantial majority of our live streaming revenues using this revenue model. Our live streaming business has experienced significant growth in recent years, but we cannot assure you that we will continue to achieve a similar growth rate in the future, as the user demand for this service may change, decrease substantially or dissipate, or we may fail to anticipate and serve user demands effectively.

We may not be able to continue to successfully implement the virtual items-based revenue model for live streaming, as users may not be able to develop new relationships in the community, or popular performers, channel owners, and famous professional game teams may leave our platforms and we may be unable to attract new talent that can attract users or cause such users to increase the amount of time spent engaging and money spent on purchasing virtual items on our platforms. In addition, certain content on our live streaming platforms, such as certain online games owned by or licensed to certain gaming companies or publishers, may not continue to be available to our users for live streaming purposes. Failure to keep our users engaged in the live streaming service may result in reducing average revenue per user and the number of paying users, which may adversely affect our financial condition and results of operations.

Furthermore, under our current arrangements with certain talent performers, agencies, channel owners and famous professional game teams, we share with them a portion of the revenues we derive from the sales of virtual items on our live streaming platform. In turn, this may affect the user and revenue growth in this business, which may materially and adversely affect our financial condition and results of operations.

In addition, we have been a pioneer in offering an online concert platform to music performers and platform users. We also continue to focus on the development of professionally-curated user generated content and professionally generated content as well as introducing more e-sports content on our platforms. However, if our users decide to access live streaming content provided by our current or future competitors, our business, financial condition and results of operations could be materially and adversely affected.

Users may also purchase time-based virtual items from us, such as the membership subscription service with the designation of Noble Members for themselves. We offer a range of privileges and benefits, such as virtual items exclusively available to members, dedicated customer services specialist and priority entrance to certain live performances. However, we may not be able to further build or maintain our membership base in the future for various reasons-for example, if we fail to continue to provide innovative products and services that are attractive to members, we may not be able to retain them and our business, financial condition and results of operations could be adversely affected.

***We generate a portion of our revenues from online advertising. If we fail to attract more advertisers to our platforms or if advertisers are less willing to advertise with us, our revenues may be adversely affected.***

We generate a portion of our revenues from online advertising. Our advertising revenues partly depend on the continual development of the online advertising industry and advertisers' allocation of budgets to internet advertising. In addition, companies that decide to advertise or promote online may utilize more established methods or channels for online advertising, such as more established internet portals or search engines, over advertising on our platforms. Our ability to increase our online advertising revenues and our profitability and prospects can be influenced by numerous other factors, including: (i) growth and trends of the global online advertising market; (ii) our ability to grow our user base and user engagement, particularly for our products that deliver advertisement impressions; (iii) our ability to capture and retain a sufficient share of that market; (iv) changes to the content or application of third-party policies that limit our ability to deliver, target, or measure the effectiveness of advertising, including changes by mobile operating system and browser providers such as Apple and Google; and (v) the pricing of our advertisements.

We offer advertising services substantially through contracts entered into with advertisers and third-party advertising agencies and by way of displaying advertisement on our websites and platforms or providing promotion integrated into the programs, shows or other content offered on our platforms. We cannot assure you that we will be able to retain existing direct advertisers or advertising agencies or attract new direct advertisers and advertising agencies. Since our arrangements with third-party advertising agencies typically involve one-year framework agreements, these advertising arrangements may be easily amended or terminated without incurring liabilities. If we fail to retain existing advertisers and advertising agencies or attract new direct advertisers and direct advertising agencies or any of our current advertising methods or promotion activities become less effective, our business, financial condition and results of operations may be adversely affected.

***Changes in global or regional economic, geopolitical or social conditions, as well as changes in government policies, could materially and adversely affect our business, financial condition and results of operations.***

We have businesses in diverse global markets and are subject to risks associated with doing business internationally. Our business, financial condition and results of operations may be influenced to a significant degree by economic, geopolitical and social conditions, and government policies related to the markets where we operate. A general slowdown in the global economy, increased volatility, or inflation could adversely affect our business, financial condition and results of operations. Changes in consumer behavior due to adverse economic conditions may also negatively impact us as such developments could lead to a decrease in consumer spending and reduction in demand for our products and services, which may adversely affect our business, financial condition, results of operation or competitive position.

The economies in different markets generally differ in many respects, including the level of government involvement, level of development, growth rate, regulation of foreign exchange, government policy on public order and allocation of resources. In some of the markets where we operate, governments continue to play a significant role in regulating industry development by imposing industrial policies. Some governments also exercise significant discretion over the economic growth and public order in their respective jurisdictions through allocating resources, controlling payment of foreign currency-denominated obligations, setting monetary policies, and providing preferential treatment to particular industries or companies. Governmental actions to manage inflation and other policies and regulations have often involved, among other measures, price regulations, currency devaluations, capital management and limits on imports. Our business, financial condition and results of operations may be adversely affected by changes in government policies or regulations, such as exchange rates and exchange regulation policies, inflation rates, interest rates, tariff and inflation management policies, price management policies, import duties and restrictions, liquidity of domestic capital and lending markets, electricity rationing tax policies, including royalty, tax increases and retroactive tax claims, and other political, diplomatic, social and economic developments in or affecting the markets where we operate.

Economic growth in the various markets where we operate has been uneven, both geographically and among various sectors of the economy. Any adverse changes in economic conditions in the markets where we operate or neighboring regions, or in the policies of the governments or of the laws and regulations in each respective market could have a material adverse effect on the overall economic growth of those markets. Such developments could adversely affect our business, financial condition and results of operations, lead to a reduction in demand for our products and services, and adversely affect our competitive position.

Some of the markets where we operate have experienced, and may in the future experience, geopolitical and social instability, including strikes, demonstrations, protests, marches, other types of civil disorder, war or armed conflict, refugee migration or other types of unrests. For example, the ongoing geopolitical tensions related to Russia's actions in Ukraine, resulting sanctions imposed by the United States and other countries and retaliatory actions taken by Russia in response to such sanctions have resulted in significant disruptions to supply chains, logistics, and business activities globally. We cannot predict the duration or outcome of these events and actions or whether future developments would have any material adverse impact on our business. These and other instabilities and any adverse changes in the political environment could increase our costs, increase our exposure to legal and business risks, disrupt our operations or the business activities of our ecosystem participants, or affect our ability to expand or retain our user base.

In addition, governments or government agencies in any of the markets where we operate could censor, ban or block access to our services, mobile applications, platforms and/or the internet generally for various reasons, including political tensions and wars between countries, content restrictions, national security, data protection or regulatory concerns. For example, in late June 2020, the Indian government took extensive measures to block certain apps in its local market and defend other geopolitical risks. Our platforms, including Bigo Live, Likee and Hago were subsequently blocked as a result, which has negatively affected the scale of our user base and our operations in the region. Users generally need to access the internet and/or app stores to access, download or use our services and mobile applications. If governments either directly or indirectly block, limit or otherwise restrict us from publishing or making available our products and services to users, block, limit or restrict our users from accessing our products, services or mobile applications, prevent us from onboarding new users, prevent data transfers to or from certain markets or services, or take similar actions against us, our business could be negatively impacted, and we could experience loss or slower growth of our user base, financial loss, and our reputation may be adversely affected. Further, any government actions taken against our service providers, partners or other third-party intermediaries on which our business relies could cause our products and services to become unavailable for extended periods of time or even indefinitely.

Governments or government agencies may take legislative, executive, administrative or other measures or implement policies to regulate foreign investments, including applying heightened scrutiny and imposing additional requirements, prohibitions and restrictions on investments made by companies that meet certain criteria. Companies may be evaluated based on (i) their place of incorporation or country of origin, (ii) the place of incorporate, country of origin, or nationality of their shareholders and/or beneficial owners, and (iii) where the companies have employees or service providers, store data or develop or provide their products and services. Any changes in foreign investment restrictions in the markets where we operate may affect our ability to operate and maintain our business in these markets. In the event of such restrictions, we may face additional legal and regulatory compliance costs and risks, lose investments we have made and/or exit such markets, our users may develop a negative perception of us, and our business, financial condition and results of operations could be negatively affected.

***Our business is subject to complex and evolving laws and regulations across the globe regarding cybersecurity, information security, privacy and data protection. Many of these laws and regulations are subject to change and uncertain interpretation, and any failure or perceived failure to comply with these laws and regulations could result in claims, changes to our business practices, negative publicity, legal proceedings, increased cost of operations, or declines in user growth or engagement, or otherwise harm our business.***

We operate in several key markets across the globe. Our business generates and processes a large quantity of data. We face risks inherent in handling and protecting large volume of data. In particular, we face a number of challenges relating to data from transactions and other activities on our platforms, including:

- protecting the data in and hosted on our system, including against attacks on our system by outside parties or fraudulent behavior or improper use by our employees;
- addressing concerns related to privacy and sharing, safety, security and other factors; and
- complying with applicable laws, rules and regulations relating to the collection, use, storage, transfer, disclosure and security of personal information, including any requests from regulatory and government authorities relating to these data.

In general, we expect that data security and data protection compliance will receive greater attention and focus from regulators globally, as well as attract continued or greater public scrutiny and attention going forward, which could increase our compliance costs and subject us to heightened risks and challenges associated with data security and protection. If we are unable to manage these risks, we could become subject to penalties, including fines, suspension of business and revocation of required licenses, and our reputation and results of operations could be materially and adversely affected.

Legal developments in Europe have created compliance uncertainty regarding the processing of personal data. For example, the General Data Protection Regulation, or GDPR, which came into application in the European Union, or EU, on May 25, 2018, applies to all of our activities conducted from an establishment in the EU or related to products and services that we offer to EU users. We may be considered in violation of the GDPR and thus be required to adopt additional measures in the future. If we fail to comply with the requirements stipulated by the GDPR in a timely manner, or at all, we may be subject to significant penalties and fines, which may in turn adversely affect our business, reputation, financial condition and operating results. The privacy requirements and expectations created by the GDPR are stricter than certain other regions. On December 22, 2023, the regulation on harmonized rules on fair access to and use of data was published in the EU's Official Journal. This regulation sets up new rules on who can access and use data generated in the EU across all economic sectors. It will lay down rules on business-to-business and business-to-customer data access, establishes a ban on unfair contractual terms on data sharing, and introduce restrictions to non-EU governmental access and international transfers of non-personal data, by requiring providers of data processing services to take technical, organizational and legal measures to prevent unlawful access and transfers.

Additionally, California enacted legislation that has been dubbed the first “GDPR-like” law in the United States. Known as the California Consumer Privacy Act, it created new individual privacy rights for consumers (as that word is broadly defined in the law) and places increased privacy and security obligations on entities handling personal data of consumers or households. The California Consumer Privacy Act, which came into effect on January 1, 2020, requires covered companies to provide new disclosures to California consumers, and provides such consumers new ways to opt-out of certain sales of personal information. The California Consumer Privacy Act provides for civil penalties for violations, as well as a private right of action for data breaches that is expected to increase data breach litigation. The California Consumer Privacy Act may increase our compliance costs and potential liability. Some observers have noted that the California Consumer Privacy Act could mark the beginning of a trend toward more stringent privacy legislation in the United States, which could increase our potential liability and adversely affect our business.

Under Personal Data Protection Act 2012 of Singapore, as amended from time to time, when an organization collects personal data, it must procure the individual's consent to the collection, use and disclosure of his/her personal data. Individuals have clearly defined rights, such as the right to access their personal data, request information on how their personal data has been used, and correct any inaccuracies in the personal data held by the organization. The organization should designate a Data Protection Officer for this purpose. Indonesia, Vietnam and Malaysia also enacted legislation providing protection on personal data, the general principles of which are substantially similar. For details, see "Item 4. Information on the Company—B. Business Overview—Regulations in Multiple Jurisdictions Where We Operate—Regulations on Data Privacy and Protection." Furthermore, we may also be subject to the Information Technology Act 2000 of India, which primarily provides for (i) civil liability to compensate for wrongful loss or gain to any person arising from negligence in implementing and maintaining reasonable security practices and procedures with respect to sensitive personal data or information that we possess, deal with or handle in our computer systems, networks, databases and software, and (ii) criminal punishment if, in the course of performing a contract, a service provider discloses personal information without the consent of the person concerned or is in breach of a lawful contract and does so with the intention to cause, or knowing it is likely to cause, wrongful loss or wrongful gain. As our global expansion evolves, we may incur additional costs for the compliance with these legislations and be exposed to additional risks and challenges in our ordinary course of business. Also, we may, from time to time, be subject to data protection regulations from additional jurisdictions, which may impose additional and more stringent requirements.

For our operations in mainland China, the regulatory and enforcement regime of mainland China with regard to data security and data protection is evolving and may be subject to different interpretations or significant changes. Moreover, different mainland China's regulatory bodies, including the Standing Committee of the National People's Congress, the Ministry of Industry and Information Technology, the CAC, the Ministry of Public Security and the State Administration for Market Regulation, or the SAMR, have enforced data privacy and protections laws and regulations with varying standards and applications. See "Item 4. Information on the Company—B. Business Overview—Regulations in Multiple Jurisdictions Where We Operate—Mainland China Regulations—Information Security and Censorship," "Item 4. Information on the Company—B. Business Overview—Regulations in Multiple Jurisdictions Where We Operate—Mainland China Regulations—Privacy Protection," and "Item 4. Information on the Company—B. Business Overview—Regulations in Multiple Jurisdictions Where We Operate—Mainland China Regulations—Regulations on Overseas Listing by Domestic Companies."

Many of the data-related legislations are relatively new and certain concepts thereunder remain subject to interpretation by the regulators. If any data that we possess belongs to data categories that are subject to heightened scrutiny, we may be required to adopt stricter measures for protection and management of such data. For example, the Measures for Cybersecurity Review and the draft of the Administrative Measures for Internet Data Security remain unclear on whether the relevant requirements will be applicable to companies that are already listed in the United States, such as us, if we were to pursue another listing outside of mainland China. If the Measures for Cybersecurity Review, the enacted version of the Administrative Measures for Internet Data Security and the Measures for Security Assessment of Cross-border Data Transfer mandate clearance of cybersecurity review, data security assessment and other specific actions to be taken by issuers like us, we face uncertainties as to whether these additional procedures can be completed by us timely, or at all, which may delay or disallow our future listings (should we decide to pursue them), subject us to government enforcement actions and investigations, fines, penalties, suspension of our non-compliant operations, or removal of our apps from the relevant application stores, and materially and adversely affect our business and results of operations. As of the date of this annual report, we have not been involved in any formal investigations on cybersecurity review made by the CAC on such basis.

In general, compliance with the existing laws and regulations of mainland China, as well as additional laws and regulations that mainland China's regulatory bodies may enact in the future, related to data security and personal information protection, may be costly and result in additional expenses to us, and subject us to negative publicity, which could harm our reputation and business operations. There are also uncertainties with respect to how such laws and regulations will be implemented and interpreted in practice.

We make statements about our use and disclosure of personally identifiable information through our privacy policy, information provided on our internet platform and press statements. Any failure by us to comply with these public statements or with international privacy-related or data protection laws and regulations could result in proceedings against us by governmental entities or others. In addition to reputational impacts, penalties could include ongoing audit requirements and significant legal liability. None of the data security measures can provide absolute security, and losses or unauthorized access to or releases of confidential information, in particular personally identifiable information, may still occur, which could materially and adversely affect our reputation, financial condition and operating results.

From time to time, concerns may be expressed about whether our products, services, or processes compromise the privacy of users, customers, and others. Concerns about our practices with regard to the collection, use, disclosure, or security of personally identifiable information or other privacy related matters, even if unfounded, could damage our reputation and adversely affect our operating results.

***We face competition in several major aspects of our business. If we fail to compete effectively, we may lose users, advertisers and merchants which could materially and adversely affect our business, financial condition and results of operations.***

We face competition in several major aspects of our business in each market where we operate, particularly from companies that provide social media and smart commerce solution services. Some of our competitors may have longer operating histories, significantly larger user bases, more established brand recognition, and significantly greater financial, technical and marketing resources than we do, and in turn may have an advantage in attracting and retaining users, merchants and advertisers. In addition, competitors in some areas of our business may be able to develop products and services better received by users or merchants, or may be able to respond more quickly and effectively than we can to new or evolving opportunities, technologies, regulations or user trends. Some competitors may be able to leverage a stronger financial position to adopt more aggressive pricing policies and offer more attractive terms to our users, merchants or business partners.

In relation to our global business, our competitors primarily include global short video platforms such as TikTok, and live streaming platforms such as Twitch in certain regions. We also compete for online advertising revenues with other internet companies that sell online advertising services globally. In the meanwhile, we face competition from companies that provide smart commerce solutions for merchants, such as Shopify. We may offer new products and services, develop new features and functionality of our platforms or enhance existing ones, which may subject us to increased or additional competition. We may also periodically change or remove new features and functionality, optimize our operational efficiency and increase monetization efforts, which may not be well received and lead to decrease in the number of users on our platforms. We may also face potential protectionist policies, political measures or regulatory challenges that are more supportive of local players in such markets, which may, among other things, hinder our ability to compete effectively in such markets.

If we are not able to effectively compete in any of our lines of business, our overall user base and level of user engagement may decrease, which could reduce our paying users or make us less attractive to advertisers or merchants. We may be required to spend additional resources to further increase our brand recognition and promote our products and services, and such additional spending could adversely affect our profitability. Furthermore, if we are involved in disputes with any of our competitors that result in negative publicity to us, such disputes, regardless of their veracity or outcome, may harm our reputation or brand image and in turn lead to reduced number of users and advertisers. Any legal proceedings or measures we take in response to such disputes may be expensive, time-consuming and disruptive to our operations and divert our management's attention.

Our competitors may unilaterally decide to adopt a wide range of measures targeted at us, including possibly designing their products to negatively impact our operations, such as sending virus-like programs to attack elements of our platforms. Some competitors may also make their applications incompatible with ours, effectively requiring users to either stop using our competitors' products or uninstall our products, leading to a reduction in our number of users.

***We have granted employee stock options and other share-based awards in the past and are very likely to continue to do so in the future. We recognize share-based compensation expenses in our consolidated statements of operations in accordance with the relevant rules under U.S. GAAP, which have had and may continue to have a material and adverse effect on our results of operations.***

We have adopted several share incentive plans and granted share-based compensation awards pursuant to which, including share options, restricted shares and restricted share units, to various employees, key personnel and other non-employees to incentivize performance and align their interests with ours. As of March 31, 2024, options to purchase 8,574,220 Class A common shares, 5,968,858 restricted shares and 43,061,343 restricted share units were outstanding under our share incentive plans. As a result of these grants and potential future grants, we had incurred in the past and expect to continue to incur significant share-based compensation expenses in the future. The amount of these expenses is based on the fair value of the share-based awards. We account for compensation costs for certain share-based compensation awards granted in the past using a graded-vesting method and recognize expenses in our consolidated statements of operations in accordance with the relevant rules under U.S. GAAP. The expenses associated with share-based compensation materially increased our net losses or reduced our net income in the past, and may reduce our net income in the future. In addition, any additional securities issued under share-based compensation schemes will dilute the ownership interests of our shareholders, including holders of our ADSs. However, if we limit the scope of the share-based compensation schemes, we may not be able to attract or retain key personnel who expect to be compensated by options, restricted shares or restricted share units.

***The number of mobile active users we have may fluctuate and we may fail to attract more paying users, which may materially and adversely affect our revenues growth, results of operations and financial condition.***

The number of our mobile monthly active users across various platforms of ours may fluctuate significantly from time to time. The number of our mobile monthly active users may vary significantly from quarter to quarter due to a variety of factors, including, but not limited to, (i) overall consumer demand for online entertainment services such as live streaming; (ii) our ability to attract and attain users; (iii) seasonality in activity level of our users; (iv) increases in sales and marketing expenses and other operating expenses that we may incur to grow and expand our operations; (v) timing of promotional and marketing activities; (vi) change of our business strategy, such as launching new services or products, or expanding into new markets, or discontinuing services in certain markets, or discontinuing certain products; (vii) competitors' entry into or exiting from our markets; and (viii) government regulations, policies, actions or restrictions globally and in markets where we operate.

For instance, in late June 2020, the Indian government took extensive measures to block certain apps in its local market and defend other geopolitical risks. Our platforms, including Bigo Live, Likee and Hago were subsequently blocked as a result, which has negatively affected the scale of our user base and resulted a short-term impact on our operations. In addition, we voluntarily reduced the sales and marketing expenditures for Likee and Hago in 2021, which has negatively affected our user acquisition and in turn led to a decrease in their user base. If we are unable to attract new users and retain them as active users and convert non-paying active users into paying users, the numbers of our active users and paying users may further fluctuate and our growth prospects, results of operations and financial condition may be materially and adversely affected.

***We may not be able to keep our users highly engaged, which may reduce our monetization opportunities and materially and adversely affect our revenues, profitability and prospects.***

Our success depends on our ability to maintain and grow our user base and keep our users highly engaged. In order to attract and retain users and remain competitive, we must continue to innovate our products and services, implement new technologies and functionalities and improve the features of our platforms in order to entice users to use our products and services more frequently and for longer durations.

The internet industry is characterized by constant changes, including rapid technological evolution, continual shifts in customer demands, frequent introductions of new products and services and constant emergence of new industry standards and practices. Thus our success will depend, in part, on our ability to respond to these changes on a cost-effective and timely basis; failure to do so may cause our user base to shrink and user engagement level to decline and our results of operations would be materially and adversely affected. For example, our plan to more broadly support mobile-live broadcasting across our live streaming platform and retain the ability to offer high quality delivery of voice and video data may cause us to incur significant additional costs and may not succeed.

Due to the intensified competitions among audio and video-based social entertainment platforms, users may leave us for competitors' platforms more quickly than in other online sectors. A decrease in the number of our active users may reduce the diversity and vibrancy of our platforms' online ecosystem and affect our user-generated channels, which may in turn reduce our monetization opportunities and have a material and adverse effect on our business, financial condition and results of operations.

We cannot assure you that our platforms will continue to be sufficiently popular with our users to offset the costs incurred to operate and expand it. Our sales and marketing expenses may significantly increase in the future, which could have an adverse effect on our results of operations. Failure to maintain or grow our user base in a cost-effective manner, or at all, and keep our users highly engaged would materially and negatively affect our results of operations.

***Spammers and malicious applications may affect user experience, which could reduce our ability to attract users and advertisers and materially and adversely affect our business, financial condition and results of operations.***

Spammers may use our platforms to send targeted and untargeted spam messages to users, which may affect user experience. As a result, our users may use our products and services less or stop using them altogether. In spamming activities, spammers typically create multiple user accounts for the purpose of sending spam messages. Although we attempt to identify and delete accounts created for spamming purposes, we may not be able to effectively eliminate all spam messages from our platforms in a timely fashion. Any spamming activities could have a material and adverse effect on our business, financial condition and results of operations.

***We use third-party services and technologies in connection with our business, and any disruption to the provision of these services and technologies to us could result in adverse publicity and a slowdown in the growth of our users, which could materially and adversely affect our business, financial condition and results of operations.***

Our business depends upon services provided by, and relationships with, third parties. For example, we primarily rely on third-party application distribution channels, such as the iOS App Store and the Google Play Store, to allow users to download and access our applications and games. If our third-party distribution channels voluntarily or involuntarily suspend their services to us, including taking down or removing our applications in response to government actions or other legal actions or pursuant to their own policies, and we are unable to arrange for alternative measures in a timely manner or at all, our users will have difficulties accessing our applications or making payments for our products and services. Consequently, we may lose users temporarily or permanently, and our business and results of operations could be materially and adversely affected. Additionally, if we are unable to retain or attract popular talents such as performers, channel managers, professional game players, commentators and hosts for our live streaming platform or if these talents cannot draw fans or participants, our results of operations may be adversely affected. Also, if channel owners are unable to reach or maintain mutually satisfactory cooperation arrangements with the performers on their channels on our live streaming platform, we may lose popular performers and our business and operations may be adversely affected. Furthermore, if we are unable to obtain or retain rights to host popular online games or popular in-game virtual items, or if we are required to share a bigger portion of our revenues with third-party game developers, we could be required to devote greater resources and time to obtain hosting rights for new games and applications from other parties, and our results of operations may be impacted. In addition, some third-party software we use in our operations are currently publicly available without charge. If the owner of any such software decides to charge users or no longer makes the software publicly available, we may need to incur significant cost to license the software, find replacement software or develop alternative software. If we are unable to find or develop replacement software at a reasonable cost, or at all, our business and operations may be adversely affected.

Some of the services offered by us run on a complex network of servers located in and maintained by third-party data centers and our overall network relies on broadband connections provided by third-party operators. We expect this dependence on third parties to continue. The networks maintained and services provided by such third parties are vulnerable to damage or interruption, which could impact our results of operations. See “—System failure, interruptions and downtime can result in adverse publicity for our products and result in net revenue losses, a slowdown in the growth of our registered user accounts and a decrease in the number of our active users. If any of these system disruptions occurs, our business, financial condition and results of operations may be materially and adversely affected.”

Furthermore, we generate a majority of our online advertising revenues through agreements entered into with various third-party advertising agencies that represent advertisers. We do not have long-term cooperation agreements or exclusive arrangements with these agencies and they may elect to direct business opportunities to other advertising service providers. If we fail to retain and enhance our business relationships with these third-party advertising agencies, we may suffer from a loss of advertisers and our business and results of operations may be materially and adversely affected.

In addition, we sell a significant portion of our products and services through third-party online payment systems. If any of these third-party online payment systems suffer from security breaches, users may lose confidence in such payment systems and refrain from purchasing our virtual items online, in which case our results of operations would be negatively impacted. See “—The security of operations of, and fees charged by, third-party online payment platforms may have a material adverse effect on our business and results of operations.” Failure to timely collect our receivables from these third parties whose billing and payment systems we use and third-party payment processors may adversely affect our cash flows. Our third-party payment processors may from time to time experience cash flow difficulties. Consequently, they may delay their payments to us or fail to pay us at all. Any delay in payment or inability of current or potential third-party payment processors to pay us may significantly harm our cash flow and results of operations.

We exercise no control over the third parties with whom we have business arrangements. If such third parties increase their prices, fail to provide their services effectively, terminate their service or agreements or discontinue their relationships with us, we could suffer service interruptions, reduced revenues or increased costs, any of which may have a material adverse effect on our business, financial condition and results of operations.

***System failure, interruptions and downtime can result in adverse publicity for our products and result in net revenue losses, a slowdown in the growth of our registered user accounts and a decrease in the number of our active users. If any of these system disruptions occurs, our business, financial condition and results of operations may be materially and adversely affected.***

We rely on technology and internet infrastructure, data center and cloud service providers, and telecommunication networks in the markets where we operate. Although we seek to reduce the possibility of disruptions or other outages, our services may be disrupted by problems with our own technology and system, such as malfunctions in our software or other facilities and network overload. Our systems may be vulnerable to damage or interruption from telecommunication failures, power loss, computer attacks or viruses, earthquakes, floods, fires, terrorist attacks, geopolitical events, and similar events. We have experienced system failures for some operations and we have subsequently updated our system. However, we cannot assure you that there will be no similar technical failures in the future. Parts of our system are not fully redundant, and our disaster recovery planning may not be sufficient for all eventualities. Despite any precaution we may take, the occurrence of a natural disaster or other unanticipated problems at our hosting facilities could result in lengthy interruptions in the availability of our products and services. Any interruption in the ability of our users to use our products and services could reduce our future revenues, harm our future profits, subject us to regulatory scrutiny and lead users to seek alternative forms of online social interactions.

Our servers that process user payments experience some downtime on a regular basis, which may negatively affect our brand and user perception of the reliability of our systems. Any scheduled or unscheduled interruption in the ability of users to use our payment systems could result in an immediate, and possibly substantial, disruption to our business operations, loss of revenues, and damage to our reputation. Furthermore, in the event of disruptions or failures of, or other problems with, the fixed telecommunications networks of telecommunications operators, or if such operators otherwise fail to provide such services, we cannot assure you that these operators and providers will not take measures that could degrade or disrupt, as well as restrict or prohibit the use of their lines for our businesses.

Our users may use our products or services for critical transactions and communications, especially business communications. As a result, any system failures could result in damage to such users' businesses. These users could seek significant compensation from us for their losses. Even if unsuccessful, this type of claim would likely be time consuming and costly for us to address.

We have limited control over the prices of the services provided by telecommunication service providers and may have limited access to alternative networks or services. If the prices we pay for telecommunications and internet services rise significantly, our results of operations may be materially and adversely affected. Furthermore, if internet access fees or other charges to internet users increase, our user traffic may decline and our business may be harmed.

***The respective number of our registered user accounts, active users and paying users may overstate the number of unique individuals who register to use our products and services, log on to our platforms, purchase virtual items or other products and services on our platforms, respectively, and may therefore lead to an inaccurate interpretation of our average revenue per paying user metric and of our business operations by our management and by investors, and may affect advertisers' decisions on the amount spent on advertising with us.***

While BIGO users who make fund withdrawal requests are required to provide full name, date of birth and identity information, users are otherwise not required or obligated to undergo real-name verification under the currently valid regulations. Therefore, we cannot and do not track the number of unique paying users. Instead, we track the number of registered user accounts, active users and paying users. We calculate certain operating metrics in the following ways: (a) the number of registered user accounts is the cumulative number of accounts on our social entertainment platforms that, by the end of the relevant period, had log-on activity at least once after registration, (b) the number of active users is measured by the number of registered user accounts that have had log-on activities at least once during the relevant period, and (c) the number of paying users is measured by the number of registered user accounts that have purchased virtual items or other products and services on our platforms at least once during the relevant period. The actual number of unique individual users, however, is likely to be lower than that of registered user accounts, active users and paying users, potentially significantly, for three primary reasons. First, each individual user may register more than once and therefore have more than one account, and sign onto each of these accounts during a given period. For example, a user may (a) create separate accounts for community and personal use and log onto each account at different times for different activities or (b) if he or she lost his or her original username or password, he or she can simply register again and create an additional account. Second, we experience irregular registration activities such as the creation of a significant number of improper user accounts by a limited number of individuals, which may be in violation of our policies, including for the purpose of clogging our network or posting spam to our channels. We believe that some of these accounts may also be created for specific purposes such as to increase the number of votes for certain performers in various contests, but the number of registered user accounts, paying users and active users do not exclude user accounts created for such purposes. We have limited ability to validate or confirm the accuracy of information provided during the user registration process to ascertain whether a new user account created was actually created by an existing user who is registering duplicative accounts. Thus, the respective number of our registered user accounts, active users and paying users may overstate the number of unique individuals who register on our platforms, sign onto our platforms, purchase virtual items or other products and services on our platforms, respectively which may lead to an inaccurate interpretation of our average revenue per paying user metric.

In addition, we may be unable to track whether we are successfully converting registered users or active users into paying users since we do not track the number of unique individuals or operate our platforms on a real-name basis. If the growth in the number of registered user accounts, active users or paying users is lower than the actual growth in the number of unique individual registered, active or paying users, our user engagement level, sales and our business may not grow as quickly as we expect, and advertisers may reduce the amount spent on advertising with us, which may harm our business, financial condition and results of operations. In addition, such overstatement may cause inaccurate evaluation of our business operations by our management and by investors, which may also materially and adversely affect our business and results of operations.

***Concerns about collection and use of personal data could damage our reputation and deter current and potential users from using our products and services, which could lead to lower revenues.***

Concerns about our practices with regard to the collection, use or disclosure of personal information or other privacy-related matters, even if unfounded, could damage our reputation and operating results. We apply strict management and protection for any information provided by users and, under our privacy policy, without our users' prior consent, we will not provide any of our users' personal information to any unrelated third party. While we strive to comply with our privacy guidelines as well as all applicable data protection laws and regulations, any failure or perceived failure to comply may result in proceedings or actions against us by government entities or others, and could damage our reputation. User and regulatory attitudes towards privacy are evolving, and future regulatory or user concerns about the extent to which personal information is used or shared with advertisers or others may adversely affect our ability to share certain data with advertisers, which may limit certain methods of targeted advertising. Concerns about the security of personal data could also lead to a decline in general internet usage, which could lead to lower registered, active or paying user numbers on our platforms. A significant reduction in registered, active or paying user numbers could lead to lower revenues, which could have a material and adverse effect on our business, financial condition and results of operations.

***The security of operations of, and fees charged by, third-party online payment platforms may have a material adverse effect on our business and results of operations.***

Currently, we sell almost all of our products and services to our users through third-party online payment systems. We expect that an increasing amount of our sales will be conducted over the internet as a result of the growing use of online payment systems. In all these online payment transactions, secured transmission of confidential information such as customers' credit card numbers and personal information over public networks is essential to maintain consumer confidence.

We do not have control over the security measures of our third-party online payment vendors, and security breaches of the online payment systems that we use could expose us to litigation and possible liability for failing to secure confidential customer information and could, among other things, damage our reputation and the perceived security of all of the online payment systems that we use. If a well-publicized internet or mobile network security breach were to occur, users concerned about the security of their online financial transactions may become reluctant to purchase our virtual items even if the publicized breach did not involve payment systems or methods used by us. In addition, there may be billing software errors that would damage customer confidence in these online payment systems. If any of the above were to occur and damage our reputation or the perceived security of the online payment systems we use, we may lose paying users and users may be discouraged from purchasing our services, which may have a material adverse effect on our business.

In addition, there are currently only a limited number of third-party online payment systems. If any of these major payment systems decides to cease to provide services to us, or significantly increase the percentage they charge us for using their payment systems for our virtual items and other services, our results of operations may be materially and adversely affected.

***Our core values of focusing on user experience and satisfaction first and acting for the long-term may conflict with the short-term operating results of our business, and also negatively impact our relationships with advertisers or other third parties.***

One of our core values is to focus on user experience and satisfaction, which we believe is essential to our success and serves the best, long-term interests of our company and our shareholders. Therefore, we have made, and may make in the future, significant investments or changes in strategy that we think will benefit our users, even if our decision negatively impacts our operating results in the short term. In addition, this philosophy of putting our users first may also negatively impact our relationships with advertisers or other third parties, and may not result in the long-term benefits that we expect, in which case the success of our business and operating results could be harmed.

***Our strategic alliances, investments or acquisitions may have a material and adverse effect on our business, reputation and results of operations. There can be no assurance that the anticipated benefits of our strategic alliances, investments or acquisitions could be realized.***

We may enter into strategic alliances, including joint ventures or minority equity investments, with various third parties to further our business purpose from time to time. These alliances could subject us to a number of risks, including risks associated with sharing proprietary information, non-performance by the third party and increased expenses in establishing new strategic alliances, any of which may materially and adversely affect our business. We may have limited ability to monitor or control the actions of these third parties and, to the extent any of these strategic third parties suffers negative publicity or harm to their reputation from events relating to their business, we may also suffer negative publicity or harm to our reputation by virtue of our association with any such third party.

In addition, if appropriate opportunities arise, we may acquire and/or invest in additional assets, products, technologies or businesses that are complementary to our existing business. Past and future acquisitions and the subsequent integration of new assets and businesses into our own require significant attention from our management and could result in a diversion of resources from our existing business, which in turn could have an adverse effect on our business operations. The integration of previously independent businesses is a complex, costly and time-consuming process, and may result in material unanticipated problems, expenses, liabilities, competitive responses, and diversion of management's attention.

Also, there can be no assurance that we can achieve the intended objectives or anticipated benefits by such strategic investments or acquisitions. Acquired assets or businesses may not generate the financial results we expect. Acquisitions could result in the use of substantial amounts of cash, potentially dilutive issuances of equity securities, the occurrence of significant goodwill impairment charges, amortization expenses for other intangible assets, exposure to potential unknown liabilities of the acquired business and decrease in our gross and net margins as a result of the consolidation of the financial results of the acquired business. To the extent that significant amortization expenses related to intangible assets are applicable, we are required to test our intangible assets, goodwill and our strategic investments for impairment annually or more frequently whenever events or changes indicate that they may be impaired. We may also incur investment loss or impairment charges to acquired businesses and assets. If implemented ineffectively or if impacted by unforeseen negative economic or market conditions or other factors, we may not realize the full anticipated benefits of our strategic investments. Our failure to meet the challenges involved in realizing the anticipated benefits of the strategic investments could cause an interruption of, or a loss of momentum in, our activities and could adversely affect our results of operations.

Moreover, the costs of identifying and consummating acquisitions may be significant. In addition to possible shareholders' approval, we may also have to obtain approvals and licenses from relevant government authorities for the acquisitions and to comply with any applicable laws and regulations, which could result in increased delay and costs. Furthermore, we may be subject to negative public perception as a result of those strategic investments or acquisition and be viewed negatively by our users, investors and financial markets in general. The market value of our investments or acquisitions may also fluctuate, particularly in volatile markets, which may adversely affect our results of operations and financial condition.

***Registered trademarks, purchased internet search engine keywords and registered domain names of third parties that are similar to our trademarks, brands or domain names could cause confusion to our users, divert online customers away from our products and services or harm our reputation.***

Competitors and other third parties may register trademarks or domain names that are similar to our trademarks or domain names or purchase keywords that are confusingly similar to our brands or websites in internet search engine advertising programs and in the header and text of the resulting sponsored links or advertisements in order to divert potential customers from us to their websites. Preventing such activity is inherently difficult. If we are unable to prevent such activity, competitors and other third parties may continue to drive potential online customers away from our platforms to competing, irrelevant or potentially offensive platforms, which could harm our reputation and cause us to lose revenue.

***We have been and may be subject to intellectual property infringement, misappropriation or other claims or allegations in multiple jurisdictions, which could result in our payment of substantial damages, penalties and fines, removal of relevant content from our website, removal of relevant application from application store platform, or seeking license arrangements which may not be available on commercially reasonable terms.***

Third party owners or right holders of patents, copyrights, trademarks, trade secrets and website content may assert intellectual property infringement, misappropriation or other claims against us. Our success depends, in part, on our ability to develop and commercialize our platforms without infringing, misappropriating or otherwise violating the intellectual property rights of third parties. However, we may not be aware that our platforms are infringing, misappropriating or otherwise violating third-party intellectual property rights and such third parties may bring claims alleging such infringement, misappropriation or violation. In addition, content generated through our platforms, including real-time content, may also potentially cause disputes regarding content ownership or intellectual property rights. For example, we could face copyright infringement claims with respect to songs performed live, recorded or made accessible and online games being streamed live, recorded or made accessible on our audio and video-based social entertainment platforms. Separately, as our business expands in global landscape, the costs of carrying out these procedures and obtaining authorization and licenses for the growing content on our platforms and to use such content in multiple jurisdictions into which we may expand our operations may increase, which may potentially have material and adverse effects on our results of operations.

The validity, enforceability and scope of protection of intellectual property rights in internet-related industries are uncertain and still evolving. Considering the nature of our business, we have been subject to infringement claims and may continue to be subject to such infringement claims from time to time. For example, we were involved in a lawsuit with Guangzhou NetEase Computer System Co., Ltd. in the past few years. However, we cannot predict the possible outcome of the legal proceedings of such nature. Also, these legal proceedings may be expensive, time-consuming and disruptive to our operations and divert our management's attention. There can be no assurance that we will prevail in those legal proceedings and we cannot assure you that no intellectual property claims or lawsuits will be initiated by other companies in the future. In addition, if any third party complains to an application store platform, alleging that we infringe such third party's intellectual property rights, our applications may be temporarily removed from such platform, which could negatively affect our operational and/or financial results.

We have implemented procedures to reduce the likelihood that we may use, develop or make available any content or applications without the proper licenses or necessary third-party consents; such procedures include requiring performers, channel owners and users to acknowledge and agree that they would not perform or upload copyrighted content without proper authorization and that they will indemnify us for any relevant copyright infringement claims. However, these procedures may not be effective in preventing unauthorized posting or use of copyrighted content on our platforms or the infringement of third-party rights. Specifically, such acknowledgments and agreements by performers, channel owners and users are not enforceable against third parties who may nevertheless file claims of copyright infringement against us. Furthermore, individual performers or channel owners who generate content on our platform that may infringe copyrights of third parties may not be easily traceable, if at all, by a plaintiff who may then choose to file a claim against us, and these individual performers and channel owners may not have resources to fully indemnify us, if at all, for any such claims. Given that, we cannot assure you that we will not become subject to other intellectual property claims and lawsuits in the jurisdictions where we have presence, including the United States, by virtue of our ADSs being listed on the Nasdaq Global Select Market, the ability of users to access our platforms in the United States and other jurisdictions, the performance of songs and other contents which are subject to copyright and other intellectual property laws of multiple jurisdictions, the ownership of our ADSs by investors in the United States and other jurisdictions, or the extraterritorial application of laws by courts in any other jurisdiction or otherwise. In addition, as a publicly listed company, we may be exposed to increased risk of litigation.

If an infringement claim brought against us under the jurisdictional laws is successful, we may be required to pay substantial statutory penalties or other damages and fines, remove relevant content from our platforms, face injunctive relief or enter into license agreements which may not be made on commercially reasonable terms or at all. We currently have a U.S. patent portfolio, and our competitors and other third parties may now or in the future have significantly larger and more mature patent portfolios than we have. Litigation or other claims against us also subject us to adverse publicity which could harm our reputation and affect our ability to attract and retain users, including channel owners, singers and other performers, which could materially and adversely affect the popularity of our platforms and therefore, our business, financial condition, results of operations and prospects may be materially and adversely affected.

***We may not be able to successfully halt the operations of platforms that aggregate our data as well as data from other companies, including social networks, or "copycat" platforms that have misappropriated our data in the past or may misappropriate our data in the future. Those platforms may also lure away some of our users or advertisers or reduce our market share, causing material and adverse effects on our business operations.***

From time to time, third parties have misappropriated our data through scraping our platforms, robots or other means and aggregated this data on their platforms with data from other companies. In addition, historically "copycat" platforms or client applications had misappropriated data on our platforms, implanted Trojan viruses in user PCs or mobiles to steal user data from YY Live (our discontinued business in mainland China) or other mobile applications and attempted to imitate our brand or the functionality of our platforms. When we became aware of such platforms, we employed technological and legal measures in an attempt to halt their operations. However, we may not be able to detect all such misappropriation in a timely manner and, even if we could, technological and legal measures may be insufficient to stop all such misappropriation. In those cases, our available remedies may not be adequate to protect us against such misappropriation. Regardless of whether we can successfully enforce our rights against these third parties, any measures that we may take could require significant financial or other resources from us. Those third parties may also lure away some of our users or advertisers or reduce our market share, causing material and adverse effects to our business operations.

***We may not be able to prevent unauthorized use of our intellectual property, which could harm our business and competitive position.***

We regard our trademarks, service marks, patents, domain names, trade secrets, proprietary technologies and similar intellectual property as critical to our success, and we rely on trademark and patent law, trade secret protection and confidentiality and license agreements with our employees and others to protect our proprietary rights. However, the steps we take to obtain, maintain, protect and enforce our intellectual property rights may be inadequate. We will not be able to protect our intellectual property rights if we are unable to obtain such intellectual property rights, or enforce our rights or if we do not detect unauthorized use of our intellectual property rights. If we fail to protect our intellectual property rights adequately, our competitors may gain access to our proprietary technology and develop and commercialize substantially identical products, services or technologies, and our business, financial condition, results of operations or prospects may be harmed. In addition, defending our intellectual property rights may entail significant expense.

It is often difficult to obtain, maintain and enforce intellectual property rights in certain developing countries such as China and other jurisdictions, as compared with the United States. Patents, trademarks and service marks may be invalidated, circumvented, or challenged. Trade secrets are difficult to protect, and our trade secrets may be leaked or otherwise become known or be independently discovered by others. Moreover, no assurance can be given that confidential agreements will be effective in controlling access to, distribution, use, misuse, misappropriation, reverse engineering or disclosure of our proprietary information, know-how and trade secrets. Further, these agreements may not prevent our competitors from independently developing technologies that are substantially equivalent or superior to our platform capabilities. Confidentiality agreements may be breached, and we may not have adequate remedies for any breach. Even where adequate, relevant laws exist, it may not be possible to obtain swift and equitable enforcement of such laws, or to obtain enforcement of a court judgment or an arbitration award delivered in another jurisdiction, and accordingly, we may not be able to effectively protect our intellectual property rights or enforce agreements in mainland China or other jurisdictions. Policing any unauthorized use of our intellectual property is difficult and costly and the steps we have taken may be inadequate to prevent the misappropriation of our technologies. Given the potential cost, effort, risks and downsides of obtaining patent protection, in some cases we have not and do not plan to apply for patents or other forms of formal intellectual property protection for certain key technologies. If some of these technologies are later proven to be important to our business and are used by third parties without our authorization, especially for commercial purposes, our business and competitive position may be harmed. Patent, trademark, copyright, and trade secret protection may not be available to us in every country in which our platforms are or become available. For example, as we have expanded our business in multiple regions across the globe, we may be unable to register and obtain exclusive rights to use our trademarks in certain jurisdictions. As we expand our international activities, our exposure to unauthorized copying and use of our platforms will likely increase.

Litigation may be necessary in the future to enforce our intellectual property rights and to protect our trade secrets. Such litigation could be costly, time-consuming, and distracting to management, and could result in the impairment or loss of portions of our intellectual property. Further, our efforts to enforce our intellectual property rights may be met with defenses, counterclaims, and countersuits attacking the validity and enforceability of our intellectual property rights, and if such defenses, counterclaims or countersuits are successful, we could lose valuable intellectual property rights. Our inability to protect our proprietary technology against unauthorized copying or use, as well as any costly litigation or diversion of our management's attention and resources, could delay further sales or the implementation of our platforms, impair the functionality of our platforms, delay introductions of our platforms, result in our substituting inferior or more costly technologies into our platforms or damage our reputation.

***As our patents may expire and may not be extended, our patent applications may not be granted and our patent rights may be contested, circumvented, invalidated or limited in scope, our patent rights may not protect us effectively. In particular, we may not be able to prevent others from developing or exploiting competing technologies, which could have a material and adverse effect on our business operations, financial condition and results of operations.***

Generally, registered patents are subject to finite terms in various jurisdictions, which may vary from jurisdictions to jurisdictions as to the specific time period, term extension and other regulatory maintenance requirements. For example, in the United States and Singapore, once a patent is granted, it will be protected for twenty years from the date of application filing. The same twenty-year period also applies to patents for invention in Vietnam and invention patents in Thailand, while the valid period for patents for utility in Vietnam and design patents in Thailand is ten years. In mainland China, the valid period of utility model patent right and design patent right is ten years and fifteen years, respectively, according to the Patent Law of the People's Republic of China that became effective on June 1, 2021, and is not extendable. Currently, we have patent applications pending in multiple regions across the globe, but we cannot assure you that we will be granted patents pursuant to our pending applications or will be granted patents based on patent applications we may file in other jurisdictions. Even if our patent applications succeed and we are issued patents in accordance with them, it is still uncertain whether these patents will be contested, circumvented or invalidated in the future. The rights granted under any issued patents may not provide us with proprietary protection or competitive advantages. Further, the claims under any patents that issue from our patent applications may not be broad enough to prevent others from developing technologies that are similar or that achieve results similar to ours. It is also possible that the intellectual property rights of others will bar us from licensing and from exploiting any patents that issue from our pending applications. Numerous U.S. and patents issued in other regions and pending patent applications owned by others exist in the fields in which we have developed and are developing our technology. These patents and patent applications might have priority over our patent applications and could subject our patent applications to invalidation and subject to patent infringement lawsuits if we expand our operations into such jurisdictions. Finally, in addition to those who may claim priority, any of our existing or pending patents may also be challenged by others on the basis that they are otherwise invalid or unenforceable.

***If we fail to maintain and enhance our brands or to effectively promote our products and acquire new users, or if we incur excessive expenses in these efforts, our business, results of operations and prospects may be materially and adversely affected.***

We believe that maintaining and enhancing our brands is of significant importance to the success of our business. Well-recognized brands are important to increasing the number of users and the level of engagement of our users and enhancing our attractiveness to advertisers. Since we operate in a highly competitive market, brand maintenance and enhancement directly affect our ability to maintain our market position.

As we expand in the future, we may conduct various marketing and brand promotion activities using various methods to continue promoting our brands. We cannot assure you, however, that these activities will be successful or that we will be able to achieve the brand promotion effect we expect. In addition, any negative publicity in relation to our products or services, regardless of its veracity, could harm our brands and reputation.

We have sometimes received, and expect to continue to receive, complaints from users regarding the quality of the products and services we offer. Negative publicity or public complaints by users may harm our reputation and affect our ability to attract new users and retain existing users. If our users' complaints are not addressed to their satisfaction, our reputation and our market position could be significantly harmed, which may materially and adversely affect our business, results of operations and prospects.

***Our business depends substantially on the continuing efforts of our executive officers and key employees, and our business operations may be severely disrupted if we lose their services.***

Our future success depends substantially on the continued efforts of our executive officers and key employees. If one or more of our executive officers or key employees were unable or unwilling to continue their services with us, we might not be able to replace them easily, in a timely manner, or at all. In addition, some of our executive officers and key employees hold the equity interests in the variable interest entities in mainland China. If any of these executive officers and key employees terminates their services with us, we have the contractual right to appoint designees to hold the variable interest entities' equity interests. However, our business may be severely disrupted, our financial condition and results of operations may be materially and adversely affected and we may incur additional expenses to recruit, train and retain personnel. If any of our executive officers or key employees joins a competitor or forms a competing company, we may lose customers, know-how and key professionals and staff members. Each of our executive officers and key employees has entered into an employment agreement and a non-compete agreement with us. However, as advised by our PRC counsel, Fangda Partners, certain provisions under the non-compete agreement may not be deemed valid or enforceable under laws of mainland China. If any dispute arises between our executive officers and key employees and us, we cannot assure you that we would be able to enforce these non-compete agreements in mainland China, where these executive officers reside, in light of uncertainties with mainland China's legal system. See “—Risks Related to Doing Business in Jurisdictions We Operate—There are uncertainties regarding the interpretation and enforcement of PRC laws, rules and regulations.”

***If we are unable to attract, train and retain qualified personnel, our business may be materially and adversely affected.***

Our future success depends, to a significant extent, on our ability to attract, train and retain qualified personnel, particularly management, technical and marketing personnel with expertise in the internet industry; inability to do so may materially and adversely affect our business. Since the internet industry is characterized by high demand and intense competition for talent, we cannot assure you that we will be able to attract or retain qualified staff or other highly skilled employees. As our company is relatively young, our ability to train and integrate new employees into our operations may not meet the growing demands of our business which may materially and adversely affect our ability to grow our business and hence our results of operations.

***We may be exposed to cyber security risk.***

Computer hackers, governments or cyber terrorists may attempt to penetrate our network security and our website. Unauthorized access to our proprietary business information or customer data may be obtained through break-ins, sabotage, breach of our secure network by an unauthorized party, computer viruses, computer denial-of-service attacks, employee theft or misuse, breach of the security of the networks of our third-party providers, or other misconduct. Because the techniques used by computer programmers who may attempt to penetrate and sabotage our network security or our website change frequently and may not be recognized until launched against a target, we may be unable to anticipate these techniques. It is also possible that unauthorized access to customer data may be obtained through inadequate use of security controls by customers. We would suffer economic and reputational damages if a technical failure of our systems or a security breach compromises our user data, including identification or contact information, although there has not been any compromise in the past. Any disruption to our computer systems could have a material adverse effect on our on-site operations and ability to retain and attract users.

***Our results of operations are subject to fluctuations due to seasonality and other factors.***

We experience seasonality in our business, reflecting seasonal fluctuations in internet usage. As a result, comparing our operating results on a period-to-period basis may not be meaningful. There could be fluctuations and changes in overall consumer demand for our products and services in certain markets in general or during certain months and holidays. For example, online user numbers tend to be lower during the holidays and celebrations in different cultures (including, but not limited to, Independence Day, Ramadan, Lunar New Year, etc.), which negatively affects our cash flow for those periods. We may also experience a slight decrease of active users during Christmas and ending with the New Year's Day. Historically, excluding the impact of COVID-19, our revenues from advertising have followed the same general seasonal trend throughout the year with the first quarter of the year being the weakest quarter and the fourth quarter being the strongest. Additionally, a portion of our e-commerce revenues correlate with the GMV that merchants facilitate through our smart commerce solution platform. Our merchants typically tend to process more GMV during the fourth quarter due to holiday season.

Other factors may also cause our revenue, profits and other operating results to vary significantly from quarter to quarter, such as (i) timing of marketing campaigns and promotional activities we conduct from time to time; (ii) timing of new products and services releases and monetization rates of our products and services or content enhancements in different markets; (iii) increases in sales and marketing and other operating expenses; (iv) macroeconomic conditions including recessionary fears or rising inflation and their effect on consumer spending; (v) geopolitical conditions; and (vi) business strategy changes.

As a result, our operating results in future quarters or years may fall below the expectations of securities analysts and investors. In such event, the trading price of our ADSs would likely be materially and adversely affected.

***We face risks associated with our investments.***

We currently invest a portion of our capital in long-term and short-term investments. Our long-term investments mainly consisted of investment in equity method investees, equity investments with readily determinable fair values and equity investments without readily determinable fair values, and our short-term investments mainly consisted of financial products issued by commercial banks with a variable interest rate indexed to the performance of underlying assets and a maturity date within one year when purchased. These investments may earn yields substantially lower than anticipated, and any failure to realize the benefits we expected from these investments may materially and adversely affect our business and financial results. Any change in securities prices and market conditions could lead to volatility in the fair value of our investments accounted for at fair value, which could further impact our financial condition and results of operations and may also impact our ability to dispose of these investments at favorable prices. We may also suffer losses from these long-term and short-term investments, which could adversely affect our results of operations and financial condition. Further, we may be adversely affected by a crisis in the banking industry. For example, on March 10, 2023, the Federal Deposit Insurance Corporation, took control and was appointed as the receiver of Silicon Valley Bank. Although we have not held funds of meaningful amount at Silicon Valley Bank, we have funds at other banks in the United States and several other countries. If banks and financial institutions enter receivership or become insolvent in the future and a portion of our cash or cash equivalents and/or short-term investments is held in such banks and financial institutions, our ability to access our existing cash and cash equivalents and/or short-term investments may be impacted, which could have a material adverse effect on our business and financial condition.

***If we fail to maintain an effective system of internal control over financial reporting, we may be unable to accurately report our financial results or prevent fraud, and investor confidence in our company and the market price of our ADSs may be adversely affected.***

The SEC, as required by Section 404 of the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act, adopted rules requiring most public companies to include a management report on such company's internal control over financial reporting in its annual report, which contains management's assessment of the effectiveness of the company's internal control over financial reporting. In addition, when a company meets the SEC's criteria, an independent registered public accounting firm must report on the effectiveness of the company's internal control over financial reporting.

Our management and independent registered public accounting firm have concluded that our internal control over financial reporting was effective as of December 31, 2023. However, we cannot assure you that in the future our management or our independent registered public accounting firm will not identify material weaknesses during the Section 404 of the Sarbanes-Oxley Act audit process or for other reasons. In addition, because of the inherent limitations of internal control over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may not be prevented or detected on a timely basis. As a result, if we fail to maintain effective internal control over financial reporting or should we be unable to prevent or detect material misstatements due to error or fraud on a timely basis, investors could lose confidence in the reliability of our financial statements, which in turn could harm our business, results of operations and negatively impact the market price of our ADSs, and harm our reputation. Furthermore, we have incurred and expect to continue to incur considerable costs and to use significant management time and the other resources in an effort to comply with Section 404 and other requirements of the Sarbanes-Oxley Act.

***Unauthorized third-party platforms may sell virtual items we offer for free on our platforms, which may affect our revenue-generating opportunities and exert downward pressure on the prices we charge for our virtual items.***

We, from time to time, offer virtual items free of charge to attract users or encourage user participation in channels. Some of our users may sell or purchase such free virtual items through unauthorized third-party sellers in exchange for real currency. For example, fans of a performer may pay other users to send flowers or gifts the latter have accumulated on our platforms to the performer, in order to show support and raise the popularity ranking of the performer of their choice. These unauthorized transactions are usually arranged on third-party platforms which we do not and are unable to track or monitor. Accordingly, these unauthorized purchases and sales from third-party sellers may affect our revenue-generating opportunities and may impede our revenue and profit growth by, among other things, reducing the revenues we could have generated and exerting downward pressure on the prices we charge for our virtual items.

***We have limited business insurance coverage, so that any uninsured occurrence of business disruption may result in substantial costs to us and the diversion of our resources, which could have an adverse effect on our results of operations and financial condition.***

Insurance products available in some emerging markets in which we operate currently are not as extensive as those offered in more developed economies. We may not have sufficient insurance coverage for business liabilities or disruptions. We have determined that the costs of insuring for these risks and the difficulties associated with acquiring such insurance on commercially reasonable terms make it impractical for us to have such insurance. Any uninsured occurrence may disrupt our business operations, require us to incur substantial costs and divert our resources, which could have an adverse effect on our results of operations and financial condition.

### **Risks Related to Doing Business in Jurisdictions We Operate**

***We are subject to the risks of doing business globally.***

We maintain our operations in multiple jurisdictions across the globe, and may in the future continue expanding, or seek to expand, our operations to additional jurisdictions. The global operation and expansion plan exposes us to international political, legal and economic risks, which are fluid and unpredictable. Our ability to maintain good operation in multiple countries and regions may be adversely affected by changes in international and local laws, regulations and government policies such as those related to investment, taxation, import and export tariffs, environmental regulations, land use rights, intellectual property, currency controls, network security and other matters. Many, if not all of the above-mentioned risks also apply to our operations in multiple jurisdictions across the globe where we operate or seek to operate. If any of these risks were to occur, our business, financial condition and results of operations could be materially and adversely affected by any of the risks above.

We cannot guarantee that we will be able to successfully carry out our global expansion strategy. We will face certain risks inherent in doing business globally, including, but not limited to, difficulties in developing, staffing and simultaneously managing global operations as a result of distance, language and cultural differences; challenges in formulating effective local sales and marketing strategies targeting users from various jurisdictions and cultures, who have a diverse range of preferences and demands; challenges in identifying appropriate local business partners and establishing and maintaining good working relationships with them; challenges in recruiting and retaining talented and capable management and employees in various markets; challenges in obtaining and maintaining sufficient intellectual property protection and rights in various jurisdictions; dependence on local platforms in marketing our international products and services in multiple regions across the globe; challenges in selecting suitable geographical regions for international business; political or social unrest or economic instability; compliance with applicable laws and regulations in multiple regions across the globe and unexpected changes in laws or regulations, including, but not limited to, investment restrictions and ownership requirements; exposure to different tax jurisdictions that may subject us to greater fluctuations in our effective tax rate and potentially adverse tax consequences; and increased costs associated with doing business in multiple jurisdictions across the globe.

As we operate in multiple jurisdictions across the globe, economic, political and social conditions of certain jurisdictions may represent unique features, as compared to other jurisdictions, in many aspects. With our subsidiaries incorporated in multiple jurisdictions across the globe, our business, financial condition, results of operations and prospects in those jurisdictions may be influenced to a significant degree by local political, economic and social conditions. Also, the economies in emerging markets generally differ from the economies of most developed countries in many respects, including the level of government involvement, level of development, growth rate, control of foreign exchange, government policy on public order and allocation of resources. The government authorities of certain jurisdictions, such as mainland China, has significant oversight over the conduct of our business in the region and may intervene or influence our operations in the region. These government authorities have published and may continue to publish new policies that significantly affected certain industries and we cannot rule out the possibility that it will in the future release regulations or policies that directly or indirectly affect our industry or require us to comply with more stringent regulatory requirements in order for us to continue our local operations, which could result in a material adverse change in our operation in such jurisdictions and/or the value of our ADSs. Therefore, investors of our company face potential uncertainty from actions taken by the governmental authorities in markets in which we operate. If we cannot timely and effectively manage such challenge, it may place significant strain on our management and resources to keep balance among the jurisdictions where we operate, which may adversely affect our business, financial condition and results of operations.

***We have limited experience in international markets. If we fail to meet the challenges presented by our increasingly globalized operations, our business, financial condition and results of operations may be materially and adversely affected.***

We have limited experience in international markets and we expect to enter into and expand our operations in international markets. Our businesses have footprint around the world, primarily including North America, Europe, the Middle East, Southeast Asia and Eastern Pacific regions, etc. Global expansion is a key growth strategy for us, which exposes us to a number of risks, including:

- compliance with applicable laws and regulations in multiple jurisdictions, including, but not limited to, internet content provider licenses and other applicable licenses or governmental authorizations;
- policies that increase restrictions on our ability to invest in certain jurisdictions, especially in the telecommunication and internet sectors;
- challenges in identifying appropriate local business partners and establishing and maintaining good working relationships with them. Our business partners primarily include popular talents and their agencies, third parties that promote our platform and applications and third parties that provide us technology support;
- challenges in obtaining and maintaining sufficient intellectual property protection and rights;
- challenges in commercializing our platforms in international markets without infringing, misappropriating or otherwise violating the intellectual property rights of third parties;
- challenges in formulating effective marketing strategies targeting users from various jurisdictions and cultures, who have a diverse range of preferences and demands;
- lack of acceptance of our product and service offerings, and challenges of localizing our offerings to appeal to local tastes;
- challenges in replicating or adapting our company policies and procedures to operating environments that are different from each other, including technology infrastructure;
- challenges in meeting local advertiser demands as well as online marketing practices and conventions;
- differences in user and advertiser reception and perception of our applications internationally;
- challenges in managing compliance with local labor regulations and risks associated with labor dispute across different jurisdictions;
- fluctuations in currency exchange rates;

- increased competition with local players in different markets and sub-markets;
- political instability and general economic or political conditions in particular countries or regions, including territorial or trade disputes, war and terrorism;
- exposure to different tax jurisdictions that may subject us to greater fluctuations in our effective tax rate and assessments in multiple jurisdictions on various tax-related assertions, including transfer pricing adjustments and permanent establishment;
- recruitment and retention of talented and capable management and employees in various markets;
- challenges of maintaining efficient and consolidated internal systems, including information technology infrastructure, and of achieving customization and integration of these systems;
- compliance with privacy laws and data security laws, including heightened restrictions and barriers on the transfer of data between different jurisdictions;
- regulatory regime and business practices that essentially favors the domestic companies, such as imposing restrictions on foreign ownership, which could, among other things, give rise to competitive disadvantage for us and hinder our ability to execute our business strategies;
- actions by local governments or others to restrict access to our products and services or to cause us to discontinue our operations in a particular market, regardless of whether these actions are taken for political, security or other reasons; and
- increased costs associated with doing business in multiple jurisdictions.

There is no assurance we will be able to manage these risks and challenges as we continue to grow our international businesses. Failure to manage these risks and challenges could negatively affect our ability to expand our international and cross-border businesses and operations as well as materially and adversely affect our business, financial condition and results of operations.

***We face risks and uncertainties to comply with the laws, regulations and rules in various aspects in multiple jurisdictions across the globe. Failure to comply with such applicable laws, regulations and rules may subject our global operations to strict scrutiny by local authorities, which in turn may materially and adversely affect our globalized operations.***

Nowadays, we operate in several key markets across the globe and our revenue is diversified across multiple markets. As we expand our operations in additional emerging markets and regions, we may have to take efforts to comply with the local legal requirements and markets conditions. Such efforts may include, among others, adapting our business models or operations to the local markets and engaging specialized professionals for compliance purpose. Our international operations and expansion efforts may result in increased costs and are subject to various risks, including difficulties in obtaining licenses, permits or other applicable governmental authorizations, content control from local authorities, uncertain enforcement of intellectual property rights, potential claims of intellectual property infringement, the complexity of compliance with laws and regulations and cultural differences. Compliance with applicable laws, regulations and rules related to matters that are central to our business, including those related to live streaming services, advertising, online gaming, virtual items, communications, internet services, e-commerce, content restrictions, data privacy, data usage, data transfer, data processing, data storage, data retention and protection, anti-corruption laws, employment and labor laws, intellectual property, anti-money laundering, protection of minors, national security, economic or other trade prohibitions or sanctions, foreign investment and currency control regulations, increases the costs and risk exposure of doing business in multiple jurisdictions across the globe including North America, Europe, the Middle East, Southeast Asia, and Eastern Pacific regions, among others. Laws and regulations and their enforcement vary from jurisdiction to jurisdiction and are often evolving, unclear or inconsistent with other applicable laws. In some cases, compliance with the laws and regulations of one country could violate the laws and regulations of another country. Additionally, as we operate across multiple markets across the globe, we are more likely to be exposed to international political tension, which may inevitably adversely affect our business and operating results. See “—Risks Related to Our Business and Industry—Changes in global or regional economic, geopolitical or social conditions, as well as changes in government policies, could materially and adversely affect our business, financial condition and results of operations.” As our globalized operations evolve, we cannot assure you that we are able to fully comply with the legal requirements of each jurisdiction and successfully adapt our business models to local market conditions. Due to the complexity involved in our global business expansion, we cannot assure you that we are in compliance with all local laws or regulations, including regulatory control, license requirements, or that our existing licenses will be successfully renewed or expanded to cover all of our areas of operations. If we fail to properly and timely address those risks and challenges, our business that are not compliant with the local regulations may be subject to penalties, rectification, suspension of business and/or platform shutdown.

***Fluctuations in foreign currency exchange rates may adversely affect our operational and financial results, which we report in U.S. dollars.***

We operate in multiple markets, which exposes us to the effects of fluctuations in currency exchange rates as we report our financials and key operational metrics in U.S. dollars. Appreciation of the U.S. dollars against the local currencies used by our paying users may reduce their demand for our services, which may negatively impact our results of operations. While a majority of our revenues and expenses are dominated in U.S. dollars, some of our expenses and revenues are denominated in various other foreign currencies, such as Renminbi, Euro, Singapore dollars, Japanese yen, Indonesian rupiah, Vietnamese dong, Thai baht, Malaysian ringgit, Turkish lira, among other currencies. We generally incur expenses for employee compensation and other operating expenses in the local currencies in the markets in which we operate. Therefore, fluctuations in the exchange rates among the various currencies that we use could cause fluctuations in our operational and financial results. Our expenses may become higher and our revenue and operating metrics may become lower than would be the case if exchange rates were stable or if we were operating and reporting in one currency. Movements in foreign currency exchange rates may have a material adverse effect on our results of operations, which may cause our financial and operational metrics reported in U.S. dollars to be not fully representative of our underlying business performance. Because fluctuations in the value of the local currencies are not necessarily correlated, our results of operations in any period may be adversely affected by such volatility. See “Item 11. Quantitative and Qualitative Disclosures About Market Risk.”

We may enter into derivatives transactions and incur relevant costs from time to time to manage our exposure to exchange rate risk. Such derivatives transactions while intended to be non-speculative, are designed to protect us against increases or decreases in exchange rates, but not both. If we have entered into derivatives transactions to protect against, for example, decreases in the value of a local currency and such local currency instead increases in value, we may incur financial losses. Such losses could materially and adversely affect our financial condition and results of operations.

***The approval of and the filing with the CSRC or other government authorities of mainland China may be required in connection with our offerings and financing activities outside mainland China in the future under the laws of mainland China, and, if required, we cannot predict whether or for how long we will be able to obtain such approval or complete such filing.***

The Regulations on Mergers and Acquisitions of Domestic Enterprises by Foreign Investors adopted by six regulatory agencies of mainland China in 2006 and amended in 2009, requires an overseas special purpose vehicle formed for listing purposes through acquisitions of domestic companies in mainland China and controlled by PRC persons or entities to obtain the approval of the CSRC prior to the listing and trading of such special purpose vehicle's securities on an overseas stock exchange. As the interpretation and application of the regulations remain unclear, although we have a majority of our revenue outside mainland China, we are not certain if our offerings outside mainland China may ultimately require approval of the CSRC. If the CSRC approval is required, it is uncertain whether we can or how long it will take us to obtain the approval and, even if we obtain such CSRC approval, the approval could be rescinded. Any failure to obtain or delay in obtaining the CSRC approval for any of our offerings outside mainland China, or a rescission of such approval if obtained by us, would subject us to sanctions imposed by the CSRC or other regulatory authorities of mainland China, which could include fines and penalties on our operations in mainland China, restrictions or limitations on our ability to pay dividends outside of mainland China, and other forms of sanctions that may materially and adversely affect our business, financial condition, and results of operations.

On February 17, 2023, the CSRC promulgated the Trial Administrative Measures of the Overseas Securities Offering and Listing by Domestic companies, or the Overseas Listing Trial Measures, and relevant five guidelines, which came into effect on March 31, 2023. According to the Overseas Listing Trial Measures and guidelines, domestic companies in mainland China that seek to offer and list securities in overseas markets, including secondary listing and follow-on offerings, either directly or indirectly, are required to fulfill the filing procedure with the CSRC and report relevant information. The Overseas Listing Trial Measures provides that if the issuer meets both of the following criteria, the overseas securities offering and listing conducted by such issuer would be deemed as an indirect overseas offering subject to the filing procedure set forth under the Overseas Listing Trial Measures: (i) any of the operating revenue, total profit, total assets or net assets of domestic companies in mainland China for the most recent fiscal year accounts for 50% or more of the corresponding item as recorded in issuer's audited consolidated financial statements; and (ii) the issuer's business activities are substantially conducted in mainland China, or its principal place of business are located in mainland China, or the senior managers in charge of its business operations and management are mostly Chinese citizens or domiciled in mainland China. The Overseas Listing Trial Measures also provides that the determination for indirect overseas offering shall follow the "substance-over-formality" principle. In addition, at the press conference held for these new regulations on the same day, officials from the CSRC clarified that the domestic companies in mainland China whose securities have already been listed overseas on or before the effective date of the Overseas Listing Trial Measures (i.e., March 31, 2023) are not required to complete the filing procedures immediately, but they must file with the CSRC if they are involved in matters that are subject to the filing procedures, such as follow-on securities offerings conducted in overseas markets in the future. As the Overseas Listing Trial Measures are relatively new, it remains unclear on how these measures will be interpreted and implemented by CSRC and the relevant mainland China's governmental authorities, how mainland China's governmental authorities will regulate overseas listing in general. Given the uncertainty of interpretation and implementation of the Overseas Listing Trial Measures and our global operations, substantial uncertainties remain and we could not rule out the possibility that we may be required to file the relevant documents with the CSRC in connection with our proposed offerings and listings outside mainland China in the future.

Relatedly, on December 27, 2021, the National Development and Reform Commission and the Ministry of Finance jointly issued the Special Administrative Measures (Negative List) for the Access of Foreign Investment (Edition 2021), or the 2021 Negative List, which became effective on January 1, 2022. Pursuant to the Special Administrative Measures, if a domestic company engaging in the prohibited business stipulated in the 2021 Negative List seeks an overseas offering and listing, it should obtain the approval from the competent governmental authorities. Besides, the foreign investors of the company must not be involved in the company's operation and management, and their shareholding percentages must be subject, mutatis mutandis, to the relevant regulations on the domestic securities investments by foreign investors. It is unclear as to whether and to what extent listed companies like us will be subject to these requirements. If we are required to comply with these requirements and fail to do so on a timely basis, if at all, our business operation, financial conditions and business prospect in mainland China may be adversely and materially affected.

We may inadvertently conclude that such permissions, approvals or filings are not required, or applicable laws, regulations, or interpretations may change and we are required to complete the filing procedures, obtain permission or approval from CSRC or the relevant mainland China's governmental authorities for the offering and any follow-on offering in the future. In addition, we cannot assure you that any new rules or regulations promulgated in the future will not impose additional requirements on us. If it is determined in the future that filing from the CSRC or approval from other regulatory authorities or other procedures, including the cybersecurity review under the enacted version of the revised Measures for Cybersecurity Review and the Regulations on the Administration of Cyber Data Security (Draft for Comments), are required for our offerings or follow-on financing activities (if any) outside mainland China, it is uncertain whether we can or how long it will take us to obtain such approval or complete such filing or review procedures and any such approval or filing could be rescinded or rejected. Any failure to obtain or delay in obtaining such approval or completing such filing procedures for our offerings or follow-on financing activities (if any) outside mainland China, or a rescission of any such approval or filing if obtained by us, would subject us to sanctions by the CSRC or other regulatory authorities of mainland China for failure to complete the CSRC filing or seek approval from other government authorization for our offerings outside mainland China. These regulatory authorities may order rectification, issue warnings, impose fines and penalties on our operations in mainland China and on directly responsible person-in-charge, other directly responsible persons of domestic companies in mainland China, the controlling shareholders and the actual controllers of such domestic companies in mainland China, limit our ability to pay dividends outside of mainland China, limit our operating privileges in mainland China, delay or restrict the repatriation of the proceeds from our offshore offerings into mainland China or take other actions that could materially and adversely affect our business, financial condition, results of operations, and prospects, as well as the trading price of our listed securities. The CSRC or other regulatory authorities of mainland China also may take actions requiring us, or making it advisable for us, to halt our offerings or follow-on financing activities (if any) outside mainland China before settlement and delivery of the shares offered. Consequently, if investors engage in market trading or other activities in anticipation of and prior to settlement and delivery, they do so at the risk that settlement and delivery may not occur. In addition, if the CSRC or other regulatory authorities later promulgate new rules or explanations requiring that we obtain their approvals or accomplish the required filing or other regulatory procedures for our prior offerings or follow-on financing activities (if any) outside mainland China, we may be unable to obtain a waiver of such approval requirements, if and when procedures are established to obtain such a waiver. Any uncertainties or negative publicity regarding such approval requirement could materially and adversely affect our business, prospects, financial condition, reputation, and the trading price of our listed securities.

***It is not certain if we will be classified as a Singapore tax resident.***

Under the Singapore Income Tax Act, a company established outside Singapore but whose governing body, being the board of directors, usually exercises de facto control and management of its business in Singapore could be considered a tax resident in Singapore. However, such control and management of the business should not be deemed to be in Singapore if physical board meetings are mainly conducted outside of Singapore. Where board resolutions are passed in the form of written consent signed by the directors each acting in their own jurisdictions, or where the board meetings are held by teleconference or videoconference, it is possible that the place of de facto control and management will be considered to be where the majority of the board are located when they sign such consent or attend such conferences.

We believe that we are not a Singapore tax resident for Singapore income tax purposes. However, our tax residence status is subject to determination by the Inland Revenue Authority of Singapore, and uncertainties remain with respect to the interpretation of the term “control and management” for the purposes of the Singapore Income Tax Act. If the Inland Revenue Authority of Singapore determines that we are a Singapore tax resident for Singapore income tax purposes, the portion of our single company income on an unconsolidated basis that is received or deemed by the Singapore Income Tax Act to be received in Singapore, where applicable, may be subject to Singapore income tax at the prevailing tax rate of 17% before applicable income tax exemptions or relief, where Bigo Technology Pte. Ltd., or Bigo Singapore, is entitled to enjoy the beneficial tax rate of 5% as the incentive for the years 2018 through 2027. If we are regarded as a Singapore tax resident, any dividends received or deemed received by us in Singapore from subsidiaries located in a foreign jurisdiction with a rate of income tax or tax of a similar nature of no more than 15% may generally be subject to additional Singapore income tax where there is no other applicable tax treaty between such foreign jurisdiction and Singapore. Income is considered to have been received in Singapore when it is: (i) remitted to, transmitted or brought into Singapore; (ii) applied in or towards satisfaction of any debt incurred in respect of a trade or business carried on in Singapore; or (iii) applied to purchase any movable property that is brought into Singapore. In addition, as Singapore does not impose withholding tax on dividends declared by Singapore resident companies, if we are considered a Singapore tax resident, dividends paid to the holders of our common shares and ADSs will not be subject to withholding tax in Singapore. Regardless of whether or not we are regarded as a Singapore tax resident, holders of our common shares or the ADSs who are not Singapore tax residents would generally not be subject to Singapore income tax on gains derived from the disposal of our common shares or the ADSs if such shareholders do not maintain a permanent establishment in Singapore, to which the disposition gains may be effectively connected, and the entire process (including the negotiation, deliberation, execution of the acquisition and sale, etc.) leading up to the actual acquisition and sale of the ADSs or our common shares is performed outside of Singapore. For Singapore resident shareholders, if the gain from disposal of our common shares or the ADSs is considered by the Inland Revenue Authority of Singapore as income in nature, such gain will generally be subject to Singapore income tax, and not taxable in Singapore if the gain is considered by the Inland Revenue Authority of Singapore as capital gains in nature. See “Item 10. Additional Information—Taxation—Singapore Taxation.”

***There are uncertainties regarding the interpretation and enforcement of PRC laws, rules and regulations.***

The legal system of mainland China is based on written statutes and prior court decisions have limited value as precedents. Each of our subsidiaries in mainland China is a foreign-invested enterprise and is subject to laws and regulations applicable to foreign-invested enterprises as well as various laws and regulations of mainland China generally applicable to companies incorporated therein. However, since these laws and regulations are relatively new and the legal system of mainland China continues to rapidly evolve, the interpretations of many laws, regulations and rules are not always uniform and enforcement of these laws, regulations and rules involves uncertainties.

From time to time, we may have to resort to administrative and court proceedings to enforce our legal rights. However, since mainland China’s administrative and court authorities have significant discretion in interpreting and implementing statutory and contractual terms, it may be more difficult to evaluate the outcome of administrative and court proceedings and the level of legal protection we enjoy than in more developed legal systems. Furthermore, the legal system of mainland China is based in part on government policies and internal rules (some of which are not published in a timely manner or at all) that may have retroactive effect. As a result, we may not be aware of our violation of these policies and rules until sometime after the violation. Such uncertainties, including uncertainty over the scope and effect of our contractual, property (including intellectual property) and procedural rights, could materially and adversely affect our business and impede our ability to continue our operations.

***We may be adversely affected by the complexity, uncertainties and changes in regulation of internet business and companies in mainland China.***

The mainland China's government extensively regulates the internet industry, including foreign ownership of, and the licensing and permit requirements pertaining to, companies in the internet industry. These internet-related laws and regulations are relatively new and evolving, and their interpretation and enforcement involve significant uncertainty. As a result, in certain circumstances it may be difficult to determine what actions or omissions may be deemed to be in violations of applicable laws and regulations. Issues, risks and uncertainties relating to regulation of the internet business in mainland China include, but are not limited to, the following:

- We only have contractual arrangements, but no equity ownership, with the variable interest entities that own our platforms in mainland China due to the restriction of foreign investment in businesses providing value-added telecommunication services in mainland China, including internet content provision services. If any of the variable interest entities breaches its contractual arrangements with us and no longer satisfies the conditions for us to consolidate under U.S. GAAP, this may significantly disrupt our business, subject us to sanctions, compromise enforceability of related contractual arrangements, or have other harmful effects on us.
- There are uncertainties relating to the regulation of the internet business in mainland China, including evolving licensing practices and the requirement for real-name registrations. Permits, licenses or operations at some of our subsidiaries and the variable interest entities levels may be subject to challenge, or we may fail to obtain permits or licenses that may be deemed necessary for our operations or we may not be able to obtain or renew certain permits or licenses. See “—Risks Related to Our Corporate Structure—If the variable interest entities fail to obtain and maintain the requisite licenses and approvals required under the complex regulatory environment for internet-based businesses in mainland China, our business, financial condition and results of operations in mainland China may be adversely affected” and “Item 4. Information on the Company—B. Business Overview—Regulations in Multiple Jurisdictions Where We Operate—Mainland China Regulations.”
- The evolving regulatory system of mainland China for the internet industry may lead to the establishment of new regulatory agencies. For example, in May 2011, the State Council announced the establishment of a new department, the State Internet Information Office (with the involvement of the State Council Information Office, the Ministry of Industry and Information Technology and the Ministry of Public Security). The primary role of this new agency is to facilitate the policy-making and legislative development in this field to direct and coordinate with the relevant departments in connection with online content administration and to deal with cross-ministry regulatory matters in relation to the internet industry. We are unable to determine what policies this new agency or any new agencies to be established in the future may have or how they may interpret existing laws, regulations and policies and how they may affect us. Further, new laws, regulations or policies may be promulgated or announced that will regulate internet activities, including online video and online advertising businesses. If these new laws, regulations or policies are promulgated, additional licenses may be required for our operations in mainland China. If our operations in mainland China do not comply with these new regulations after they become effective, or if we fail to obtain any licenses required under these new laws and regulations, we could be subject to penalties.

On July 13, 2006, the Ministry of Industry and Information Technology issued the Notice of the Ministry of Information Industry on Intensifying the Administration of Foreign Investment in Value-added Telecommunications Services. This notice prohibits domestic telecommunication service providers from leasing, transferring or selling telecommunication business operating licenses to any foreign investor in any form, or providing any resources, sites or facilities to any foreign investor for their illegal operation of a telecommunication business in mainland China. According to this notice, either the holder of a value-added telecommunication business operating license or its shareholders must be the registered holders of the domain names or trademarks used by such license holders in their provision of value-added telecommunication services. The notice also requires each license holder to have the necessary facilities, including servers, for its approved business operations and to maintain such facilities in the regions covered by its license. Currently, all contracts with telecommunication carriers and other service providers to host the servers used in our business within mainland China were entered into by the variable interest entities, and such arrangements are in compliance with this notice. The variable interest entities also own the related domain names and trademarks, and hold the ICP License necessary to conduct our operations in mainland China.

On December 29, 2023, China enacted its amended Company Law, which will come into effect on July 1, 2024. The changes are considerable in many respects and will have profound implications for our PRC subsidiaries and variable interest entities, such as the five-year capital contribution timeframe for shareholders of limited liability companies to make their capital contributions in full. In response to these changes, we may need to devote significant efforts and resources to adapt and conform our PRC corporate practices to the new regulatory regime.

On July 10, 2023, the CAC, consented by the National Development and Reform Commission, Ministry of Education, Ministry of Science and Technology, Ministry of Industry and Information Technology, Ministry of Public Security, National Radio and Television Administration, promulgated the Provisional Administrative Measures for Generative Artificial Intelligence Services, effective on August 15, 2023. These measures impose compliance requirements for providers of generative AI services to the general public within the territory of mainland China. These measures provide, among other things, that the provider of generative AI services of text, image, audio or video to the general public shall (i) assume the responsibilities as the producers of the AI-generated content thereon, and (ii) any provider of generative artificial intelligence services with attribute of public opinions or capable of social mobilization shall conduct security assessment in accordance with the relevant regulations, and complete the formalities for algorithm filing, change or deregistration in accordance with Provisions Administration of Algorithm-generated Recommendations for Internet Information Services.

The interpretation and application of existing laws, regulations and policies of mainland China and possible new laws, regulations or policies relating to the internet industry in mainland China have created substantial uncertainties regarding the legality of existing and future foreign investments in, and the businesses and activities of, internet businesses in mainland China, including our business. There are also risks that we may be found to violate the existing or future laws and regulations given the uncertainty and complexity of mainland China's regulation of internet business.

***Under the PRC enterprise income tax law, we may be classified as a PRC “resident enterprise,” which could result in unfavorable tax consequences to us and our shareholders and have a material adverse effect on our results of operations and the value of your investment.***

Under the PRC Enterprise Income Tax Law that became effective on January 1, 2008, as last amended on December 29, 2018, an enterprise established outside mainland China with “de facto management bodies” within mainland China is considered a “resident enterprise” for PRC enterprise income tax purposes and is generally subject to a uniform 25% enterprise income tax rate on its worldwide income. On April 22, 2009, the State Administration of Taxation, or the SAT, issued the Notice Regarding the Determination of Chinese-Controlled Overseas Incorporated Enterprises as PRC Tax Resident Enterprise on the Basis of De Facto Management Bodies, or SAT Circular 82, which provides certain specific criteria for determining whether the “de facto management body” of a PRC-controlled enterprise that is incorporated offshore is located in mainland China. Further to SAT Circular 82, on August 3, 2011, the SAT issued the Administrative Measures of Enterprise Income Tax of Chinese-Controlled Offshore Incorporated Resident Enterprises (Trial), or SAT Bulletin 45, which clarified certain issues in the areas of resident status determination, post-determination administration and competent tax authorities.

According to SAT Circular 82, an offshore incorporated enterprise controlled by a PRC enterprise or a PRC enterprise group will be considered as a PRC tax resident enterprise by virtue of having its “de facto management body” in mainland China and will be subject to PRC enterprise income tax on its worldwide income only if all of the following conditions are met: (a) the senior management and core management departments in charge of its daily operations function have their presence mainly in mainland China; (b) its financial and human resources decisions are subject to determination or approval by persons or bodies in mainland China; (c) its major assets, accounting books, company seals, and minutes and files of its board and shareholders' meetings are located or kept in mainland China; and (d) more than half of the enterprise's directors or senior management with voting rights habitually reside in mainland China. SAT Bulletin 45 further clarifies the resident status determination, post-determination administration, as well as competent tax authorities.

Although SAT Circular 82 and SAT Bulletin 45 only apply to offshore incorporated enterprises controlled by PRC enterprises or PRC enterprise group instead of those controlled by PRC individuals or foreigners, the determination criteria set forth therein may reflect SAT's general position on how the term “de facto management body” could be applied in determining the tax resident status of offshore enterprises, regardless of whether they are controlled by PRC enterprises, individuals or foreigners.

We believe that none of JOYY Inc. or its subsidiaries outside of mainland China is a PRC resident enterprise for PRC tax purposes. JOYY Inc. is not controlled by an enterprise or enterprise group of mainland China and we do not believe that JOYY Inc. meets all of the conditions above. JOYY Inc. is a company incorporated outside mainland China. As a holding company, its key assets are its ownership interests in its subsidiaries, and its key assets are located, and its records (including the resolutions of its board of directors and the resolutions of its shareholders) are maintained, outside mainland China. For the same reasons, we believe our other subsidiaries outside of mainland China are not PRC resident enterprises either. Therefore, we believe that we should not be treated as a “resident enterprise” for PRC tax purposes even if the standards for “de facto management body” prescribed in the SAT Circular 82 are applicable to us.

However, it is possible that the mainland China's tax authorities may take a different view. If the mainland China's tax authorities determine that our Cayman Islands holding company is a PRC resident enterprise for PRC enterprise income tax purposes, then our world-wide income could be subject to PRC tax at a rate of 25%, which could materially reduce our net income. In addition, we will also be subject to PRC enterprise income tax reporting obligations.

Although dividends paid by one PRC tax resident to another PRC tax resident should qualify as "tax-exempt income" under the enterprise income tax law, we cannot assure you that dividends by our subsidiaries in mainland China to our Cayman Islands holding company will not be subject to a 10% withholding tax, as the foreign exchange regulation authorities, which enforce the withholding tax on dividends, and the tax authorities of mainland China have not yet issued guidance with respect to the processing of outbound remittances to entities that are treated as resident enterprises for PRC enterprise income tax purposes.

***We face uncertainties on the reporting and consequences on private equity financing transactions, private share transfers and share exchange involving the transfer of shares in our company by non-resident investors.***

On February 3, 2015, the PRC State Administration of Taxation issued the Notice on Several Issues Concerning Enterprise Income Tax for Indirect Share Transfer by Non-PRC Resident Enterprises, or the SAT Circular 7. Pursuant to SAT Circular 7, an "indirect transfer" of assets of a PRC resident enterprise, including equity interests in a PRC resident enterprise, by non-PRC resident enterprises may be re-characterized and treated as a direct transfer of PRC taxable properties, if such transaction arrangement lacks reasonable commercial purpose and was established for the purpose of reducing, avoiding or deferring PRC enterprise income tax. As a result, gains derived from such indirect transfer may be subject to PRC enterprise income tax, and tax filing or withholding obligations may be triggered, depending on the nature of the PRC taxable properties being transferred. According to SAT Circular 7, "PRC taxable properties" include assets of a PRC establishment or place of business, real properties in mainland China, and equity investments in PRC resident enterprises, in respect of which gains from their transfer by a direct holder, being a non-PRC resident enterprise, would be subject to PRC enterprise income taxes. When determining if there is a "reasonable commercial purpose" of the transaction arrangement, features to be taken into consideration include: whether the main value of the equity interest of the relevant offshore enterprise derives from PRC taxable properties; whether the assets of the relevant offshore enterprise mainly consists of direct or indirect investment in mainland China or if its income mainly derives from mainland China; whether the offshore enterprise and its subsidiaries directly or indirectly holding PRC taxable properties have real commercial nature which is evidenced by their actual function and risk exposure; the duration of existence of the business model and organizational structure; the replicability of the transaction by direct transfer of PRC taxable properties; and the tax situation of such indirect transfer and applicable tax treaties or similar arrangements. In respect of an indirect offshore transfer of assets of a PRC establishment or place of business of a foreign enterprise, the resulting gain is to be included with the annual enterprise filing of the PRC establishment or place of business being transferred, and would consequently be subject to PRC enterprise income tax at a rate of 25%. Where the underlying transfer relates to PRC real properties or to equity investments in a PRC resident enterprise, which is not related to a PRC establishment or place of business of a non-resident enterprise, a PRC enterprise income tax at a rate of 10% would apply, subject to available preferential tax treatment under applicable tax treaties or similar arrangements, and the party who is obligated to make the transfer payments has the withholding obligation. Where the payor fails to withhold any or sufficient tax, the transferor shall declare and pay such tax to the competent tax authority by itself within the statutory time limit. Late payment of applicable tax will subject the transferor to default interest. Circular 7 does not apply to transactions of sale of shares by investors through a public stock exchange where such shares were acquired from a transaction through a public stock exchange. On October 17, 2017, SAT issued the Announcement on Issues Relating to Withholding at Source of Income Tax of Non-resident Enterprises, or SAT Circular 37, effective December 2017, partially amended some provisions in SAT Circular 7. SAT Circular 37 purports to clarify certain issues by providing the definition of equity transfer income and tax basis, the foreign exchange rate to be used in the calculation of withholding amount, and the date of occurrence of the withholding obligation. Specifically, SAT Circular 37 provides that where the transfer income subject to withholding at source is derived by a non-PRC resident enterprise in instalments, the instalments may first be treated as recovery of costs of previous investments. Upon recovery of all costs, the tax amount to be withheld must then be computed and withheld. Currently, the sale of shares by investors through a public stock exchange where such shares were acquired from a transaction through a public stock exchange is not considered an "indirect transfer" subject to the rules described above.

We cannot assure you that the tax authorities of mainland China will not, at their discretion, adjust any capital gains and impose tax return filing and withholding or tax payment obligations on the transferors and transferees of our shares acquired or sold outside a public stock exchange, while our subsidiaries in mainland China may be requested to assist in the filing. Any PRC tax imposed on a transfer of our shares or any adjustment of such gains would cause us to incur additional costs and may have a negative impact on the value of your investment in our company.

***If our preferential tax treatments are revoked or become unavailable or if the calculation of our tax liability is successfully challenged by the relevant tax authorities, we may be required to pay tax, interest and penalties in excess of our tax provisions, and our financial condition and results of operations could be materially and adversely affected.***

According to the applicable provisions under Singapore law, corporations that are engaging in new high-value-added projects, expanding or upgrading their operations, or undertaking incremental activities after their pioneer period may apply for their profits to be taxed at a reduced rate of 5%, at minimum, for an initial period of up to ten years. The total tax relief period for each qualifying project or activity is subject to a maximum of 40 years (inclusive of the post-pioneer relief period previously granted, if applicable). Bigo Singapore was approved for such preferential tax treatment, enabling it to enjoy the preferential tax rate of 5% with the valid period from 2018 to 2022. Bigo Singapore renewed its qualification in 2022 and is entitled to continue to enjoy such preferential tax treatment from 2023 to 2027.

In addition, the mainland China's government has provided various tax incentives to our subsidiaries in mainland China, which include reduced enterprise income tax rates. For example, under the PRC Enterprise Income Tax Law, which came into effect on January 1, 2008 and subsequently amended on February 24, 2017 and on December 29, 2018, respectively, the statutory enterprise income tax rate is 25%. Certain subsidiaries and VIEs in mainland China, including Guangzhou Huanju Shidai Information Technology Co., Ltd., or Guangzhou Huanju Shidai, Guangzhou BaiGuoYuan and Guangzhou BaiGuoYuan Information Technology Co., Ltd., or BaiGuoYuan Technology, among others, are qualified High and New Technology Enterprises and enjoy a reduced tax rate of 15% for the year ended December 31, 2021, 2022 and 2023. An entity could re-apply for the High and New Technology Enterprise certificate when the prior certificate expires.

However, if any of the abovementioned companies fails to maintain its qualification for preferential tax treatments, its applicable enterprise income tax rate may increase to the applicable standard tax rate, which could materially and adversely affect our financial condition and results of operations. Furthermore, there can be no assurance that our effective tax rate will not increase over time as a result of changes in corporate income tax rates or other changes in the tax laws in the jurisdictions in which we operate. Any changes in tax laws could have an adverse impact on our financial results. For example, the Organization for Economic Cooperation and Development's 2021 announcement of the Inclusive Framework on Base Erosion and Profit Shifting, along with the Pillar Two Model Rules establishing a global minimum tax of 15% for large multinational corporations, further complicates the tax landscape. Subsequent to this announcement, various administrative guidelines have been released. Several tax jurisdictions have either implemented legislation to adopt elements of the Pillar Two Model Rules, commencing in 2024 with additional components to follow in subsequent years, or have outlined intentions to do so in the future. We will continually assess the implications of such legislative changes in the jurisdictions where we operate. Given the uncertainties surrounding the rules and their implementations, our results of operation and financial condition may be materially and adversely affected.

***Mainland China's Regulations on Mergers and Acquisitions of Domestic Enterprises by Foreign Investors and certain other regulations of mainland China establish complex procedures for certain acquisitions of companies in mainland China by foreign investors.***

Six regulatory agencies of mainland China promulgated the Regulations on Mergers and Acquisitions of Domestic Enterprises by Foreign Investors, effective on September 8, 2006, subsequently amended on June 22, 2009. See "Item 4. Information on the Company—B. Business Overview—Regulations in Multiple Jurisdictions Where We Operate—Mainland China Regulations—Regulations on Overseas Listing by Domestic Companies." These rules establish procedures and requirements that could make some acquisitions of companies in mainland China by foreign investors more time-consuming and complex, including requirements in some instances that the Ministry of Commerce be notified in advance of any change-of-control transaction in which a foreign investor takes control of a domestic enterprise in mainland China or a foreign company with substantial operations in mainland China, if certain thresholds under the Provisions on Thresholds for Prior Notification of Concentrations of Undertakings, issued by the State Council on August 3, 2008 and amended on September 18, 2018, are triggered.

Moreover, the Anti-Monopoly Law promulgated by the Standing Committee of the National People's Congress on August 30, 2007, which became effective on August 1, 2008 and was amended on June 24, 2022 and came into effect on August 1, 2022, requires that transactions which are deemed concentrations and involve parties with specified turnover thresholds must be cleared by the Ministry of Commerce before they can be completed. In addition, on February 3, 2011, the General Office of the State Council promulgated a Notice on Establishing the Security Review System for Mergers and Acquisitions of Domestic Enterprises by Foreign Investors, which officially established a security review system for mergers and acquisitions of domestic enterprises by foreign investors. According to the Rules on Implementation of Security Review System for the Merger and Acquisition of Domestic Enterprises by Foreign Investors issued by the Ministry of Commerce on August 25, 2011, which became effective on September 1, 2011, and the Notice on Establishing the Security Review System for Mergers and Acquisitions of Domestic Enterprises by Foreign Investors, a security review is required for mergers and acquisitions by foreign investors having "national defense and security" concerns and mergers and acquisitions by which foreign investors may acquire the "de facto control" of domestic enterprises with "national security" concerns, and the regulations prohibit any activities attempting to bypass such security review, including by structuring the transaction through a proxy or contractual control arrangement. Furthermore, on December 19, 2020, the National Development and Reform Commission and the Ministry of Commerce promulgated the Measures for Security Review of Foreign Investment, which took effect on January 18, 2021. Under these measures, investment in certain key areas which results in acquiring the actual control of the assets is required to obtain approval from designated governmental authorities in advance.

***Regulations of mainland China in relation to offshore investment activities by mainland China residents and direct investment and loans by offshore holding companies to entities in mainland China may delay or limit our ability to effectively use the proceeds of our offshore financing activities.***

We are an offshore holding company conducting part of our operations in mainland China through our subsidiaries in mainland China and the variable interest entities. We may make loans to our subsidiaries in mainland China and the variable interest entities, or we may make additional capital contributions to our subsidiaries in mainland China and our subsidiaries in mainland China may distribute profits to us. Any capital contributions or loans that we, as an offshore entity, make to our subsidiaries in mainland China, including from the proceeds of our public offerings, and the distribution of profits by our subsidiaries in mainland China are subject to regulations of mainland China. For example, none of our loans to a subsidiary in mainland China can exceed the statutory limits, and the loans must be registered with the local branch of SAFE. Our capital contributions to our mainland China subsidiaries are subject to the requirement of making necessary registration with competent governmental authorities in mainland China.

On March 30, 2015, SAFE issued the Circular on the Reforming of the Management Method of the Settlement of Foreign Currency Capital of Foreign-Invested Enterprises, which came into effect on June 1, 2015, and was last amended on March 23, 2023. Under this circular, a foreign-invested enterprise, within the scope of business, may choose to convert its registered capital from foreign currency to RMB on a discretionary basis, and the RMB capital so converted can be used for equity investments within mainland China, which will be regarded as the reinvestment of foreign-invested enterprise. SAFE promulgated the Notice of SAFE on Reforming and Standardizing the Foreign Exchange Settlement Management Policy of Capital Account, which came into effect on June 9, 2016 and was recently amended on December 4, 2023. The notice provides that discretionary foreign exchange settlement applies to foreign exchange capital, foreign debt offering proceeds and remitted foreign listing proceeds, and the corresponding RMB capital converted from foreign exchange are not restricted from extending loans to related parties or repaying the inter-company loans (including advances by third parties).

In January 2017, the SAFE promulgated the Circular on Further Improving Reform of Foreign Exchange Administration and Optimizing Genuineness and Compliance Verification, which stipulates several capital control measures with respect to the outbound remittance of profit from domestic entities to offshore entities. Moreover, pursuant to this circular, domestic entities shall make detailed explanations of the sources of capital and utilization arrangements, and provide board resolutions, contracts and other proof when completing the registration procedures in connection with an outbound investment.

On December 4, 2023, SAFE issued the Notice on Further Deepening Reforms to Promote the Convenience of Cross-border Trade and Investment, or SAFE Notice 28, which provides that qualified high-tech, “professional, sophisticated, unique and new” and technology-based small and medium-sized enterprises in Guangdong (including Shenzhen), and certain other areas can borrow foreign debt on their own within an amount not exceeding the equivalent of US\$10 million. Additionally, SAFE Notice 28 restructured the asset realization account of capital accounts to the settlement account of capital accounts. The equity transfer consideration funds in foreign currency received by a domestic equity transferor (including institutions and individuals) from domestic parties, as well as the foreign exchange funds raised by domestic enterprises through overseas listing may be directly remitted to the settlement account of capital accounts. Funds in the settlement account of capital accounts may be settled and used at discretion. The equity transfer consideration funds received by a domestic equity transferor from foreign-invested enterprises which are paid with RMB funds derived from the settlement of foreign exchange (i.e., RMB funds derived from direct settlement of foreign exchange or from settlement account for pending payment) may be transferred directly to the RMB account of the domestic equity transferor.

In addition, SAFE has promulgated regulations, including the Notice on Relevant Issues Relating to Domestic Residents’ Investment and Financing and Round-Trip Investment through Special Purpose Vehicles, or SAFE Circular 37, effective on July 4, 2014, and its appendixes, that require PRC residents, including institutions and individuals of mainland China, to register with local branches of SAFE in connection with their direct establishment or indirect control of an offshore entity, for the purpose of overseas investment and financing, with such PRC residents’ legally owned assets or equity interests in domestic enterprises or offshore assets or interests, referred to in SAFE Circular 37 as a “special purpose vehicle.” SAFE Circular 37 further requires amendment to the registration in the event of any significant changes with respect to the special purpose vehicle, such as increase or decrease of capital contributed by individuals of mainland China, share transfer or exchange, merger, division or other material event. In the event that a shareholder of mainland China holding interests in a special purpose vehicle fails to fulfill the required SAFE registration, the subsidiaries of that special purpose vehicle in mainland China may be prohibited from making profit distributions to the offshore parent and from carrying out subsequent cross-border foreign exchange activities, and the special purpose vehicle may be restricted in their ability to contribute additional capital into its subsidiary in mainland China. Further, failure to comply with the various SAFE registration requirements described above could result in liability under laws of mainland China for foreign exchange evasion, including (i) the requirement by SAFE to return the foreign exchange remitted overseas within a period specified by SAFE, with a fine of up to 30% of the total amount of foreign exchange remitted overseas and deemed to have been evasive and (ii) in circumstances involving serious violations, a fine of no less than 30% of and up to the total amount of remitted foreign exchange deemed evasive. Furthermore, the persons-in-charge and other persons at our subsidiaries in mainland China who are held directly liable for the violations may be subject to criminal sanctions.

Our present and prospective ability of subsidiaries in mainland China to conduct foreign exchange activities, such as the remittance of dividends and foreign currency-denominated borrowings, may be subject to compliance with the SAFE regulations by our PRC resident shareholders. In addition, in some cases, we may have little control over either our present or prospective direct or indirect PRC resident shareholders or the outcome of such registration procedures. A failure by our current or future PRC resident shareholders to comply with the SAFE regulations, including, but not limited to, any delay in subsequent filings, could subject us to fines or other legal sanctions, restrict our cross-border investment activities, limit our subsidiary’s ability to make distributions or pay dividends or affect our ownership structure, which could adversely affect our business and prospects.

In light of the various requirements imposed by regulations of mainland China on loans to and direct investment in entities in mainland China by offshore holding companies and offshore investment activities by PRC residents, we cannot assure you that we will be able to complete the necessary registration or obtain the necessary approval on a timely basis, or at all. If we fail to complete the necessary registration or obtain the necessary approval, our ability to make loans or equity contributions to our subsidiaries in mainland China and the ability of our subsidiaries in mainland China to distribute profits to us may be negatively affected, which could adversely affect the liquidity and the ability of our subsidiaries in mainland China to fund their working capital and expansion projects and meet their obligations and commitments.

***Failure to comply with mainland China's regulations regarding the registration requirements for employee stock ownership plans or share option plans may subject the plan participants in mainland China or us to fines and other legal or administrative sanctions.***

On February 15, 2012, SAFE promulgated the Notices on Issues Concerning the Foreign Exchange Administration for Domestic Individuals Participating in Stock Incentive Plans of Overseas Publicly-Listed Companies. Under these rules and other relevant rules and regulations, PRC residents who participate in stock incentive plan in an overseas publicly-listed company are required to register with SAFE or its local branches and complete certain other procedures. Participants of a stock incentive plan who are PRC residents must retain a qualified PRC agent, which could be a subsidiary within mainland China of such overseas publicly listed company or another qualified institution selected by such subsidiary within mainland China, to conduct the SAFE registration and other procedures with respect to the stock incentive plan on behalf of its participants. Such participants must also retain an overseas entrusted institution to handle matters in connection with their exercise of stock options, the purchase and sale of corresponding stocks or interests and fund transfers. In addition, the PRC agent is required to amend the SAFE registration with respect to the stock incentive plan if there is any material change to the stock incentive plan, the PRC agent or the overseas entrusted institution or other material changes. We and our employees in mainland China who have been granted stock options, restricted shares and restricted share units are subject to these regulations, and are preparing to complete such SAFE registrations. Failure of our stock option holders, restricted shareholders or restricted share units holders in mainland China to complete their SAFE registrations may subject these PRC residents to fines and legal sanctions and may also limit our ability to contribute additional capital into our subsidiaries in mainland China, limited the ability of our subsidiaries in mainland China to distribute dividends to us, or otherwise materially and adversely affect our business.

***Our subsidiaries and the variable interest entities in mainland China are subject to restrictions on paying dividends or making other payments to us, which may restrict our ability to satisfy our liquidity requirements.***

We are a holding company incorporated in the Cayman Islands. We rely on proceeds from corporate transactions such as the sales of our equity interest in HUYA Inc., and dividends from our subsidiaries as well as consulting and other fees paid to us by the variable interest entities for our cash and financing requirements, such as the funds necessary to pay dividends and other cash distributions to our shareholders, including holders of our ADSs, and service any debt we may incur. Current regulations of mainland China permit our subsidiaries in mainland China to pay dividends to us only out of their accumulated after-tax profits upon satisfaction of relevant statutory condition and procedures, if any, determined in accordance with Chinese accounting standards and regulations. In addition, each of our subsidiaries in mainland China is required to set aside at least 10% of its accumulated profits each year, if any, to fund certain reserve funds until the total amount set aside reaches 50% of its registered capital. As of December 31, 2023, appropriations to statutory reserves amounting to US\$37.7 million were made by our subsidiaries in mainland China and the variable interest entities. These reserves are not distributable as cash dividends. Furthermore, if our subsidiaries in mainland China and the variable interest entities incur debt on their own behalf in the future, the instruments governing the debt may restrict their ability to pay dividends or make other payments to us, which may restrict our ability to satisfy our liquidity requirements. Our capital expenditures are primarily used to purchase office space.

In addition, the PRC Enterprise Income Tax Law and its implementation rules provide that withholding tax rate of 10% will be applicable to dividends payable by companies in mainland China to non-mainland-China-resident enterprises unless otherwise exempted or reduced according to treaties or arrangements between the central government of mainland China and governments of other countries or regions where the non-mainland-China-resident enterprises are incorporated.

***It may be difficult for overseas regulators to conduct investigation or collect evidence within mainland China.***

Shareholder claims or regulatory investigation that are common in the United States generally are difficult to pursue as a matter of law or practicality in mainland China. For example, in mainland China, there are significant legal and other obstacles to providing information needed for regulatory investigations or litigation initiated outside mainland China. Although the authorities in mainland China may establish a regulatory cooperation mechanism with the securities regulatory authorities of another country or region to implement cross-border supervision and administration, such cooperation with the securities regulatory authorities in the United States may not be efficient in the absence of mutual and practical cooperation mechanism. Furthermore, according to Article 177 of the PRC Securities Law, which became effective in March 2020, no overseas securities regulator is allowed to directly conduct investigation or evidence collection activities within the territory of mainland China and without the consent by the mainland China's securities regulatory authorities and the other competent governmental agencies, no entity or individual may provide documents or materials related to securities business to overseas parties. In addition, the Data Security Law and the Personal Information Protection Law provide that no entity or individual within the territory of mainland China shall provide any foreign judicial body and law enforcement body with any data or any personal information stored within the territory of mainland China without the approval of the competent governmental authority of mainland China. While detailed interpretation of or implementation rules under these laws have yet to be promulgated, the inability for an overseas securities regulator to directly conduct investigation or evidence collection activities within mainland China, and restrictions on the provision of documents, materials, data and personal information by entities and individuals in mainland China to an overseas securities regulator, foreign judicial body or foreign law enforcement body may further increase difficulties faced by you in protecting your interests.

**Risks Related to Our Corporate Structure**

***If the mainland China's government finds that the structure we have adopted for our business operations in mainland China does not comply with laws and regulations of mainland China, or if these laws or regulations or interpretations of existing laws or regulations change in the future, we could be subject to severe penalties, including the shutting down of our platforms and our business operations currently operated in mainland China.***

Foreign ownership of internet-based businesses is subject to significant restrictions under current laws and regulations of mainland China. The mainland China's government regulates internet access, the distribution of online information and the conduct of online commerce through strict business licensing requirements and other government regulations. These laws and regulations also limit foreign ownership in companies in mainland China that provide internet information distribution services. Specifically, foreign ownership in an internet information provider or other value-added telecommunication service providers may not exceed 50%. In addition, according to the Several Opinions on the Introduction of Foreign Investment in the Cultural Industry promulgated by the Ministry of Culture (currently known as the Ministry of Culture and Tourism), the State Administration of Radio, Film and Television, the General Administration of Press and Publication (currently known as the State Administration of Press Publication, Radio, Film and Television after combination of the State Administration of Radio, Film and Television and the General Administration of Press and Publication), the National Development and Reform Commission and the Ministry of Commerce in July 2005, foreign investors are prohibited from investing in or operating, among others, any internet cultural operating entities and from engaging in the business of transmitting audio-visual programs through information networks. In addition, according to the 2021 Negative List promulgated by the National Development and Reform Commission and the Ministry of Commerce on December 27, 2021 and effective on January 1, 2022, other than e-commerce, domestic multiparty communication, store and forward, and call center services, the permitted foreign investment in value-added telecommunications service providers must not be more than 50%.

We are an exempted company incorporated in the Cayman Islands. We conduct part of our operations in mainland China primarily through a series of contractual arrangements entered into among our subsidiaries and the respective shareholders of the variable interest entities in mainland China. As a result of these contractual arrangements, we are considered the primary beneficiary of the variable interest entities and consolidate each of their operating results in our financial statements under U.S. GAAP. All of the equity (net assets) or deficit (net liabilities) and net income (loss) of the variable interest entities are attributed to us. For a detailed description of these contractual arrangements, see “Item 7. Major Shareholders and Related Party Transactions—B. Related Party Transactions—VIE Structure and the Contractual Arrangements.” However, as we are a Cayman Islands holding company with no equity ownership in the variable interest entities, investors in our ADSs or the common shares thus are not purchasing equity interest in the variable interest entities but instead are purchasing equity interest in a Cayman Islands holding company. The Foreign Investment Law, which promulgated by the Standing Committee of the National People’s Congress on March 15, 2019 and became effective on January 1, 2020, does not explicitly stipulate the contractual arrangements under the “variable interest equity” structures as a form of foreign investment. Nevertheless, we cannot assure you that there will not be any further changes in the regulatory regime in the future. For more information, please see “—Risks Related to Doing Business in Jurisdictions We Operate—Substantial uncertainties exist with respect to the interpretation and implementation of the Foreign Investment Law and how it may impact the viability of our current corporate structure, corporate governance and business operations in mainland China.” If the mainland China’s government deems that our contractual arrangements with the variable interest entities do not comply with mainland China’s regulatory restrictions on foreign investment in the relevant industries, or if these regulations or the interpretation of existing regulations change or are interpreted differently in the future, we could be subject to severe penalties or be forced to relinquish our interests in those operations in mainland China. We may not be able to fully repay the notes and other indebtedness, and our shares may decline significantly in value, if we are unable to assert our contractual control rights over the assets of the variable interest entities. Our holding company in the Cayman Islands, the variable interest entities, and investors of our company face uncertainty about potential future actions by the mainland China’s government that could affect the enforceability of the contractual arrangements with the variable interest entities and, consequently, significantly affect the financial performance of the variable interest entities and our company as a group.

Based on understanding of current laws, rules and regulations of mainland China of our PRC counsel, Fangda Partners, our current ownership structure for our business operations, the ownership structure of our subsidiaries in mainland China and the variable interest entities, the contractual arrangements among our subsidiaries in mainland China, the variable interest entities and their shareholders, as described in this annual report on Form 20-F, are in compliance with existing laws, rules and regulations of mainland China. However, we were further advised by Fangda Partners that there is substantial uncertainty regarding the interpretation and application of current or future laws and regulations of mainland China and these laws or regulations or interpretations of these laws or regulations may change in the future. Furthermore, the relevant government authorities have broad discretion in interpreting these laws and regulations. Accordingly, we cannot assure you that mainland China’s government authorities will not ultimately take a view contrary to the opinion of our PRC counsel.

If our ownership structure, contractual arrangements and businesses of our company, our subsidiaries in mainland China or the variable interest entities are found to be in violation of any existing or future laws or regulations of mainland China, the relevant governmental authorities would have broad discretion in dealing with such violation, including levying fines, confiscating our income or the income of our subsidiaries in mainland China or the variable interest entities, revoking or suspending the business licenses or operating licenses of our subsidiaries in mainland China or the variable interest entities, shutting down our servers or blocking our platforms, discontinuing or placing restrictions or onerous conditions on our operations, requiring us to discontinue our operations in mainland China, requiring us to undergo a costly and disruptive restructuring, restricting or prohibiting our use of proceeds from our initial public offering to finance our business and operations in mainland China, and taking other regulatory or enforcement actions that could be harmful to our business. Any of these actions could cause significant disruption to our business operations in mainland China and severely damage our reputation, which would in turn materially and adversely affect our business, financial condition and results of operations. In addition, if the imposition of any of these penalties causes us to lose the rights to direct the activities of the variable interest entities or our right to receive their economic benefits, we would no longer be able to consolidate such entities.

***We rely on contractual arrangements with the variable interest entities and their shareholders for some of our operation in mainland China, which may not be as effective as direct ownership. If the variable interest entities and their shareholders fail to perform their obligations under these contractual arrangements, we may have to resort to litigation or other legal proceedings to enforce our rights, which may be time-consuming, unpredictable, expensive and damaging to our operations and reputation.***

Because of the restrictions on foreign ownership of internet-based businesses in mainland China, we depend on contractual arrangements with the variable interest entities in which we have no ownership interest to conduct some of our business in mainland China. These contractual arrangements are intended to provide us with the ability to direct the operations of these entities and allow us to obtain economic benefits from them. For additional details on these ownership interests, see “—Risks Related to Our Business and Industry—Our business depends substantially on the continuing efforts of our executive officers and key employees, and our business operations may be severely disrupted if we lose their services” and “Item 7. Major Shareholders and Related Party Transactions—B. Related Party Transactions—VIE Structure and the Contractual Arrangements.” However, these contractual arrangements may not be as effective in providing control as direct ownership. For example, each of the variable interest entities and their shareholders could breach their contractual arrangements with us by, among other things, failing to operate our business currently operated in mainland China in an acceptable manner or taking other actions that are detrimental to our interests. If we were the controlling shareholder of these variable interest entities with direct ownership, we would be able to exercise our rights as shareholders to effect changes to their board of directors, which in turn could implement changes at the management and operational level. However, under the current contractual arrangements, as a legal matter, if the variable interest entities or their shareholders fail to perform their obligations under these contractual arrangements, we may have to incur substantial costs to enforce such arrangements, and rely on legal remedies under laws of mainland China, including contract remedies, which may not be sufficient or effective. In particular, the contractual arrangements provide that any dispute arising from these arrangements will be submitted to the China International Economic and Trade Arbitration Commission for arbitration in Beijing, Beijing Arbitration Commission or Guangzhou Arbitration Commission as applicable, the ruling of which will be final and binding. There are significant uncertainties relating to the enforcement of legal rights through arbitration, litigation and other legal proceedings, which could limit our ability to enforce these contractual arrangements and exert effective control over the variable interest entities. Meanwhile, there are very few precedents and little formal guidance as to how contractual arrangements in the context of a variable interest entity should be interpreted or enforced under law of mainland China. Significant uncertainties remain regarding the ultimate outcome of such arbitration should legal action become necessary. In addition, under law of mainland China, rulings by arbitrators are final, parties cannot appeal the arbitration results in courts, and if the losing parties fail to carry out the arbitration awards within a prescribed time limit, the prevailing parties may only enforce the arbitration awards in courts of mainland China through arbitration award recognition proceedings, which would require additional expenses and delay. If we are unable to enforce these contractual arrangements, or if we suffer significant delay or other obstacles in the process of enforcing these contractual arrangements, our business and operations in mainland China could be severely disrupted, which could materially and adversely affect our results of operations and damage our reputation. See “—Risks Related to Doing Business in Jurisdictions We Operate—There are uncertainties regarding the interpretation and enforcement of PRC laws, rules and regulations.”

***The shareholders of the variable interest entities may have potential conflicts of interest with us, and if any such conflicts of interest are not resolved in our favor, our business may be materially and adversely affected.***

Certain selected individuals, who are PRC citizens, from our senior management team are nominee shareholders of the variable interest entities in essence. The interests of such nominated individuals as the controlling shareholders of the variable interest entities may differ from the interests of our company as a whole, as what is in the best interests of the variable interest entities may not be in the best interests of our company. We cannot assure you that when conflicts of interest arise, the shareholders of the variable interest entities will act in the best interests of our company or that conflicts of interests will be resolved in our favor. In addition, the shareholders of the variable interest entities may breach or cause the consolidated variable entities and their respective subsidiaries to breach or refuse to renew the existing contractual arrangements with us. Currently, we do not have existing arrangements to address potential conflicts of interest the shareholders of the variable interest entities may encounter in his/her capacity as a shareholder or director of the variable interest entities, on the one hand, and as a beneficial owner or director of our company, on the other hand; provided that we could, at all times, exercise our option under the exclusive option agreement with the shareholders of the variable interest entities to cause them to transfer all of his equity ownership in the consolidated variable interest entities to an entity or individual in mainland China designated by us, and this new shareholder of the consolidated variable entities could then appoint a new director of the consolidated variable entities to replace the existing directors. In addition, if such conflicts of interest arise, our wholly owned subsidiaries in mainland China, could also, in the capacity of attorney-in-fact for the shareholders of the variable interest entities as provided under the relevant powers of attorney, directly appoint a new director of the consolidated variable entities to replace the existing directors. However, the legal frameworks of mainland China and the Cayman Islands do not provide guidance on resolving conflicts in the event of a conflict with another corporate governance regime. If we cannot resolve any conflicts of interest or disputes between us and the shareholders and the nominated individuals of the variable interest entities, we would have to rely on legal proceedings, which could result in disruption of our business in mainland China and subject us to substantial uncertainty as to the outcome of any such legal proceedings.

***We may lose the ability to use and enjoy assets held by the variable interest entities that are important to the operation of our business if such entities go bankrupt or become subject to a dissolution or liquidation proceeding.***

As part of our contractual arrangements with the variable interest entities, such entities hold certain assets, such as patents for the proprietary technologies that are essential to the operations of our platforms and important to the operation of our business. If any one of the variable interest entities goes bankrupt and all or part of its assets become subject to liens or rights of third-party creditors, we may be unable to continue some or all of our business activities, which could materially and adversely affect our business, financial condition and results of operations. If any one of the variable interest entities undergoes a voluntary or involuntary liquidation proceeding, the unrelated third-party creditors may claim rights to some or all of these assets, thereby hindering our ability to operate our business, which could materially and adversely affect our business, financial condition and results of operations.

***Our ability to enforce the equity pledge agreements between us and the variable interest entities' shareholders may be subject to limitations based on laws and regulations of mainland China.***

Pursuant to the equity interest pledge agreements between our wholly owned subsidiaries in mainland China, and the shareholders of the variable interest entities, each shareholder of each variable interest entity agrees to pledge its equity interests in the VIE to our subsidiary to secure the relevant VIE's performance of their obligations under the relevant contractual arrangements. The equity interest pledges of shareholders of VIEs under these equity pledge agreements have been registered with the relevant local branch of the SAMR, except that (i) the equity interest pledged by the shareholders of Beijing Tuda Technology Co., Ltd., or Beijing Tuda, of their equity interest in Beijing Tuda, (ii) the equity interest pledged by the shareholder of Chengdu Yunbu Internet Technology Co., Ltd., or the Chengdu Yunbu, of its equity interest in Chengdu Yunbu, (iii) the equity interest pledged by the shareholder of Chengdu Luota Internet Technology Co., Ltd., or the Chengdu Luota, of its equity interest in Chengdu Luota, and (iv) the equity interest pledged by the shareholder of Chengdu Jiyue Internet Technology Co., Ltd., or the Chengdu Jiyue, of its equity interest in Chengdu Jiyue have not been registered. The equity interest pledge agreements with each of the VIEs' shareholders provide that the pledged equity interest shall constitute continuing security for any and all of the indebtedness, obligations and liabilities under all of the principal service agreements and the scope of pledge which are not limited by the amount of the registered capital of that VIE. However, it is possible that a court in mainland China may take the position that the amount listed on the equity pledge registration forms represents the full amount of the collateral that has been registered and perfected. If this is the case, the obligations that are supposed to be secured in the equity interest pledge agreements in excess of the amount listed on the equity pledge registration forms could be determined by the court in mainland China as unsecured debt, which takes last priority among creditors.

***Our contractual arrangements with the variable interest entities may result in adverse tax consequences to us.***

As a result of our corporate structure and the contractual arrangements among our subsidiaries in mainland China, the variable interest entities and their shareholders, we are effectively subject to PRC turnover tax on revenues generated by our subsidiaries from our contractual arrangements with the variable interest entities. Such tax generally includes the PRC value-added tax, along with related surcharges. The applicable turnover tax is determined by the nature of the transaction generating the revenues subject to taxation. The PRC enterprise income tax law requires every enterprise in mainland China to submit its annual enterprise income tax return together with a report on transactions with its affiliates or related parties to the relevant tax authorities. These transactions may be subject to audit or challenge by the mainland China's tax authorities within ten years after the taxable year during which the transactions are conducted. We may be subject to adverse tax consequences if the mainland China's tax authorities were to determine that the contracts between us and the variable interest entities were not on an arm's length basis and therefore constitute a favorable transfer pricing arrangements. If this occurs, the mainland China's tax authorities could request that either of the variable interest entities adjust its taxable income upward for tax purposes in mainland China. Such a pricing adjustment could adversely affect us by reducing expense deductions recorded by either of the variable interest entities and thereby increasing these entities' tax liabilities, which could subject these entities to late payment fees and other penalties for the underpayment of taxes. Our consolidated net income may be materially and adversely affected if the variable interest entities' tax liabilities increase or if it becomes subject to late payment fees or other penalties.

***If the variable interest entities fail to obtain and maintain the requisite licenses and approvals required under the complex regulatory environment for internet-based businesses in mainland China, our business, financial condition and results of operations in mainland China may be adversely affected.***

We generated 16.8%, 19.7% and 15.3% of our total net revenues from mainland China for the year ended December 31, 2021, 2022 and 2023, respectively. We believe the majority of our continuing business, especially our global platforms that operated outside mainland China, is not subject to the regulations of mainland China that require us to obtain and maintain certain licenses and approvals through the variable interest entities as we used to be. Yet as we maintain some our audio and video capabilities and functions in mainland China, we will need to obtain additional qualifications, permits, approvals or licenses. In addition, with respect to specific services offered online, we or the service or content providers may be subject to additional separate qualifications, permits, approvals, licenses or filing requirements. We cannot assure you that we or the service or content providers will be granted such qualifications, permits, approvals or licenses, or complete the filings in a timely manner or at all. Prior to the receipt of such qualifications, permits, approvals or licenses, or the completion of such filings, we may be deemed as being in violation of relevant laws or regulations and be subject to penalties.

As the internet industry in mainland China is still in development, new laws and regulations may be adopted from time to time to address new issues that come to the authorities' attention. In the interpretation and implementation of existing and future laws and regulations governing our business activities, considerable uncertainties still exist. We cannot assure you that we will not be found in violation of any future laws and regulations or any of the laws and regulations currently in effect due to changes in the relevant authorities' interpretation of these laws and regulations. In addition, we may be required to obtain additional license or approvals, and we cannot assure you that we will be able to timely obtain or maintain all the required licenses or approvals or make all the necessary filings in the future. If we fail to obtain or maintain any of the required licenses or approvals or make the necessary filings, we may be subject to various penalties, such as confiscation of the net revenues that were generated through the unlicensed internet activities, the imposition of fines and the discontinuation or restriction of our operations in mainland China. Any such penalties may disrupt our business operations in mainland China and adversely affect our business, financial condition and results of operations.

***Substantial uncertainties exist with respect to the interpretation and implementation of the Foreign Investment Law and how it may impact the viability of our current corporate structure, corporate governance and business operations in mainland China.***

On March 15, 2019, the Standing Committee of the National People’s Congress promulgated the Foreign Investment Law, which came into effect on January 1, 2020, and on December 12, 2019, the Implementation Regulations of Foreign Investment Law was promulgated by the State Council, which simultaneously came into effect on January 1, 2020. The Foreign Investment Law, together with the Implementation Regulations of Foreign Investment Law, replaced the trio of existing laws regulating foreign investment in mainland China, namely, the Sino-foreign Equity Joint Venture Enterprise Law, the Sino-foreign Cooperative Joint Venture Enterprise Law and the Wholly Foreign-invested Enterprise Law, together with their implementation rules and ancillary regulations. This law is the legal foundation for foreign investment in mainland China. The Foreign Investment Law embodies an expected regulatory trend in mainland China to rationalize its foreign investment regulatory regime in line with prevailing international practice and the legislative efforts to unify the corporate legal requirements for both foreign and domestic investments. The Implementation Regulations of Foreign Investment Law provide detailed rules for the principles of investment protection, promotion and management set forth in the Foreign Investment Law.

The Foreign Investment Law stipulates three forms of foreign investment, but does not explicitly stipulate the contractual arrangements under the “variable interest equity” structures as a form of foreign investment. The Foreign Investment Law further stipulates that foreign investment includes “foreign investors invest in mainland China through any other methods under laws, administrative regulations, or provisions prescribed by the State Council.” Therefore, it is possible that future laws, administrative regulations or provisions of the State Council may stipulate contractual arrangements as a form of foreign investment, and then whether the contractual arrangements will be recognized as a foreign investment, whether the contractual arrangements will be deemed to be in violation of the access requirements of foreign investment and how the contractual arrangements will be interpreted and handled remain uncertain. Conversely, if contractual arrangements are then incorporated as a form of foreign investment, it may materially impact our corporate governance practice and increase our compliance costs.

***Compliance with the laws or regulations governing virtual currency may cause us to obtain additional approvals or licenses or change our current business model.***

The issuance and use of “virtual currency” in mainland China has been regulated since 2007 in response to the growth of the online game industry in mainland China. On January 25, 2007, the Ministry of Public Security, the Ministry of Culture, the Ministry of Industry and Information Technology and the General Administration of Press and Publication jointly issued a circular regarding online gambling which has implications for the use of virtual currency. The circular bans the conversion of virtual currency into real currency or property.

We issue virtual currency to users on our platforms currently operated in mainland China for them to purchase various items to be used in channels, including music channels. We are in the process of adjusting the content of our platforms currently operated in mainland China but we cannot assure you that our adjustments will be sufficient to comply with the relevant laws. Moreover, although we believe we do not offer virtual currency transaction services, we cannot assure you that the mainland China’s regulatory authorities will not take a view contrary to ours. In that event, we may be required to cease either our virtual currency issuance activities or such deemed “transaction service” activities and may be subject to certain penalties, including mandatory corrective measures and fines. The occurrence of any of the foregoing could have an adverse effect on our business, financial condition and results of operations in mainland China.

***We face risks related to geopolitical events, natural disasters, health epidemics, and other outbreaks, which could significantly disrupt our operations.***

Our business could be adversely affected by the effects of epidemics. In recent years, there have been outbreaks of epidemics globally. Our business operations could be disrupted if one of our employees is suspected of having contracted the H1N1 flu, avian flu, Ebola, COVID-19 or another epidemic, since it could require our employees to be quarantined and/or our offices to be disinfected. Our results of operations could be adversely affected to the extent that the outbreak has any negative impact on the global economy in general and the global mobile internet and gaming industries in particular.

We are also vulnerable to natural disasters and other calamities. It is possible that we may be unable to recover certain data in the event of a server failure. We cannot assure you that any backup systems will be adequate to protect us from the effects of fire, floods, typhoons, earthquakes, power loss, telecommunications failures, break-ins, war, riots, terrorist attacks or similar events. Any of the foregoing events may give rise to server interruptions, breakdowns, system failures, technology platform failures or internet failures, which could cause the loss or corruption of data or malfunctions of software or hardware as well as adversely affect our ability to provide services on our platform.

***Non-compliance on the part of third parties with which we conduct business could restrict our ability to maintain or increase our number of users or the level of traffic to our platforms.***

Our business partners may be subject to regulatory penalties or punishments because of their regulatory compliance failures, which may disrupt our business. Although we conduct a rigid review of legal formalities and certifications before entering into contractual relationship with other businesses such as third-party game developers, e-commerce merchants and landlords, we cannot be certain whether such third party has or will infringe any third parties' legal rights or violate any regulatory requirements. We regularly identify irregularities or non-compliance in the business practices of any parties with whom we pursue existing or future cooperation and we cannot assure you that any of these irregularities will be corrected in a prompt and proper manner. The legal liabilities and regulatory actions on our commercial partners may affect our business activities and reputation and in turn, our results of operations. For example, according to regulations of mainland China, all lease agreements are required to be registered with the local housing authorities. Currently, certain of our offices in mainland China for daily operations and certain other properties serving as dormitories and canteens in mainland China are on leased premises, and the landlords of some of these properties are still completing the registration of their ownership rights or the registration of our leases with the relevant authorities. Some of our lessors have not provided us with appropriate title certificates, which may adversely affect the validity of the leases if the lessors do not have proper title. We cannot assure you that such certificates or registration will be obtained in a timely manner or at all, and in case of failures, we may be subject to monetary fines, have to relocate our offices and suffer economic losses. We may also be adversely affected for intellectual property infringement, product related claims, consumer protection deficiencies, or regulatory violations resulting from e-commerce merchants who use our e-commerce services.

In addition, we allow providers of some online services to establish channels on our platforms. The online service providers and the producers of content on our platforms may be required to meet specific qualifying standards, evidenced by approvals, permits or certificates, and to comply with various requirements when conducting business. We cannot predict if any non-compliance on the part of such commercial partners may cause potential liabilities to us and in turn disrupt our operations.

#### **Risks Related to Our ADSs**

***The trading prices of our ADSs are likely to be volatile, which could result in substantial losses to investors.***

The trading prices of our ADSs ranged from US\$24.12 to US\$43.20 in 2023. The trading prices of our ADSs are likely to be volatile and could fluctuate widely due to factors beyond our control. This may happen because of broad market and industry factors, like the performance and fluctuation in the market prices or the underperformance or deteriorating financial results of other companies in the global online entertainment or smart commerce solution industry or with business operations located mainly in the same markets as ours. The sale of a significant number of the ADSs, common shares or other equity securities in the public market, or the perception that such sales may occur, could also materially and adversely affect the market price of our ADSs. The securities of some of these companies have experienced significant volatility since their initial public offerings, including, in some cases, substantial price declines in the trading prices of their securities. The trading performances of certain companies' securities after their offerings, including companies in internet, social networking or smart commerce solution businesses, may affect the attitudes of investors toward other companies listed in the United States in the same sector, which consequently may impact the trading performance of our ADSs, regardless of our actual operating performance. In addition, any negative news or perceptions about inadequate corporate governance practices or fraudulent accounting or other practices at other companies may also negatively affect the attitudes of investors towards companies in the same sector or in the same market in general, including us, regardless of whether we have engaged in such practices. Furthermore, the stock market in general has experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of companies like us. These broad market and industry fluctuations may adversely affect the market price of our ADSs.

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In addition to market and industry factors, the price and trading volume for our ADSs may be highly volatile due to specific factors, including the following:

- variations in our net revenues, earnings and cash flow;
- guidance or other projections we may provide to the public, including any changes or failure to meet any guidance or other projections;
- announcements of share repurchase, dividends or any other capital usage plans;
- announcements of new investments, acquisitions, strategic partnerships, or joint ventures;
- announcements of new services and expansions by us or our competitors;
- changes in financial estimates by securities analysts;
- downgrades, suspension or termination of coverage by industry or securities analysts that publish research or reports on us;
- changes in the number of our registered or active users;
- fluctuations in the number of paying users, merchants or other operating metrics;
- failure on our part to realize monetization opportunities as expected;
- additions or departures of key personnel;
- release of lock-up or other transfer restrictions on our outstanding equity securities or sales of additional equity securities or the perception that such sales may occur;
- detrimental negative publicity about us, our competitors or our industry;
- potential litigation, government policies, restrictions or actions, or regulatory proceedings or changes;
- volatility in the stock market;
- changing trends in the economy, interest rate hikes or other interest rate-related decisions; and
- general political, economic, or market conditions, or other events or factors, including those resulting from war, incidents of terrorism, pandemics, and other disruptive external events, or responses to those events.

Any of these factors may result in large and sudden changes in the volume and price at which our ADSs will trade.

***We may be named as a defendant in putative shareholder class action lawsuits and may be subject to the SEC or third-party investigations which could have a material adverse impact on our business, financial condition, results of operation, cash flows and reputation.***

We were involved in a putative shareholder class action lawsuit described in “Item 8. Financial Information—A. Consolidated Statements and Other Financial Information—Legal Proceedings,” including any appeals of such lawsuit. On March 9, 2022, the court granted our motion to dismiss and dismissed the operative complaint in its entirety with prejudice. On April 8, 2022, the co-lead plaintiffs filed a notice of appeal. The court heard oral argument on April 21, 2023. The appellate court affirmed the district court’s decision on May 9, 2023 and issued the formal mandate on May 31, 2023. This class action was resolved. However, we cannot assure you that we will not be subject to similar class action in the future, and if we do, we also cannot assure you that we will not be held liable. In addition, there can be no assurance that our insurance carriers will cover all or part of the defense costs, or any liabilities that may arise from these matters. Even if the allegations against us may ultimately be proven to be groundless, we may have to utilize a significant portion of our cash resources and divert management’s attention from the day-to-day operations of our company, all of which could harm our business. We also may be subject to claims for indemnification related to these matters, and we cannot predict the impact that indemnification claims may have on our business or financial results. In addition, we may be subject to further due diligence and investigations conducted by competent third-party advisors or regulatory authorities. We cannot predict or provide any assurance as to the timing, outcome or consequences of such reviews and investigations, and we have incurred and may continue to incur significant expenses related to legal, accounting, and other professional services in connection with matters relating to or arising from such reviews and investigations.

***We believe that we were a passive foreign investment company, or PFIC, for United States federal income tax purposes for the taxable year ended December 31, 2023, which could subject United States holders of our ADSs or Class A common shares to significant adverse United States income tax consequences.***

We will be classified as a “passive foreign investment company,” or “PFIC” for United States federal income tax purposes for any taxable year, if either (a) 75% or more of our gross income for such year consists of certain types of “passive” income or (b) 50% or more of the value of our assets (generally determined on the basis of a quarterly average) during such year produce or are held for the production of passive income. Although the law in this regard is unclear, we treat the variable interest entities as being owned by us for United States federal income tax purposes, not only because we exercise effective control over the operation of such entities but also because we are entitled to substantially all of their economic benefits, and, as a result, we consolidate their operating results in our consolidated financial statements.

Based on the market price of our ADSs and the nature and composition of our assets (in particular the retention of substantial amounts of cash, deposits and investments), we believe that we were a PFIC for United States federal income tax purposes for the taxable year ended December 31, 2023, and we will likely be a PFIC for our current taxable year unless the market price of our ADSs increases and/or we invest a substantial amount of the cash and other passive assets we hold in assets that produce or are held for the production of active income.

If we are classified as a PFIC in any taxable year, a U.S. holder (as defined in “Item 10. Additional Information—E. Taxation—United States Federal Income Tax Considerations”) will generally be subject to reporting requirements and may incur significantly increased United States income tax on gain recognized on the sale or other disposition of the ADSs or Class A common shares and on the receipt of distributions on the ADSs or Class A common shares to the extent such gain or distribution is treated as an “excess distribution” under the United States federal income tax rules. Further, if we are classified as a PFIC for any year during which a U.S. holder holds our ADSs or Class A common shares, we generally will continue to be treated as a PFIC for all succeeding years during which such U.S. holder holds our ADSs or Class A common shares. Alternatively, U.S. holders of PFIC shares can sometimes avoid the rules described above by making certain elections, including a “mark-to-market” election or electing to treat a PFIC as a “qualified electing fund.” However, U.S. holders will not be able to make an election to treat us as a “qualified electing fund” because, even if we were to be or become a PFIC, we do not intend to comply with the requirements necessary to permit U.S. holders to make such election. Each U.S. holder is urged to consult its tax advisor concerning the United States federal income tax considerations relating to the ownership and disposition of our ADSs or Class A common shares if we are treated as a PFIC for our current taxable year or any future taxable year (including the possibility of making a “mark-to-market” election and the unavailability of an election to treat us as a qualified electing fund). For more information see “Item 10. Additional Information—E. Taxation—United States Federal Income Tax Considerations—Passive Foreign Investment Company Rules.”

***Our dual class common share structure with different voting rights will limit your ability to influence corporate matters and could discourage others from pursuing any change of control transactions that holders of our Class A common shares and ADSs may view as beneficial.***

Our common shares are divided into Class A common shares and Class B common shares. Holders of Class A common shares are entitled to one vote per share, while holders of Class B common shares are entitled to ten votes per share, voting together as one class on all matters requiring a shareholders' vote and which are voted upon by way of a poll. Each Class B common share is convertible into one Class A common share at any time by the holder thereof. Class A common shares are not convertible into Class B common shares under any circumstances. Upon any sale, pledge, transfer or assignment or disposition of Class B common shares by a holder thereof to any person or entity that is not an affiliate of such holder, such Class B common shares will be automatically and immediately converted into an equal number of Class A common shares. In addition, if at any time, Messrs. David Xueling Li, Jun Lei and their affiliates collectively own less than 5% of the total number of the issued and outstanding Class B common shares, each issued and outstanding Class B common share will be automatically and immediately converted into one Class A common share, and we will not issue any Class B common shares thereafter. Furthermore, if at any time more than 50% of the ultimate beneficial ownership of any holder of Class B common shares (other than our founders or our founders' affiliates) changes, each such Class B common share will be automatically and immediately converted into one Class A common share.

Due to the disparate voting powers attached to these two classes of common shares, as of March 31, 2024, Mr. David Xueling Li and his respective affiliates, held 83.0% of the total voting power of our company and have considerable influence over all matters requiring a shareholders' vote, including election of directors and significant corporate transactions, such as a merger or sale of our company or our assets. This concentrated control will limit your ability to influence corporate matters and could discourage others from pursuing any potential merger, takeover or other change of control transactions that holders of Class A common shares and ADSs may view as beneficial.

***Our existing shareholders have substantial influence over our company and their interests may not be aligned with the interests of our other shareholders, which may discourage, delay or prevent a change in control of our company, which could deprive our shareholders of an opportunity to receive a premium for their securities.***

As of March 31, 2024, Mr. David Xueling Li, our co-founder, chairman and chief executive officer, and his affiliates, held 83.0% of the total voting power. Mr. David Xueling Li has substantial influence over our business, including decisions regarding mergers, consolidations and the sale of all or substantially all of our assets, election of directors and other significant corporate actions. This concentration of ownership may discourage, delay or prevent a change in control of our company, which could deprive our shareholders of an opportunity to receive a premium for their shares as part of any contemplated sale of our company and may reduce the price of our ADSs. In addition, Mr. Li could violate the terms of his non-compete or employment agreements with us or his legal duties by diverting business opportunities from us, resulting in our loss of corporate opportunities. These actions may take place even if they are opposed by our other shareholders.

Additionally, Mr. Jun Lei, one of our major shareholders who beneficially owned 10.4% of our outstanding shares as of March 31, 2024, has delegated the voting rights of the shares that he holds in our company to Mr. Li. Mr. Lei is active in making investments in internet companies in mainland China and currently holds direct and indirect interests in Xiaomi and other entities that may have businesses competing with ours. Xiaomi Corporation (HKEX: 1810) is an internet company with smartphones and smart hardware connected by an IoT platform at its core, which also offer online performance and live broadcasting services. Mr. Lei may, in the future, acquire additional interests in businesses that directly or indirectly compete with some of our lines of business or that are our suppliers or customers. Furthermore, Mr. Lei may pursue acquisitions or make further investments in our industries which may conflict with our interests. For more information regarding the beneficial ownership of our company by our principal shareholders, see "Item 6. Directors, Senior management and Employees—E. Share Ownership."

***Our reputation and the trading price of our ADSs may be negatively affected by adverse publicity or detrimental conduct against us.***

Adverse publicity concerning the alleged fraudulence on our reported user metrics and authenticity on our revenues and cash balances could harm our reputation and cause the trading price of our ADSs to decline and fluctuate significantly. For example, after the publication of the short seller report issued by Muddy Waters Capital LLC containing various allegations against us on November 18, 2020, the trading price of our ADSs declined sharply. The negative publicity and the resulting decline of the trading price of our ADSs also led to the filing of a shareholder class action lawsuits against us and certain of our directors and officers.

Although we have publicly refuted the erroneous and misleading statements regarding us in the Muddy Water short seller report, we may still continue to be the target of adverse publicity and detrimental conduct against us, including complaints, anonymous or otherwise, to regulatory agencies regarding our operations, accounting, revenues and regulatory compliance. Additionally, allegations against us may be posted on the Internet by any person or entity which identifies itself or on an anonymous basis. We may be subject to government or regulatory investigation or inquiries, or shareholder lawsuits, as a result of such third-party conduct and may be required to incur significant time and substantial costs to defend ourselves. There is no assurance that we will be able to conclusively refute each of the allegations in connection with the Muddy Water short seller report within a reasonable period of time or at all. Our reputation may also be negatively affected as a result of the public dissemination of allegations or malicious statements about us, which in turn may materially and adversely affect the trading price of our ADSs.

***Techniques employed by short sellers may drive down the market price of our listed securities.***

Short selling is the practice of selling securities that a seller does not own but rather has borrowed from a third party with the intention of buying identical securities back at a later date to return to the lender. Short sellers hope to profit from a decline in the value of the securities between the sale of the borrowed securities and the purchase of the replacement shares, as short sellers expect to pay less in that purchase than they received in the sale. As it is in short sellers' interest for the price of the security to decline, many short sellers publish, or arrange for the publication of, negative opinions and allegations regarding the relevant issuer and its business prospects in order to create negative market momentum and generate profits for themselves after selling a security short. These short attacks have, in the past, led to selling of shares in the market.

Much of the scrutiny and negative publicity on the target companies has centered on allegations of lack of effective internal control over financial reporting resulting in financial and accounting irregularities and mistakes, inadequate corporate governance policies or a lack of adherence thereto and, in many cases, allegations of fraud. As a result, many of these companies are now conducting internal and external investigations into the allegations and, in the interim, are subject to shareholder lawsuits and/or SEC enforcement actions.

We were, and may in the future be, the subject of unfavorable allegations made by short sellers. On November 18, 2020, Muddy Waters Capital LLC, an entity unrelated to us, issued the Muddy Water short seller report, containing certain allegations against us. Our audit committee has conducted an independent review of the allegations raised in the Muddy Water short seller report related to the YY Live business, with the assistance of independent counsel, working with a team of experienced forensic auditors and data analytics experts. Our announcement dated February 8, 2021 disclosed the conclusion of the independent review, which concluded that the allegations raised and conclusions reached in the Muddy Water short seller report about the YY Live business were not substantiated. On March 26, 2021, our audit committee also concluded its work as to the handful of claims in the Muddy Water short seller report unrelated to the YY Live business (concerning BIGO) and likewise found the short seller allegations unsubstantiated. Any such allegations may be followed by periods of instability in the market price of our common shares and ADSs and negative publicity. If and when we become the subject of any unfavorable allegations, whether such allegations are proven to be true or untrue, we may have to utilize a significant portion of our resources to investigate such allegations and/or defend ourselves, including in connection with class actions or regulatory enforcement actions derivative of such allegations. While we would strongly defend against any such short seller attacks, we may be constrained in the manner in which we can proceed against the relevant short sellers by principles of freedom of speech, applicable federal or state law or issues of commercial confidentiality. Such a situation could be costly and time-consuming and could divert management's attention from the day-to-day operations of our Company. Even if such allegations are ultimately proven to be groundless, allegations against us could severely impact the market price of our securities and our business operations.

***If securities or industry analysts do not publish research or reports about our business, or if they adversely change their recommendations regarding our ADSs, the market price for our ADSs and trading volume could decline.***

The trading market for our ADSs will be influenced by research or reports that industry or securities analysts publish about our business. If one or more analysts who cover us downgrade our ADSs, the market price for our ADSs would likely decline. If one or more of these analysts cease to cover us or fail to regularly publish reports on us, we could lose visibility in the financial markets, which, in turn, could cause the market price or trading volume for our ADSs to decline.

***The sale or availability for sale, or perceived sale or availability for sale, of substantial amounts of our ADSs could adversely affect their market price.***

Sales of substantial amounts of our ADSs in the public market, or the perception that these sales could occur, could adversely affect the market price of our ADSs and could materially impair our ability to raise capital through equity offerings in the future. Our ADSs are freely tradable by persons other than our affiliates without restriction or further registration under the Securities Act of 1933, as amended, or the Securities Act, and shares held by our existing shareholders may also be sold in the public market in the future subject to the restrictions in Rule 144 and Rule 701 under the Securities Act. In addition, common shares subject to our outstanding share-based awards, including options, restricted shares and restricted share units, are eligible for sale in the public market to the extent permitted by the provisions of various vesting agreements, Rules 144 and 701 under the Securities Act. We may also issue additional options in the future which may be exercised for additional common shares and additional restricted shares and restricted share units which may vest. As of March 31, 2024, we had 854,753,293 Class A common shares (excluding 463,087,171 outstanding restricted shares and treasury Class A common shares held by entities controlled by us) and 326,509,555 Class B common shares outstanding. We cannot predict what effect, if any, market sales of securities held by our significant shareholders or any other shareholder or the availability of these securities for future sale will have on the market price of our ADSs.

***Our articles of association contain anti-takeover provisions that could have a material adverse effect on the rights of holders of our common shares and ADSs.***

Our articles of association contain provisions to limit the ability of others to acquire control of our company or cause us to engage in change-of-control transactions. These provisions could have the effect of depriving our shareholders of an opportunity to sell their shares at a premium over prevailing market prices by discouraging third parties from seeking to obtain control of our company in a tender offer or similar transaction. For example, our board of directors has the authority, without further action by our shareholders, to issue preferred shares in one or more series and to fix their designations, powers, preferences, privileges, and relative participating, optional or special rights and the qualifications, limitations or restrictions, including dividend rights, conversion rights, voting rights, terms of redemption and liquidation preferences, any or all of which may be greater than the rights associated with our common shares, in the form of ADSs or otherwise. Preferred shares could be issued quickly with terms calculated to delay or prevent a change in control of our company or make removal of management more difficult. If our board of directors decides to issue preferred shares, the price of our ADSs may fall and the voting and other rights of the holders of our common shares and ADSs may be materially and adversely affected.

***Our currently effective memorandum and articles of association provide that the United States District Court for the Southern District of New York (or, if the United States District Court for the Southern District of New York lacks subject matter jurisdiction over a particular dispute, the state courts in New York County, New York) is the exclusive judicial forum within the U.S. for the resolution of any complaint asserting a cause of action arising out of or relating in any way to the federal securities laws of the United States, which could limit the ability of holders of our Class A common shares, the ADSs or other securities to obtain a favorable judicial forum for disputes with us, our directors and officers, the depositary, and potentially others.***

Our currently effective memorandum and articles of association provide that the United States District Court for the Southern District of New York (or, if the United States District Court for the Southern District of New York lacks subject matter jurisdiction over a particular dispute, the state courts in New York County, New York) is the exclusive forum within the United States for the resolution of any complaint asserting a cause of action arising out of or relating in any way to the federal securities laws of the United States, regardless of whether such legal suit, action, or proceeding also involves parties other than our company. The enforceability of similar federal court choice of forum provisions in other companies' organizational documents has been challenged in legal proceedings in the United States, and it is possible that a court could find this type of provision to be inapplicable or unenforceable. If a court were to find the federal choice of forum provision contained in our currently effective memorandum and articles of association to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions. If upheld, the forum selection clause in our currently effective memorandum and articles of association may limit a security-holder's ability to bring a claim against us, our directors and officers, the depositary, and potentially others in his or her preferred judicial forum, and this limitation may discourage such lawsuits. Holders of our shares or the ADSs will not be deemed to have waived our compliance with the federal securities laws and the regulations promulgated thereunder pursuant to the exclusive forum provision in the currently effective memorandum and articles of association.

***You may face difficulties in protecting your interests, and your ability to protect your rights through U.S. courts may be limited, because we are incorporated under Cayman Islands law.***

We are an exempted company incorporated under the laws of the Cayman Islands with limited liability. Our corporate affairs are governed by our amended and restated memorandum and articles of association, the Companies Act (As Revised) of the Cayman Islands and the common law of the Cayman Islands. The rights of shareholders to take action against the directors, actions by minority shareholders and the fiduciary responsibilities of our directors to us under Cayman Islands law are to a large extent governed by the common law of the Cayman Islands. The common law of the Cayman Islands is derived in part from comparatively limited judicial precedent in the Cayman Islands as well as from the common law of England, the decisions of whose courts are of persuasive authority, but are not binding, on a court in the Cayman Islands. The rights of our shareholders and the fiduciary responsibilities of our directors under Cayman Islands law are not as clearly established as they would be under statutes or judicial precedent in some jurisdictions in the United States. In particular, the Cayman Islands has a less developed body of securities laws than the United States. Some U.S. states, such as Delaware, have more fully developed and judicially interpreted bodies of corporate law than the Cayman Islands. In addition, shareholders of a Cayman Islands company may not have standing to initiate a shareholder derivative action in a federal court of the United States.

Unlike many jurisdictions in the United States, Cayman Islands law does not generally provide for shareholder appraisal rights on an approved arrangement and reconstruction of a company. This may make it more difficult for you to assess the value of any consideration you may receive in a merger or consolidation or to require that the offeror gives you additional consideration if you believe the consideration offered is insufficient. Moreover, holders of our ADSs are not entitled to appraisal rights under Cayman Islands law. ADS holders that wish to exercise their appraisal or dissent rights must convert their ADSs into our Class A common shares by surrendering their ADSs to the depositary and paying the ADS depositary fee.

Shareholders of Cayman Islands exempted companies like us have no general rights under Cayman Islands law to inspect corporate records (except our memorandum and articles of association, special resolutions passed by our shareholders, and our register of mortgages and charges) or to obtain copies of lists of shareholders of these companies. Our directors have discretion under our existing articles of association to determine whether or not, and under what conditions, our corporate records may be inspected by our shareholders, but are not obliged to make them available to our shareholders. This may make it more difficult for you to obtain the information needed to establish any facts necessary for a shareholder motion or to solicit proxies from other shareholders in connection with a proxy contest.

As a result of all of the above, public shareholders may have more difficulty in protecting their interests in the face of actions taken by management, members of the board of directors or controlling shareholders than they would as public shareholders of a company incorporated in the United States.

***Judgments obtained against us by our shareholders may not be enforceable in our home jurisdiction.***

We are a Cayman Islands exempted company and a majority of our assets are located outside of the United States. In addition, a significant majority of our current directors and officers are nationals and residents of countries other than the United States and most of their assets are located outside the United States. As a result, it may be difficult or impossible for you to bring an action against us or against these individuals in the United States in the event that you believe that your rights have been infringed under the United States federal securities laws or otherwise. Even if you are successful in bringing an action of this kind, the laws of the Cayman Islands and of mainland China may render you unable to enforce a judgment against our assets or the assets of our directors and officers.

The Cayman Islands courts are unlikely:

- to recognize or enforce against us or our directors or officers judgments of courts of the United States based upon the civil liability provisions of U.S. securities laws; and

- in original actions brought in the Cayman Islands to impose liabilities against us or our directors or officers, that are predicated on certain civil liability provisions of U.S. securities laws so far as the liabilities imposed by those provisions are penal in nature. Although there is no statutory recognition in the Cayman Islands of judgments obtained in the United States, the courts of the Cayman Islands will, at common law, recognize and enforce a foreign money judgment of a foreign court of competent jurisdiction without reexamination of the merits of the underlying disputes based on the principle that a judgment of a competent foreign court imposes upon the judgment debtor an obligation to pay the liquidated sum for which such judgment has been given, provided that such judgment (i) is given by a foreign court of competent jurisdiction, (ii) imposes on the judgment debtor a liability to pay a liquidated sum for which the judgment has been given, (iii) is final and conclusive, (iv) is not in respect of taxes, a fine or penalty; (v) is not inconsistent with a Cayman Islands judgment in respect of the same matter, (vi) is not impeachable on the grounds of fraud and was not obtained in a manner and is not of a kind the enforcement of which is contrary to natural justice or the public policy of the Cayman Islands.

However, the Cayman Islands courts are unlikely to enforce a judgment obtained from the United States courts under the civil liability provisions of the securities laws if such judgment is determined by the courts of the Cayman Islands to give rise to obligations to make payments that are penal or punitive in nature. A Cayman Islands court may stay enforcement proceedings if concurrent proceedings are being brought elsewhere.

***We are a foreign private issuer within the meaning of the rules under the Exchange Act, and as such we are exempt from certain provisions applicable to United States domestic public companies.***

Because we qualify as a foreign private issuer under the Exchange Act, we are exempt from certain provisions of the securities rules and regulations in the United States that are applicable to U.S. domestic issuers, including:

- the rules under the Exchange Act requiring the filing with the SEC of quarterly reports on Form 10-Q or current reports on Form 8-K;
- the sections of the Exchange Act regulating the solicitation of proxies, consents, or authorizations in respect of a security registered under the Exchange Act;
- the sections of the Exchange Act requiring insiders to file public reports of their share ownership and trading activities and liability for insiders who profit from trades made in a short period of time;
- the selective disclosure rules by issuers of material nonpublic information under Regulation FD; and
- certain audit committee independence requirements in Rule 10A-3 of the Exchange Act.

We are required to file an annual report on Form 20-F within four months of the end of each fiscal year. In addition, we publish our results on a quarterly basis as press releases, distributed pursuant to the rules and regulations of the Nasdaq Global Select Market. Press releases relating to financial results and material events are also be furnished to the SEC on Form 6-K. However, the information we are required to file with or furnish to the SEC are less extensive and less timely as compared to that required to be filed with the SEC by United States domestic issuers. As a Cayman Islands company listed on the Nasdaq Global Select Market, we are subject to the Nasdaq Global Select Market corporate governance requirements. However, the Nasdaq Global Select Market permit a foreign private issuer like us to follow certain corporate governance practices of its home country. Certain corporate governance practices in the Cayman Islands, which is our home country, may differ significantly from the Nasdaq Global Select Market corporate governance requirements.

We relied on the exemption available to foreign private issuers to the requirement that a majority of our board of directors as well as each member of the compensation committee and the corporate governance and nominating committee be an independent director. Currently, among our six directors, Mr. David Xueling Li, Ms. Ting Li and Mr. Qin Liu are not independent directors, and Mr. David Xueling Li and Mr. Qin Liu serve on our compensation committee and corporate governance and nominating committee, respectively. We also relied on home country practice exemption and did not hold an annual general meeting of shareholders within one year after the end of our fiscal year-end or solicit proxies or provide proxy statements for all meetings of shareholders and provide copies of proxy solicitation to Nasdaq. See “Item 6. Directors, Senior Management and Employees—B. Compensation of Directors and Executive Officers—Share Incentive Plans” for more information. If we continue to rely on the above and other exemptions available to foreign private issuers in the future, our shareholders may be afforded less protection than they otherwise would under the Nasdaq Global Select Market corporate governance requirements applicable to U.S. domestic issuers. As a result, you may not be afforded the same protections or information, which would be made available to you, were you investing in a United States domestic issuer.

***The voting rights of holders of ADSs are limited by the terms of the deposit agreement, and you may not be able to exercise your right to direct how the Class A common shares which are represented by your ADSs are voted.***

Holders of ADSs do not have the same rights as our registered shareholders. As a holder of our ADSs, you do not have any direct right to attend general meetings of our shareholders or to cast any votes at such meetings. You are only able to exercise the voting rights which are carried by the underlying Class A common shares represented by your ADSs indirectly by giving voting instructions to the depository in accordance with the provisions of the deposit agreement. Under the deposit agreement, you may vote only by giving voting instructions to the depository. Upon receipt of your voting instructions, the depository will vote the underlying Class A common shares represented by your ADSs in accordance with your instructions. You are not able to directly exercise your right to vote with respect to the underlying Class A common shares represented by your ADSs unless you withdraw such shares from the depository and become the registered holder of such shares prior to the record date for the general meeting. Under our memorandum and articles of association, the minimum notice period required for convening a general meeting is at least ten clear days. When a general meeting is convened, you may not receive sufficient advance notice of the meeting to withdraw the underlying Class A common shares represented by your ADSs and become the registered holder of such shares to allow you to attend the general meeting and to vote directly with respect to any specific matter or resolution to be considered and voted upon at the general meeting. In addition, under our articles of association, our directors may close our register of members (subject to compliance with Nasdaq Global Select Market rules) or, for the purposes of determining those shareholders who are entitled to attend and vote at any general meeting, fix in advance a record date for such meeting, and such closure of our register of members or the setting of such a record date may prevent you from withdrawing the underlying Class A common shares represented by your ADSs and becoming the registered holder of such shares prior to the record date, so that you would not be able to attend the general meeting or to vote directly. If we ask for your instructions, the depository will notify you of the upcoming vote and will arrange to deliver our voting materials to you. We cannot assure you that you will receive the voting materials in time to ensure that you can instruct the depository to vote the underlying Class A common shares represented by your ADSs. In addition, the depository and its agents are not responsible for failing to carry out voting instructions or for their manner of carrying out your voting instructions. This means that you may not be able to exercise your right to direct how the underlying Class A common shares represented by your ADSs are to be voted and you may have no legal remedy if the underlying Class A common shares represented by your ADSs are not voted as you requested. The depository for our ADSs will give us a discretionary proxy to vote our Class A common shares represented by your ADSs if you do not vote at shareholders’ meetings, except in limited circumstances, which could adversely affect your interests.

Under the deposit agreement for the ADSs, if you do not vote, the depository will give us a discretionary proxy to vote our Class A common shares represented by your ADSs at shareholders’ meetings unless:

- we have failed to timely provide the depository with notice of meeting and related voting materials;
- we have instructed the depository that we do not wish a discretionary proxy to be given;
- we have informed the depository that there is substantial opposition as to a matter to be voted on at the meeting;
- a matter to be voted on at the meeting would have a material adverse impact on shareholders; or
- the voting at the meeting is to be made on a show of hands.

The effect of this discretionary proxy is that if you do not vote at shareholders' meetings, you cannot prevent our Class A common shares represented by your ADSs from being voted, except under the circumstances described above. This may make it more difficult for shareholders to influence the management of our company. Holders of our common shares are not subject to this discretionary proxy.

***You may not receive dividends or other distributions on our common shares and you may not receive any value for them, if it is illegal or impractical to make them available to you.***

The depositary of our ADSs has agreed to pay to you the cash dividends or other distributions it or the custodian receives on Class A common shares or other deposited securities underlying our ADSs, after deducting its fees and expenses. You will receive these distributions in proportion to the number of Class A common shares your ADSs represent. However, the depositary is not responsible if it decides that it is unlawful or impractical to make a distribution available to any holders of ADSs. For example, it would be unlawful to make a distribution to a holder of ADSs if it consists of securities that require registration under the Securities Act but that are not properly registered or distributed under an applicable exemption from registration. The depositary may also determine that it is not feasible to distribute certain property through the mail. Additionally, the value of certain distributions may be less than the cost of mailing them. In these cases, the depositary may determine not to distribute such property. We have no obligation to register under U.S. securities laws any ADSs, common shares, rights or other securities received through such distributions. We also have no obligation to take any other action to permit the distribution of ADSs, common shares, rights or anything else to holders of ADSs. This means that you may not receive distributions we make on our common shares or any value for them if it is illegal or impractical for us to make them available to you. These restrictions may cause a material decline in the value of our ADSs.

***You may be subject to limitations on transfer of your ADSs.***

Your ADSs are transferable on the books of the depositary. However, the depositary may close its books at any time or from time to time when it deems expedient in connection with the performance of its duties. The depositary may close its books from time to time for a number of reasons, including in connection with corporate events such as a rights offering, during which time the depositary needs to maintain an exact number of ADS holders on its books for a specified period. The depositary may also close its books in emergencies, and on weekends and public holidays. The depositary may refuse to deliver, transfer or register transfers of our ADSs generally when our share register or the books of the depositary are closed, or at any time if we or the depositary thinks that it is advisable to do so because of any requirement of law or of any government or governmental body, or under any provision of the deposit agreement, or for any other reason in accordance with the terms of the deposit agreement. As a result, you may be unable to transfer your ADSs when you wish to.

***We cannot guarantee that our share repurchase program will be fully consummated. Share repurchases and dividend payments could also increase the volatility of the trading price of our ADSs and will diminish our cash reserves.***

In November 2023, our board of directors authorized the continued use of the unutilized quota under the pre-existing share repurchase program of approximately US\$530 million, for another 12-month period starting from the end of November 2023. Although our board of directors has authorized a share repurchase program, the program does not obligate us to repurchase any specific dollar amount or to acquire any specific number of shares. The specific timing and amount of any share repurchases, and the specific timing and amount of any future dividend payments, will depend on prevailing share prices, general economic and market conditions, company performance, and other considerations. We cannot guarantee that the repurchase program will be fully consummated. The repurchase program and future dividend payments could affect the trading price of our ADSs and increase volatility, and any announcement of a termination of the repurchase program or dividend payments, may result in a decrease in the trading price of our ADSs. In addition, repurchase programs and future dividend payments will diminish our cash reserves.

## ITEM 4. INFORMATION ON THE COMPANY

### A. History and Development of the Company

We commenced operations in April 2005 with the establishment of Guangzhou Huaduo in mainland China. In July 2011, we established an exempted company with limited liability in the Cayman Islands, YY Inc., as our holding company. On November 21, 2012, our ADSs were listed on The Nasdaq Stock Market under the symbol “YY.” Effective December 20, 2019, we changed our corporate name from “YY Inc.” to “JOYY Inc.” We began trading under the new corporate name on December 30, 2019. Historically, we have successfully incubated, developed and monetized several social entertainment products and platforms. Our expertise in building and operating vibrant social entertainment platforms was tested and proven first in mainland China. In 2014, foreseeing massive global opportunities, we began our global expansion by investing in BIGO, followed by the internationalization of Hago in 2018 and the acquisition of BIGO in March 2019. In the third quarter of 2022, we further expanded our global operations in the smart commerce sector by consolidating Shoptline through further investments.

Currently, we mainly operate our global business through the following significant subsidiaries:

- Bigo Technology Pte. Ltd.;
- Likeme Pte. Ltd.;
- PageBites, Inc.;
- Guangzhou BaiGuo Yuan Information Technology Co., Ltd.; and
- Guangzhou Huanju Shidai Information Technology Co., Ltd.

We also conduct part of our business in mainland China primarily through the following significant variable interest entities and some of their subsidiaries:

- Guangzhou Huaduo Network Technology Co., Ltd.; and
- Guangzhou BaiGuo Yuan Network Technology Co., Ltd.

We used to consolidate the financial results of HUYA Inc., a company listed on the NYSE under the symbol “HUYA.” In April 2020, Linen Investment Limited, a wholly-owned subsidiary of Tencent, obtained the control of HUYA Inc., and we stopped consolidating the operating results of HUYA Inc. since then. As of the date of this annual report, we have sold all of our shareholdings in HUYA Inc. to Linen Investment Limited and no longer hold any share of HUYA Inc.

On November 16, 2020, we entered into definitive agreements with affiliates of Baidu, subsequently amended on February 7, 2021, pursuant to which Baidu would acquire our video-based entertainment live streaming business in mainland China, which we refer to as YY Live, including the YY mobile app, the YY.com website, and the YY PC app, among others, for an aggregate purchase price of approximately US\$3.6 billion in cash, subject to certain adjustments. The acquisition was substantially completed as of February 8, 2021, with certain matters remaining to be completed, including necessary regulatory approvals from government authorities. In April 2022, we and Baidu agreed to extend the long stop date, which is the closing deadline of the proposed acquisition, indefinitely until the extension is terminated by either party. Together with this transaction, we entered into a non-compete undertaking with Baidu and its affiliates, which poses restrictions to our video-based entertainment live streaming business in mainland China.

On January 1, 2024, we received a written notice from an affiliate of Baidu, purporting to terminate the share purchase agreement. Baidu asserted in the written notice that it has and exercised the right to terminate the referenced share purchase agreement and effectively cancel the transaction. We are currently in discussion with Baidu on the next steps following the termination of the share purchase agreement. We are also seeking legal advice and will consider all options at our disposal in response to Baidu's written notice and expressly reserve all rights. From January 1, 2024 to the date of this annual report, we have not obtained control of YY Live and have not consolidated YY Live. Baidu previously paid an aggregate amount of US\$1.9 billion to us in our designated accounts and deposited an aggregate of US\$1.6 billion into Baidu's escrow accounts, in accordance with the terms and schedule set forth in the share purchase agreement. As of the date of this annual report, the possession status of these funds remained unchanged. However, substantial uncertainties remain as to how things may develop or evolve, in particular, as to whether YY Live will be returned to us for re-consolidation and whether we could retain the paid consideration and receive the remaining deposits.

In August 2022, our subsidiary, Duowan Entertainment Corporation, together with other investors, entered into a definitive agreement with Shoptline Corporation Limited, or Shoptline, a company that operates the smart commerce platform "Shoptline." Pursuant to the agreement, we subscribed for certain number of series B preferred shares of Shoptline for an aggregate cash consideration of US\$182.9 million. Prior to the transaction, Shoptline had been an investee of ours since 2020. As a result of the closing of the transaction, we started to consolidate the financial results of Shoptline from September 6, 2022.

Our principal executive offices are located at 30 Pasir Panjang Road #15-31A Mapletree Business City, Singapore 117440. Our registered office in the Cayman Islands is located at Conyers Trust Company (Cayman) Limited of Cricket Square, Hutchins Drive, P.O. Box 2681, Grand Cayman, KYI-1111, Cayman Islands.

All information we file with the SEC can be obtained over the internet at the SEC's website at [www.sec.gov](http://www.sec.gov). You can also find information on our website at [ir.joyy.com](http://ir.joyy.com). The information contained on our website is not a part of this annual report.

## **B. Business Overview**

### **Overview**

We are a global technology company with a mission to enrich lives through technology. Through our social product matrix and communication technology, we enable people to connect with friends and family, discover and explore their interests, and share their experiences and ideas with a global audience through photos, audio, and videos. Our diverse product matrix covers live streaming, short videos, instant messaging, casual games, and beyond.

We serve a global user base, covering North America, Europe, the Middle East, Southeast Asia, Eastern Pacific regions, and more. The number of our global monthly active users on our social platforms increased by 2.6% year over year to 274.9 million in the fourth quarter of 2023. We are a leader in the global social entertainment sector, with several of our social apps ranked among the Top 10 in terms of consumer spending in various geographic regions in which we operate, according to data.ai.

We have been exploring innovative technologies and initiatives to further expand our offerings beyond social entertainment, tapping into new addressable markets worldwide. Since 2022, we have also operated a global smart commerce platform that empowers merchants to build their brand online and sell their products to customers around the world.

### ***BIGO segment***

- Live streaming platform: *Bigo Live* is a leading global social live streaming platform. Bigo Live provides an interactive online stage for global users to host and watch live streaming sessions, share their life moments, showcase their talents and interact with people around the world. Bigo Live has an extensive presence in North America, Europe, the Middle East, Southeast Asia and Eastern Pacific regions, among others.
- Short video platform: *Likee* is a global short video social platform. Likee empowers its users to easily discover, create and share short videos, with simple, all-in-one powerful video creation tools and personalized feeds. Likee is committed to building long-term relationships with content creators, aiming to increase user engagement and boost connectivity. Likee has an extensive presence in the Middle East, Europe, and Southeast Asia.

- Instant messenger: *imo* is a global instant messenger that provides audio and video communication services. It offers frictionless audio and video calls and other communication tools such as group calls, document sharing and more, catering to a variety of personal and business communication needs. *imo* has attracted a growing and highly engaged user base in South Asia and the Middle East.

#### **All other segment**

- Social networking platform: *Hago* is a social networking platform. It offers over 500 casual games, integrating social features such as audio and video multi-user chatrooms and 3D virtual interactive party games, which encourage users to establish and strengthen connections while having fun. *Hago* has an extensive presence in Southeast Asia, the Middle East and South America.
- Smart commerce solution provider: *Shopline* is a global smart commerce platform that offers solutions and services to empower merchants to create and grow their brands online and reach customers worldwide, across different sales channels including e-commerce platforms, social commerce and physical retail stores. *Shopline* provides merchants with various services to optimize their business, such as inventory and sales management, logistics, payment, marketing and data analytics. As of the date of this annual report, *Shopline* has helped over 600,000 merchants to launch and scale up their online businesses.

Currently, we primarily monetize our products and services through virtual tips for live streaming, which accounted for 87.3% of our revenues in 2023. We also generate revenues through advertising, e-commerce and subscriptions, which collectively accounted for 12.7% of our revenues in 2023.

We have built a sizable global business with improving profitability. Our total revenue amounted to US\$2.6 billion in 2021, US\$2.4 billion in 2022 and US\$2.3 billion in 2023. We recorded net loss from continuing operations attributable to common shareholders of our company of US\$125.1 million in 2021, and realized net income from continuing operations attributable to common shareholders of our company of US\$119.5 million in 2022 and US\$347.4 million in 2023.

#### **Our Strategy**

Globalization through localization is our foremost strategy, and our strong global localized operational capabilities are the cornerstone of our global success. We have built an extensive global operational network with over 30 regional offices and more than 6,000 local staff worldwide. We design our social products, cultivate local content, and launch online and offline marketing campaigns tailored to the nuances of local cultures and the preferences of our target markets. We also collaborate with a diverse array of local key opinion leaders, creators, agencies, and brands. The collaboration deepens our integration with local communities and drives brand awareness across different regions. Our localized approach enables us to resonate with users from different cultural backgrounds and differentiates our products from other platforms.

Technology is essential to our business success. We have integrated artificial intelligence (AI) and data analytics into all critical aspects of our services and broader business operations. This integration empowers us to gain deeper insights into our users and deliver personalized content recommendations tailored to their preferences. Innovative features powered by AI, such as digital avatars, improve user engagement and overall user experience. AI has also proven to be a powerful tool for improving content quality and cultivating our content ecosystem. It also enables automated product beta testing and augments critical corporate decision-making in areas such as budgeting, enhancing our operational and managerial efficiency. Our video and audio technology helps ensure a smooth user experience for our substantial global user base. We offer low latency video and audio product experience for different communication networks (3G/4G/5G/Wi-Fi, etc.), serving nearly 274.9 million users in 150 countries worldwide, many of whom are located in less developed countries with limited internet infrastructure. Our patented video codec innovation algorithm automatically adapts to different hardware platforms and environments, and optimizes the indicators of sound quality, code rate, and transmission fluency no matter where you are.

We consider social engagement and our content ecosystem as strategic pillars for the long-term competitiveness of our products. Through ongoing product feature innovations and optimizations, we have expanded interactive tools and social scenarios to enrich interactions between users. As we enable user interactions in a range of virtual environments such as live streaming sessions, interest-based communities, and other social channels, we cater to a broader and much more diverse set of social needs. We seek to further expand users' social connections, facilitate immersive interactions, and help users forge meaningful relationships with others. Through our continued creator support and extensive incentive programs, we have accumulated a large pool of professional and amateur creators, contributing to a vast reservoir of contents. In addition, leveraging our localized operational network, we have partnered with gaming companies, TV show producers, and entertainment agencies, to expand our premium content offerings.

With our diverse product offerings focusing on optimizing social and content experience, extensive global operational network, established technological capabilities and effective monetization model, we believe we are well positioned to further grow our global presence and capitalize on growth opportunities.

## **Our Platforms and Products**

### ***Bigo Live***

Bigo Live is a leading global social live streaming platform. Bigo Live enables its users to share their life moments, showcase their talents, socialize and connect with other users from all around the world through live streaming. Launched in 2016, Bigo Live currently has a strong presence in North America, Europe, the Middle East, Southeast Asia and Eastern Pacific regions, among others. Bigo Live is an international platform, available in 23 languages and approximately 150 countries.

Bigo Live has built an engaged, interactive and diverse community. Through extensive incentive programs, localized campaigns, and cross-industry partnerships, Bigo Live has attracted a substantial pool of creators and accumulated localized content across various categories, including music, dance, comedy, gaming and lifestyle.

Bigo Live's continual innovation of its product features, combined with localized campaigns and activities, enhance the quality and efficiency of users' social experience. Its Family feature, launched in 2019, has been a vital bonding element for Bigo Live's user community, as it brings together streamers, fans, and others united by similar interests to uphold the honor of their respective Families. In 2023, Bigo Live launched Family Month and held a number of activities and contests to further strengthen these bonds. Meanwhile, Bigo Live's newly launched Real Match feature helped users connect through a matching process that paired up users with similar interests.

As a result of its expanding content offerings and elevated social interactivity, Bigo Live achieved solid year-over-year user growth in 2023.

	For the Three Months Ended			
	March 31, 2023	June 30, 2023	September 30, 2023	December 31, 2023
Average monthly active users (millions)	37.7	38.5	40.3	38.4
Year-over-year change (percentage)	19.0%	18.0%	14.0%	4.5%

Bigo Live currently monetizes its user base mainly through virtual tips for live streaming. Users can purchase in-app virtual items and send them as virtual gifts to their favorite streamers to show their appreciation.

Among the various platforms operated by us, Bigo Live is currently the largest revenue contributor. Bigo Live was ranked as the World's No. 2 Social App in terms of consumer spending in 2023, according to the State of Mobile report from data.ai.

**Likee**

Likee is a global short video social platform. Likee enables users to easily discover, create and share short videos, empowered by its easy, all-in-one video creation tools, such as filters and special effects, and its AI-backed personalized feed. Launched in 2017, Likee has a strong presence in the Middle East, Europe and Southeast Asia. The average mobile monthly active users on Likee declined year over year in each quarter of 2023, primarily due to reduced spending on user acquisition via advertisement.

	For the Three Months Ended			
	March 31, 2023	June 30, 2023	September 30, 2023	December 31, 2023
Average monthly active users (millions)	44.9	43.2	41.0	39.1
Year-over-year change (percentage)	-27.4%	-25.1%	-19.0%	-13.6%

Over the past several years, Likee has been dedicated to cultivating a localized and diverse content community. Likee offers comprehensive creator support programs, providing creators across various genres with user traffic, creation tools, professional guidance, and diverse monetization methods to pave a path for their long-term personal growth and career development.

Likee currently monetizes its user base mainly through virtual tips for live streaming and advertisements. Likee has made steady progress in enhancing its monetization efficiency and diversifying revenue streams. Likee was ranked Saudi Arabia’s No. 3 Social App in terms of consumer spending in 2023, according to the State of Mobile report from data.ai. Driven by a more established business and creator marketplace, Likee’s advertising revenue grew by nearly 2.5 times in 2023 compared to the previous year.

**imo**

imo is a global instant messenger that provides audio and video communication service to its users. It offers smooth and stable international video calls in addition to other features such as group calls and document sharing, catering to a variety of personal and business communication needs. imo has a large and engaged user base in South Asia and the Middle East.

In the past years, imo has been dedicated to product optimizations and innovations, aiming to provide a superior, stable, secure, and high-quality audio and video communication experience for its users. Recognizing that a significant proportion of imo’s users are located in rural areas with limited mobile network coverage, it has implemented technologies such as adaptive bitrate streaming, packet loss concealment, and more. These measures have allowed imo to continually enhance its performance in weak networks and effectively alleviated connection problems. In addition, in 2023, imo introduced a number of new features such as “Block Screenshot for Calls”, “Zero Noise,” and “Light” to enhance privacy protection and communication experience. As a result of an improved user experience, imo achieved solid user growth in 2023.

	For the Three Months Ended			
	March 31, 2023	June 30, 2023	September 30, 2023	December 31, 2023
Average monthly active users (millions)	184.4	188.5	190.5	192.7
Year-over-year change (percentage)	7.2%	8.2%	8.1%	7.6%

imo currently monetizes its user base mainly through advertisements and live streaming. In 2021, to further enhance user social interactivity and explore additional monetization beyond advertisements, imo launched VoiceClub, an online real-time voice chat communication space, enabling users to establish connections with users beyond their existing network. VoiceClub also enables users to send virtual gifts to their friends to express their support and appreciation.

## Hago

Hago is a social networking platform that encourages users to connect and have fun. Launched in 2018, Hago has a presence mainly in Southeast Asia, the Middle East and South America. The average mobile monthly active users on Hago declined year over year in each quarter of 2023, primarily due to reduced spending on user acquisition via advertisement.

	For the Three Months Ended			
	March 31, 2023	June 30, 2023	September 30, 2023	December 31, 2023
Average monthly active users (millions)	5.9	5.5	5.0	4.6
Year-over-year change (percentage)	-36.5%	-36.0%	-34.1%	-30.9%

Following strategic changes over the past several years, Hago has evolved from a casual games platform to a social platform that offers a variety of tools for users to engage and interact. Users can make new acquaintances by playing multiplayer casual games (approximately 500 casual games are now available on the platform), join video & audio chat rooms based on their interests, create and customize their 3D avatars in Hago Space and join Groups or Families with like-minded people to foster more frequent communication.

Hago currently monetizes its user base mainly through virtual tips for live streaming. It is also exploring other monetization opportunities, such as pay-to-play games, advertisements, and virtual items. Hago was ranked among the Top 10 Social Apps in Indonesia and the Philippines in terms of consumer spend in 2023, according to the State of Mobile report from data.ai.

## Shopline

Shopline is a global smart commerce platform offering solutions and services to empower merchants to create and grow their brands online and reach customers worldwide, across different sales channels including e-commerce platforms, social commerce, and physical retail stores. Shopline provides merchants with various services to optimize their business, such as inventory and sales management, logistics, payment, marketing and data analytics, among others. Shopline has helped over 600,000 merchants to launch and scale their online businesses.

Shopline currently generates revenues through the sale of different subscription plans of its software solutions, and ancillary fees and commissions from provision of related value-added solutions.

## YY Live (Discontinued)

In the past, we also operated a live streaming platform (our discontinued business in mainland China), YY Live. YY Live is an interactive and comprehensive video-based entertainment live streaming social media platform, offering content such as music and dance shows, talk shows, outdoor activities, sports and anime. For details of the sale of YY Live to Baidu and its latest developments, see “Item 4. Information on the Company—A. History and Development of the Company.”

Given the current circumstances, we cannot predict how the situation may further evolve and develop. Substantial uncertainties remain as to whether YY Live will be returned to us for re-consolidation and whether we could retain the paid consideration and receive the remaining deposits. Our business prospects, results of operations and financial conditions may be materially and adversely affected by any further developments. See “Item 3. Key Information—Risk Factors—Risks Related to Our Business and Industry—We face risks associated with the sale of YY Live to Baidu.”

## Global Branding and Marketing

### Branding Strategy

With our growing global presence and our diverse product offerings, we position ourselves as a global technology company with a mission to “enrich lives through technology.” This positioning offers us greater flexibility to unleash the potential of each of our various products and services targeting different demographics of users and customers across the globe, as well as their diverse needs. Our global brands, primarily including Bigo Live, Likee, imo, Hago and Shopline, enable us to reach a wide variety of coveted user and customer bases around the world.

### ***Marketing Activities***

We execute a variety of marketing plans specifically designed for each of our respective businesses and markets. For our social entertainment businesses, we utilize a combination of advertising and diverse marketing activities to enhance our global brand recognition and attract users to our platforms. In particular, we employ outdoor physical advertisements, online performance-based advertising, social network marketing campaigns, and promotion through search engines and web portals, with an emphasis on efficiency and delivering measurable results. Moreover, we host or participate in various forms of local events and activities such as exhibitions, roadshows, regional galas, and campaigns. We also collaborate with a wide range of partners including application distributors, hardware manufacturers, TV programs, online shows and dramas, gaming companies, key opinion leaders, and others, to promote our brand recognition in local communities. For our smart commerce business, we utilize both online and offline marketing to maximize our brand awareness and attract new merchants and ecosystem partners. We organize product marketing and awareness-driven campaigns aimed at inspiring entrepreneurship and encouraging digitalized commerce. By attending offline exhibitions and industry summits, hosting global events and customer meetings, and promoting our digital community (Shopline Blog) and other educational materials, we intend to expand our customer reach and educate more small and medium-sized businesses on how to improve their operating efficiency and achieve business success with Shopline.

### **Seasonality**

Our results of operations of various products and services are subject to seasonal fluctuations, many of which are outside our control. For a discussion of the factors that may contribute to fluctuations of our quarterly results, see “Item 3. Key Information—D. Risk Factors—Risks Related to Our Business and Industry—Our results of operations are subject to fluctuations due to seasonality and other factors.”

### **Competition**

We face competition in various aspects of our business. We compete with companies that provide online live streaming and short video businesses. In addition, we compete with other social networking and entertainment platforms in terms of user traffic and user time. In relation to our global business, our competitors primarily include global short video platforms such as TikTok, and live streaming platforms such as Twitch in certain regions. We also face competition from companies that provide smart commerce solutions for merchants, such as Shopify.

### **Technology**

Our proprietary technologies serve as the backbone of our products and services. We enhance our user experience through a range of advanced technologies, including our AI-based content recommendation technology, which accurately and efficiently directs users to short videos and live streaming content tailored to their preferences. As a leading provider of large-scale multi-user voice and video-enabled online service, we are constantly working to improve our technological capabilities. Our ability to provide a superior user experience is further supported by our highly scalable infrastructure, proprietary algorithms and software, and tailored devices for optimal live streaming performance, which help minimize latency, jitter and loss rates when delivering voice and video data even with a weak internet connection.

### ***Artificial Intelligence (AI) and Algorithm Technologies***

AI forms an integral part of our overall technology infrastructure. Our computer vision algorithm research covers image recognition, face detection, key point location and tracking, gesture tracking, portrait segmentation and video multidimensional analysis. Our intelligent content recommendation algorithms, based on Deep Neural Networks and Graph Neural Network technology, effectively capture changes in each user’s personalized interest and caters to their demand in real time, giving users a one-of-a-kind entertainment experience. We filter audio and video content in real-time with millisecond latency, including comprehensive detection of improper or illegal content. In combination with our human content moderation team, this ensures compliance with the applicable laws and regulations regarding the provision of content via the internet, while enhancing content quality across our platforms.

### ***Quality of Service for Online Multi-media Communications***

Quality of Service (QoS) assurance is a key element of any high-quality delivery of voice and video data over the internet. When it comes to voice- and video-based communications, any delays, jitters and loss of data are often immediately noticeable to users. We employ a voice-over internet protocol and multiple quality assurance mechanisms to minimize instances of these issues, including but not limited to cloud-based intelligence routing, low-bitrate redundant solution, upstream-forward error correction, and adaptive jitter. We have also designed a special intelligent routing algorithm that automatically seeks optimal ways of delivering voice and video data across our cloud-based network, enabling us to provide better QoS even when the QoS levels are lower on certain routes.

We utilize computer programs and employ standardized measurements to constantly analyze and evaluate our voice and video communication quality. We have set up formal procedures to handle different levels of server breakdowns and network-related emergencies, and our team of experts can discover and resolve issues promptly. We have developed a series of media technologies and revamped our streaming framework, which enables multimodal information to be synthetically utilized to provide highly flexible and customizable services.

Our adaptive audio and video encoding, transmission and decoding algorithms are conducive to delivering a superior audio and video experience based on users' local setup, including locations, devices, network condition and personal preference, optimizing both fluency and latency at the same time.

### ***Large, Dedicated Cloud-based Network Infrastructure***

In 2023, we continued to develop and improve our global data center network, to provide top-quality, real-time video and audio services to our users worldwide. Leveraging our established local servers and infrastructure located in many of our key markets, our infrastructure provides seamless integration and is highly customized for supporting our services with significant flexibility. Our team of experts developed a cloud-based network infrastructure specifically designed to handle multi-party voice and video-enabled real-time online interactions. Our cloud-based network infrastructure provides quality data delivery and enable many users to interact online from anywhere with ease and speed.

Our system is designed for scalability and reliability to support growth in our user base. Our large server network contributes significantly to our premium streaming experience and reliable services, and it can be expanded with comparative ease, given that we are able to flexibly expand our number of available servers through leasing additional data centers to accommodate additional user traffic and bandwidth needs. We believe that our current network facilities and broadband capacity is sufficient for our current operations, and we will constantly monitor our bandwidth needs and adjust our network capacity to reflect the latest number of peak concurrent users. As of the date of this annual report, our data centers are mainly located in Asia, Europe and the Americas. We rely on several key technological mechanisms to manage our server network, including optimized data access, automated switch of servers, and intelligent routing, which help ensure the quality of data transmission for our users globally. In response to poor connection situations, we are able to provide precise connection estimation, adaptive transcoding, segmentation-based coding and other advanced mechanisms to help users enjoy high-quality audio and video experience.

### ***Proprietary Data-Driven Platform***

To build up and operate an infrastructure like ours requires significant time and effort. The technological difficulties faced by a platform that hosts 10,000 concurrent users differ greatly from the difficulties faced by a platform with 100,000 and 1,000,000 concurrent users. Many of these issues need to be considered at the early stages of programming the platform and planning the infrastructure. Over the years, we have gradually developed an effective system to identify, analyze and resolve issues that we encounter on a daily basis. In addition, our team members have been trained over the years to anticipate and resolve any issues, having accumulated significant knowledge from building and maintaining our platforms over time.

### ***Safeguarding User Privacy***

We dedicate significant resources to strengthening the user privacy functions of our platforms, promoting a safe online environment for our users. For example, we provide our users with adequate notice as to what data are being collected, and have implemented a variety of mechanisms and policies to prevent the unauthorized use, loss or leak of collected user data. Our data security technologies empower us to protect user data. For our external interfaces, we utilize firewalls to protect against potential attacks or unauthorized access. Our dedicated team of privacy professionals conducts regular reviews of our data security practices.

## **Content Moderation**

Our live streaming, short video and video communication platforms and other products enable users to exchange information, generate and distribute content, advertise products and services, conduct business and engage in various other online activities. A team within our data security department helps in enforcing our internal procedures to ensure that the content in our system is compliant with applicable laws and regulations. BIGO has developed various AI recognition models based on a database of millions of policy violations, and created a directory for filtering inappropriate content in more than 20 languages. BIGO's content moderation team, together with its AI-empowered program, can sweep our platforms in real time and the data being conveyed in our system for sensitive key words or questionable materials. Content that contains certain keywords is automatically filtered by our program and cannot be successfully posted. We are thus able to minimize improper or illegal content on our platforms and remove such materials promptly after they are discovered. Hago has deployed deep learning-based voice recognition technology, which helps us detect and delete improper or illegal content and deal with the relevant distributors in a timely fashion. See "Item 3. Key Information—D. Risk Factors—Risks Related to Our Business and Industry—We may face significant risks related to the content, information, communications and other activities on our platforms."

We have been continually localizing our content moderation efforts. In particular, we have deployed approximately 1,000 dedicated content moderation personnel with local language proficiency and cultural understanding in a number of countries worldwide, including, but not limited to, Egypt, Indonesia, Thailand and Vietnam. We also outsourced some of our human content moderation functions to third-party vendors, to improve operational adaptivity and flexibility.

## **Our IT Professionals**

We believe that our ability to develop internet and mobile applications and services tailored to respond to the needs of our user base has been a key factor for the success of our business. As of December 31, 2023, our research and development team consisted of 2,565 members. All of our service programs are designed and developed internally, including various interactive technologies. Our research and development team currently works on both back-end and front-end development of our products and services, including (a) the continual improvement of our core audio and video data processing and streaming technologies, (b) the enhancement of network and server structures, data distribution and transfer technologies to minimize latency and reduce interruptions, and (c) the creation of new features and functions to meet the demand of our users in various business lines, including, but not limited to, PC-desktop, web and mobile applications, channel templates and virtual items. We have also built a team of experienced engineers who help us address challenges such as recommendation engines, big data and artificial intelligence, particularly in the areas of computer vision, natural language processing, automatic speech recognition and speech synthesis.

We have a team of experts dedicated to monitoring and maintaining our network infrastructure. Our operation and maintenance team periodically analyzes and evaluates our voice and video data transmission quality, and promptly discovers and resolves issues which might arise, thereby ensuring the quality of users' experience on our platforms and the proper functioning of the servers and equipment in our network. As we operate a diverse matrix of products and serve an increasing number of global users, we hold a high working standard and requirements for our operation and maintenance team, and pushing them to continually optimize video content services and online real-time interactions to our users.

## **Intellectual Property**

We regard our patents, trademarks, domain names, copyrights, trade secrets, proprietary technologies and similar intellectual property as critical to our success. We seek to protect our intellectual property rights through a combination of patent, trademark, copyright and trade secret protection laws in various jurisdictions, as well as through confidentiality agreements and procedures with our employees, partners and others.

As of December 31, 2023, we held 1,487 registered domain names, including joyy.com, joyy.sg, Bigo.TV, Duowan.com, bigolive.sg, likee.com, shipline.com, 840 software copyrights and other copyrights, 1,630 patents and 2,294 trademarks and service marks. In addition, as of December 31, 2023, we had filed 3,764 patent applications, covering certain of our proprietary technologies, and 3,518 trademark applications. For the avoidance of confusion, the above numbers exclude intellectual property rights in relation to YY Live.

## Corporate Social Responsibility

JOYY's mission is to enrich lives through technology. We are committed to promoting corporate social responsibility and sustainable development and integrating it to major aspects of our business operations.

Our commitment to corporate social responsibility and sustainable development is reflected in our business strategy. With our social entertainment businesses, we endeavor to build trusted and safe social platforms for users of different backgrounds, and empower users to find their own voices and show their talents and content to a global audience. With our smart commerce business, we aim to lower the barriers to entrepreneurship via our integrated smart commerce solution platform and help entrepreneurs achieve business success.

The evolution of our business and ecosystem has created increasing economic opportunity for individuals, businesses and communities. By providing creator-friendly video creation tools and monetization features, and cultivating a community that empowers and encourages our creators to express themselves freely, BIGO has established a creator-centric ecosystem that enables a large number of creators to showcase their talents in front of a global audience. At the same time, it enables creators to realize economic returns, creating opportunities for employment and development in local communities. Supported by our global operations team, BIGO has rolled out a variety of online activities tailored to local users' ever-evolving needs, empowering our creators to gain exposure both locally and internationally, and enabling them to realize new levels of personal and professional success. Meanwhile, Shoptline's integrated smart commerce solutions and education campaigns have equipped small and medium-sized businesses with the essential tools for starting and growing a business, lowering the entry barriers to commerce and unlocking economic value in the relevant regions.

We aim to build a sustainable community with our employees, users, creators, and business partners, and create sustained positive impacts through various initiatives.

Set forth below are some examples of our corporate charitable activities:

- In June 2019, BIGO established a S\$500,000 Scholarship Fund with Nanyang Technological University, specifically for the cultivation and development of AI talents in the region. As a longstanding fund, it awards two graduating students every year with S\$10,000, commencing from 2020.
- In March 2022, Shoptline entered into a partnership program with Nanyang Polytechnic in Singapore. Under the program, Shoptline provides internship opportunities and mentorship to the students, and is involved in the co-development and delivery of courses and industry projects. The collaboration aims to equip the next generation of entrepreneurs with essential skills and knowledge, and help develop a pool of e-commerce talents with the specialized skillsets to strive in this dynamic and exciting industry.
- In August 2022, we established Shoptline Scholarship with a total contribution of S\$250,000 at the Singapore Management University, to motivate outstanding talents and to spur them on to greater heights of academic excellence.
- In June 2023, BIGO announced its Singapore-Jordan Incubation Program in collaboration with Singapore Business Federation. The program aims to support Singaporean startups looking to venture into the Middle East and North Africa region through Jordan. Through the program, Singaporean startups can receive free co-working space, use of facilities in the BIGO office for up to six months, free business matchmaking and networking opportunities, as well as assistance in employment permits and establishing a local presence in Jordan.

We devote substantial efforts to cultivate diversity and inclusion in our operations. As we operate in a number of markets across the globe, our users are from different backgrounds and have distinctive needs. We strive to design our social products and cultivate local content to resonate with diverse local cultures and user interests. Every year, we partner with a range of organizations and launch a variety of local themed events and campaigns, honoring diversity and promoting inclusion on the platform. For example, during Ramadan in 2023, BIGO launched a wide range of online campaigns across the Middle East, Southeast Asia, and other regions, encouraging users to participate and share their acts of kindness to embrace the festive spirit. BIGO raised funds through multiple online campaigns on our platforms, and extended our support to various programs under several international charities such as the Indonesian Cancer Foundation, the Children's Cancer Center of Lebanon, and Jordan's Tkiyet Um Ali. In June 2023, BIGO made donations to The Foundation for the Los Angeles Community Colleges, a non-profit organization aiming to advance higher education access and success for diverse students and communities.

We value and care for our employees. We are committed to building an open and inclusive working environment where we can grow alongside our employees. In line with the development of our global operations, we have recruited top talents from all over the world. We provide comprehensive training programs to facilitate our employees' pursuit of career development, including onboard training for new employees, special training for business departments, leadership training for newly-promoted managers and other training sessions on a variety of topics such as integrity, compliance, technology trends, which are available for all employees. We also have an internal online training system where employees can access and complete the training process online. In addition to providing a safe working environment, we provide our employees with access to a variety of programs and facilities designed to promote sustainable wellness for our employees, such as gyms, health talks and fitness sessions.

## **Regulations in Multiple Jurisdictions Where We Operate**

As our globalized operations evolve, we may, from time to time, be subject to government regulations. As the live streaming, short video and smart commerce businesses are still at an early stage of development in the jurisdictions where we have presence, new laws and regulations may be adopted from time to time to require new licenses and permits in addition to those we currently have. This section sets forth the most important laws and regulations that govern our current business activities in multiple jurisdictions across the globe, including European Union, India, Singapore, Indonesia, Malaysia and Vietnam.

### ***Regulations on Data Privacy and Protection***

#### *General Data Protection Regulation—European Union*

The General Data Protection Regulation, or GDPR, regulates the collection and use of personal data in the EU. The GDPR covers any business, regardless of its location, that provides goods or services to residents in the EU and, thus, could incorporate our activities in EU member states. The GDPR imposes strict requirements on controllers and processors of personal data, including special protections for "sensitive information," which includes health and genetic information of individuals residing in the EU. GDPR grants individuals the opportunity to object to the processing of their personal information, allows them to request deletion of personal information in certain circumstances, and provides the individual with an express right to seek legal remedies in the event the individual believes his or her rights have been violated. Further, the GDPR imposes strict rules on the transfer of personal data out of the EU to regions that have not been deemed to offer "adequate" privacy protections. Failure to comply with the requirements of the GDPR and the related national data protection laws of the EU member states, which may deviate slightly from the GDPR, may result in warning letters, reprimands, temporary or definitive restrictions including a ban on data processing, mandatory audits and financial penalties, including fines of up to 4 percent of global revenues, or €20,000,000, whichever is greater. As a result of the implementation of the GDPR, we may be required to put in place additional mechanisms ensuring compliance with the new data protection rules.

There is significant uncertainty related to the manner in which data protection authorities will seek to enforce compliance with GDPR. For example, it is unclear whether the authorities will conduct random audits of companies doing business in the EU, or act solely after complaints are filed claiming a violation of the GDPR. In addition, under certain conditions, the GDPR could also be able to apply to companies that are not in Europe. The lack of compliance standards and precedent, enforcement uncertainty and the costs associated with ensuring GDPR compliance may be onerous and adversely affect our business, financial condition, results of operations and prospects.

On December 22, 2023, the regulation on harmonized rules on fair access to and use of data was published in the EU's Official Journal. This regulation sets up new rules on who can access and use data generated in the EU across all economic sectors. The regulation came into effect on January 11, 2024, and most of its rules take effect from September 12, 2025. It will lay down rules on business-to-business and business-to-customer data access, establish a ban on unfair contractual terms on data sharing, and introduce restrictions to non-EU governmental access and international transfers of non-personal data, by requiring providers of data processing services to take technical, organizational and legal measures to prevent unlawful access and transfers. Upon the effectiveness of the regulation and its rules on full scale, it is very likely to have an impact on our business along with the GDPR.

*California Consumer Privacy Act—California, United States*

The California Consumer Privacy Act went into effect on January 1, 2020. The California Consumer Privacy Act creates new transparency rules and individual privacy rights for consumers (as that word is broadly defined in the law) and places increased privacy and security obligations on entities handling personal data of consumers or households. The California Consumer Privacy Act requires covered companies to provide new disclosures to California consumers, and provides such consumers new ways to opt-out of certain sales of personal information. The California Consumer Privacy Act provides for civil penalties for violations, as well as a private right of action for data breaches that is expected to increase the likelihood and cost of data breach litigation. The potential effects of this legislation are far-reaching and may require us to modify our data processing practices and policies and incur substantial costs and expenses in compliance and potential litigation efforts. As some other state and federal legislative and regulatory bodies are considering similar legislation on how to handle personal data, some observers have noted that the California Consumer Privacy Act could mark the beginning of a trend toward more stringent privacy legislation in the United States, which could increase our potential liability and adversely affect our business.

*Online Collection of Information from Children*

The Children's Online Privacy Protection Act of 1998 governs the online collection of personal information from children under the age of 13. Under the Children's Online Privacy Protection Act of 1998, a website or online service that knowingly collects information from children under 13 years old, or that in whole or in part is directed to children under 13 years old, must obtain verifiable parental consent before collecting, using and/or disclosing personal information from any child (including, but not limited to, first and last name, home address, email address, telephone number, Social Security number, image or likeness, mobile device identifier or other persistent identifier that would permit the physical or online contacting of a specific individual).

Websites or online services subject to the Children's Online Privacy Protection Act of 1998 must therefore obtain verifiable parental consent before engaging in online advertising that involves tracking of children under the age of 13. The website operator must also post and obtain parental consent to a clear online privacy policy that provides notice of what information is collected from children, how the information is used, and a list of third parties with which the operator may share or sell the child's information. The privacy policy must give parents the choice to determine whether the child's information can be shared with third parties, provide parents access to the child's information, and offer parents the opportunity to delete any collected information. If the company permits third-party advertising networks to use persistent identifiers to serve advertisements, those advertising networks must be informed that the site or service is directed towards children and the company must ensure that parental consent covers such collection, sharing, and use. Moreover, the operator must establish and maintain reasonable procedures to protect the confidentiality, security and integrity of any personal information collected from children under 13 years of age. The Children's Online Privacy Protection Act of 1998 also prohibits conditioning a child's participation in a game on the child disclosing more personal information than is reasonably necessary to participate in such activity. The Children's Online Privacy Protection Act of 1998 authorizes the FTC and the State Attorneys General to bring actions against website operators to enforce the statute, and provides for penalties of up to US\$42,530 per violation.

*Information Technology Act 2000—India*

The Information Technology Act 2000 governs the data privacy regulations in India. The Information Technology Act 2000 contains three provisions on data protection and privacy. Section 43A provides that we are subject to civil liability to compensate for wrongful loss or gain to any person arising from negligence in implementing and maintaining reasonable security practices and procedures with respect to sensitive personal data or information that we possess, deal with or handle in our computer systems, networks, databases and software. Section 72A provides for criminal punishment if, in the course of performing a contract, a service provider discloses personal information without the consent of the person concerned or in breach of a lawful contract and he or she does so with the intention to cause, or knowing he or she is likely to cause, wrongful loss or wrongful gain. Section 72 prescribes criminal punishment if a government official discloses records and information accessed by him or her in the course of his or her duties without the consent of the concerned person or unless permitted by other laws. Section 79 provides safe harbor protection to internet service providers from being held liable for third-party information or data made available by such internet service providers that they have no knowledge of or that they had exercised all due diligence to prevent. India has also implemented privacy laws, including (i) the Information Technology (Reasonable Security Practices and Procedures and Sensitive Personal Data or Information) Rules, 2011, which impose limitations and restrictions on the collection, use and disclosure of personal information, and (ii) the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021, which provides for checks and balances on social media companies by setting timelines for removal of unlawful content.

*Personal Data Protection Act 2012—Singapore*

An organization collecting, using or disclosing personal data is subject to the Personal Data Protection Act 2012 of Singapore, as amended from time to time. Any information, whether true or not, that may be used to identify a natural person either directly from the data, or from the data and other information that the organization has access to, is considered “personal data.” Examples may include an individual’s name, date of birth, identity card number, passport number, residential address, characteristics and fingerprints, among others. The personal data that is protected under the Personal Data Protection Act 2012 of Singapore excludes personal data that is publicly available and personal data that is disclosed under any written law. The Personal Data Protection Act 2012 of Singapore also does not apply to business contact information, such as an individual’s name, title, business address, business telephone number, and business e-mail address.

When an organization processes personal data, it must procure the individual’s consent for the collection, use and/or disclosure of his/her personal data. Therefore, the individual should be notified of the purposes for which his personal data is collected, used or disclosed. Consent can also be deemed to be given by individuals in some cases. The scenarios where implied consent can be deemed to be obtained have recently been expanded to include situations such as (i) where the consent is reasonably necessary for concluding the contract between the individual and the organization, and (ii) where the organization conducts an assessment to determine that the collection, use or disclosure of the personal data is not likely to have an adverse effect on the individual, and reasonable steps are taken to bring the prescribed information (including the organization’s intention to process and purpose for processing personal data) to the attention of the individual. There are certain exceptions to the consent requirement, which include the collection, use and disclosure of personal data for vital interests of individuals, matters affecting the public, legitimate interests of the organization, business asset transactions, business improvement and research.

Under the Personal Data Protection Act 2012 of Singapore, individuals have clearly defined rights, such as the right to access their personal data, request information on how their personal data has been used, and correct any inaccuracies in the personal data held by the organization. The organization should designate a Data Protection Officer for this purpose. The organization must take reasonable steps to ensure the accuracy of the personal data recorded and put security arrangements in place to protect the personal data.

Furthermore, when transferring personal data outside of Singapore, care must be taken to ensure that the recipient organization is bound by legally enforceable obligations or specified certifications to afford the personal data with a standard of protection that is comparable to that established by the Personal Data Protection Act 2012 of Singapore. Legally enforceable obligations may be imposed via the applicable law, a contract, binding corporate rules or any other legally binding instrument.

Where a breach of personal data has occurred, the organization is required to take reasonable and expeditious steps to assess the data breach. In some cases, the organization may be required to report the data breach to the Personal Data Protection Commission, and the affected individuals. Where the organization is acting as a data intermediary that is processing the personal data for another organization, the data intermediary is required to notify the organization of any data breaches in a timely manner.

Individuals who knowingly or recklessly commit an unauthorized disclosure or improper use of personal data in the control of an organization potentially face criminal sanctions on conviction of a fine not exceeding \$5,000 or imprisonment not exceeding two years or both. Further, the maximum financial penalty that may be imposed on an organization for contravention of the Personal Data Protection Act’s provisions has recently been increased to be up to 10% of an organization’s annual turnover in Singapore (where it exceeds S\$10 million), or S\$1 million, whichever is higher.

*Personal Data Protection—Indonesia*

On October 17, 2022, Law No. 27 of 2022 on Personal Data Protection, or the PDP Law, was enacted and came into effect, providing a new framework for personal data protection in Indonesia. To the extent provisions in existing and separate regulations relating to privacy and/or personal data protection in Indonesia such as The Minister of Communication and Information Regulation No. 20 of 2016 on Personal Data Protection in Electronic Systems and Government Regulation No. 71 of 2019 on the Provision of Electronic System and Transactions, or collectively the General Data Protection Regulations, do not conflict with the PDP Law, the non-conflicting provisions in these General Data Protection Regulations remain valid. These General Data Protection Regulations set out the rules governing the protection of personal data that are stored in electronic form while PDP Law governs protection of personal data that are stored both in electronic and non-electronic forms. The PDP Law introduces the definitions of “Personal Data Controllers” and “Personal Data Processors,” which were previously limited to “electronic system provider” under the General Data Protection Regulations. The Personal Data Controllers, either individually or jointly with other parties, determine the purpose and control the processing of personal data, while the Personal Data Processors, either individually or jointly with other parties, act on behalf of the Personal Data Controllers to process personal data as stipulated in Article 1 points 4 and 5 of the PDP Law. The PDP Law requires any action taken in relation to the processing of personal data by either Personal Data Controllers and Personal Data Processors, including acquisition and collection, processing and analysis, storage, correction and updates, display, announcement, transfer, dissemination, disclosure, and deletion or destruction, to be subject to provisions of the PDP Law, such as requiring prior consent of the owner of such personal data. Further, under the PDP Law, the Personal Data Controllers and Personal Data Processors are imposed with a comprehensive set of obligations, including: (i) adoption of internal data protection and security policies, (ii) performing an impact assessment for any high-risk personal data processing, (iii) providing access to the personal data that is processed along with the track record of the processing in accordance with the storage period, (iv) appointment of a data protection officer by Personal Data Controllers or Personal Data Processors to carry out personal data protection functions, and (v) for overseas transfer of personal data, ensuring the recipient country has an equal or higher personal data protection governance than the PDP Law, or otherwise, ensuring that there is adequate and binding protection, or if the foregoing is not available, consent from the personal data subjects. The condition above is aligned with Article 24 of the PDP Law, which stipulates that, in the case of processing personal data as mentioned above, the Personal Data Controller is obliged to provide evidence of the consent that has been given by the Personal Data Subject.

The General Data Protection Regulations clarify the data localization requirement by specifying that such requirement applies only to “public electronic systems providers” (i.e., central and regional executive, legislative, judicative bodies and any other bodies established pursuant to a statutory mandate, and entities appointed by the public bodies to operate electronic systems on their behalf). Meanwhile, a private provider can choose whether to process and/or host its electronic systems and data onshore or offshore. Regardless of the location, such provider must ensure that its electronic systems and data are accessible to the authority. However, this flexibility does not apply to private operators in the banking and financial services sectors.

In the event of a data breach, the PDP Law requires the Personal Data Controllers to deliver written notification no later than 72 hours to the personal data subjects and to the personal data protection authority. If the Personal Data Controllers or the Personal Data Processors fail to comply with the PDP Law, they may be subject to sanctions in the form of warnings or written reprimands, temporary suspensions of personal data processing activities, forced deletion or destruction of personal data, and administrative fines of up to 2% of annual revenue and income of the Personal Data Controller or the Personal Data Processor may be imposed. If corporations fail to comply with PDP Law, they may be subject to criminal fines as well as license revocation and liquidation.

*Personal Data Protection—Vietnam*

Until April 17, 2023, Vietnam did not have a single comprehensive data protection legal document. Instead, data protection provisions were prescribed across various laws and their corresponding guiding Decrees and Circulars, such as the Constitution, the Civil Code, the Law on Protection of Consumers’ Rights, the Law on Information Technology, etc., which regulate on different aspects of the data protection matter. In particular, the Constitution and the Civil Code provides basic principles on the right to privacy of individuals, while the Law on Protection of Consumers’ Rights and Decree 52/2013/ND-CP, amended by Decree 85/2021/ND-CP, on E-commerce regulate on the consumer protection aspect, the Law on Information Technology stipulates requirements for collecting, processing and using personal information on the Internet, etc. The laws in Vietnam are all adopted by the National Assembly of Vietnam, while the Decrees and Circulars are issued by lower-level authority, which are respectively the Government and relevant Ministries.

On November 19, 2015, the Vietnam National Assembly passed the Law on Cyber Information Security, which sets forth regulations on cyber information security. Accordingly, individuals and companies must implement measures to assure the security of cyber information. For example, entities providing information technology services must comply with regulations on the storage and use of personal information, apply blocking and handling measures upon receipt of a notice that sending such information is illegal, and implement measures to allow recipients to refuse the receipt of information. Moreover, the owners of the personal information (i.e., the data subjects) are also provided the right to request for updating, alteration and cancellation of the personal information by the data processor. On the other hand, the Law on Cyber Information Security and its guiding document also provided certain requirements regarding notification of a data breach and other cyber information security incidents.

On June 12, 2018, the Vietnam National Assembly passed the Law on Cybersecurity which regulates that any foreign service provider in certain fields such as e-payment, e-commerce, online games is required to have a commercial presence in Vietnam (such as branch, representative office) and to localize the user's data in Vietnam. Then, the government issued Decree No. 53/2022/ND-CP on August 15, 2022 to provide further details on a number of articles of the Law on Cybersecurity. Accordingly, it clarifies that foreign cyberspaces service providers engaged in (a) telecommunications services; (b) storing and sharing data in cyberspace; (c) providing national or international domain names to service users in Vietnam; (d) e-commerce; (e) online payment; (f) payment intermediary services; (g) transport connection services through cyberspace; (h) social networks and social media; (i) online video games; and (j) services that provide, manage, or operate other information on cyberspace in the form of messages, voice calls, video calls, e-mails, online chats must store such data in Vietnam for at least 24 months and set up a branch or representative office in Vietnam if requested in writing by Minister of the Ministry of Public Security.

On April 17, 2023, the Vietnam Government issued Decree 13/2023/ND-CP on Personal Data Protection, or the Decree 13—the first comprehensive legal document on personal data protection in Vietnam, which came into effect on July 1, 2023. Unlike other decrees which are to clarify and provide further guidelines on provisions of the relevant law, the Decree 13 provides new and independent requirements on personal data protection, in harmony with similar provisions under the current legal framework. In particular, the Decree 13 provides a unified definition of personal data, which is defined as “*information in the form of symbols, letters, numbers, images, sounds or similar on an electronic environment that is associated with a particular person or helps to identify a particular person. Personal data include basic personal data and sensitive personal data.*” “*Information that helps to identify a specific person*” is further clarified as “*information formed from the activities of an individual that, when combined with other data and stored information, can identify a specific person.*” Apart from unifying previous concepts regulated in various legal documents, the Decree 13 has also adopted certain contents from the well-known General Data Protection Regulations from the EU, which provided new concepts and stricter requirements not yet been regulated in previous legal documents on personal data protection such as: basic personal data, sensitive personal data, data controller, data protection impact assessment, processing personal data obtained through public recordings and filming, processing personal data in advertising and so on. On the other hand, the Decree 13 also requires entities (both foreign and Vietnam-based) relating to personal data processing activities to notify the Department of Cyber Security and Hi-tech Crime Prevention under the Ministry of Public Security upon (i) occurrence of a violation of personal data protection (i.e., a data breach); and (ii) conducting a cross-border personal data transfer. Furthermore, data subject rights and obligations, specific responsibilities of data controllers, data processors and third parties are also specified under this document.

#### *Personal Data Protection—Malaysia*

The Personal Data Protection Act 2010 regulates the processing of personal data in commercial transactions. The Personal Data Protection Act 2010 applies insofar as the personal data of a customer is processed (for example, name, identification card number, address, phone number, email address). The definition of “personal data” under the Personal Data Protection Act 2010 includes any information in respect of commercial transactions, which relates directly or indirectly to a data subject, who is identified or identifiable from that information or from that and other information in the possession of a data user, including any sensitive personal data and expression of opinion about the data subject. The Personal Data Protection Act 2010 sets out seven (7) personal data protection principles to be complied with, namely General Principle, Notice and Choice Principle, Disclosure Principle, Security Principle, Retention Principle, Data Integrity Principle, and Access Principle. Additionally, the Personal Data Protection Regulations 2013 and the Personal Data Protection Standard 2015 set out in detail the requirements to be complied with in respect of the seven (7) principles.

The General Code of Practice of Personal Data Protection sets out the best practices for data users in meeting the Personal Data Protection Act 2010 requirements when undertaking commercial transactions, by further elaborating the seven (7) principles enumerated in the Personal Data Protection Act 2010. In particular, the General Code of Practice of Personal Data Protection clarifies the manner in which consent obtained from data subjects can be recorded and maintained. Such consent can be obtained in various forms, including through a clickable box, by conduct or performance, or verbally. The relevant data users are required to develop and implement appropriate compliance policies and procedures to ensure compliance with the General Code of Practice of Personal Data Protection and the Personal Data Protection Act 2010.

The Personal Data Protection Code of Practice for Licensees under the Communications and Multimedia Act 1998 outlines guidelines for the communications sector in Malaysia to comply with the Personal Data Protection Act 2010. In addition to the seven (7) principles enumerated in the Personal Data Protection Act 2010, the Personal Data Protection Code of Practice for Licensees under the Communications and Multimedia Act 1998 covers best practices for data management in the communications sector, including the use of clear and concise privacy notices, the implementation of access controls and data retention policies, and the use of encryption and other security measures to protect personal data (as well as pre-existing data collected and processed prior to the effectiveness of the Personal Data Protection Act 2010). In addition, the Personal Data Protection Code of Practice for Licensees under the Communications and Multimedia Act 1998 outlines the requirements for cross-border data transfers, which involve the transfer of personal data outside of Malaysia, which include obtaining consent from data subjects, ensuring that the receiving country provides an adequate level of protection for personal data and implementing appropriate contractual and technical safeguards to protect personal data during the transfer process.

The General Consumer Code of Practice for the Communications and Multimedia Industry Malaysia sets out the obligations in relation to the protection of personal information and sets out the rules in respect of the protection of consumer (including consumer with special needs or disabilities) information policy and principles on notice, disclosure, consent, choice, data security, data quality and access. Accordingly, a service provider may collect and maintain necessary data / information of consumers for tracking practices, provided that the collection and maintenance of such data / information shall be fairly and lawfully collected and processed, processed for limited purposes, adequate, relevant and not excessive, accurate, not kept longer than necessary, processed in accordance with the data subject's rights, secure and not transferred to any party without the consumer's prior approval. Consumers must also be given the opportunity to exercise their choice in respect of how individually identifiable information collected from them may be used.

#### *Personal Data Protection—Saudi Arabia*

The Saudi Arabia Personal Data Protection Law, as amended, has been implemented by Royal Decree No. M/19 of 9/2/1443H (September 16, 2021) and amended by Royal Decree No. M/147 of 5/9/1444H (March 21, 2023), and came into effect on September 14, 2023. The Saudi Arabia Personal Data Protection Law is the main law in Kingdom of Saudi Arabia regulating the use of personal data. The personal data defined in the Saudi Arabia Personal Data Protection Law includes any data, regardless of its source or form, that may lead to identifying an individual specifically, or that may directly or indirectly make it possible to identify an individual, including name, personal identification number, addresses, contact numbers, license numbers, records, personal assets, bank and credit card numbers, photos and videos of an individual, and any other data of personal nature. The Saudi Arabia Personal Data Protection Law also provides for a separate concept of sensitive data. It includes personal data revealing racial or ethnic origin, or religious, intellectual or political belief, security data, data relating to criminal offenses, biometric or genetic data, health data, and data that indicates that one or both of the individual's parents are unknown.

The Saudi Arabia Personal Data Protection Law applies to the processing of personal data that takes place in the territory of the Kingdom, and also applies extra-territorially to non-Saudi entities that process the personal data of individuals residing in Saudi Arabia. The provisions, requirements, and conditions set forth in the Saudi Arabia Personal Data Protection Law do not apply to the processing of personal data by an individual for personal or family use, as long as the personal data is not published or disclosed to others.

## ***Regulations on Intellectual Property***

### *Copyright Act, 1957—India*

Copyright law in India is governed by the Copyright Act, 1957, which has been amended six times, with the last amendment in 2012. It is a comprehensive set of statutes providing for legal protection to copyright, moral rights and neighboring rights. Under the fair use provisions of the Act, section 52(1)(b) provides that transient or incidental storage of a work or performance purely in the technical process of electronic transmission or communication to the public does not constitute infringement of copyright. This provision provides safe harbor to internet service providers that may have incidentally stored infringing copies of a work for the purpose of transmission of data.

### *Regulations on Intellectual Property—Singapore*

Singapore provides a comprehensive legal framework and supporting infrastructure for protecting patents, copyrights, trademarks and industrial designs.

Singapore protects inventive designs and processes through the Patents Act 1994 (as amended from time to time), which is based on the United Kingdom's Patents Act of 1977. Singapore patents are protected internationally under the Patent Cooperation Treaty (PCT). A patent in Singapore is valid for 20 years, so long as the owner pays the annual renewal fees. Once registered, the owner can use, sell or license the patent. The criteria Singapore uses in granting a patent is that the process or design: (i) is new (i.e., should not be publicly known anywhere in the world), (ii) it must be an improvement that would not be obvious to someone with technical skill or knowledge in that field and (iii) should have practical application, which is generally in line with the criterion in the United Kingdom and the United States.

If a product or process is found to infringe a registered patent, the court can order damages and an injunction on the use of the infringing product or process.

Singapore's Copyright Act 2021, as amended from time to time, protects original works such as novels, computer programs, videos and performances, but does not include ideas, procedures, methods or discoveries because these are considered expressions of the underlying idea or discovery. There is no registration process for copyrighting in Singapore, and the copyright begins when the work is created- the author must take steps to show that he or she created the copyrighted work first in order to establish ownership. The author, or owner, of copyrighted material has the exclusive right to publish, perform, broadcast or adapt the work, and can assign or license all or part of the rights to others. An assignment of copyright needs to be in writing; a license can be exclusive or non-exclusive, and an exclusive license needs to be in writing. The protections Singapore affords through copyright and the length of those protections varies by the type of work it is.

Copyright infringement may be classified as: (i) primary infringement, covering direct unauthorized usage of the copyrighted work and (ii) secondary infringement, such as import, sale or exhibition of items which the infringer know or should have known was made without the copyright owner's consent, false attribution of the authorship of a copyrighted work and false removal or alteration of rights management information electronically attached to a copyrighted work.

Copyright infringement is subject to the general exception for "fair use." When determining whether a work has been fairly used, a variety of factors like the purpose and character of use, the nature of the work being used, and the amount and substantiality of the portion of the work being used must be considered. Under recent changes to the Copyright Act, it is no longer mandatory for courts to consider the possibility of obtaining the work within a reasonable time at an ordinary commercial price, when determining if a work has been fairly used.

Further, a new exception for "computational data analysis" has been introduced. This exception allows a person to use or make a copy of a copyrighted work or recording of a protected performance for the purposes including (i) using a computer program to identify, extract and analyze information or data from the work or recording; and (ii) using the work or recording as an example of a type of information or data to improve the functioning of a computer program in relation to that type of information or data. In practice, this exception may apply where a company is carrying out text and data mining or training an AI system. Nonetheless, the exception is subject to the user having lawful access to the works being copied. The exact scope of what "lawful access" may mean is undefined and remains to be seen.

A copyright owner can look to civil remedies for infringement include damages, an injunction and destruction of the infringing work, or “statutory damages” of not more than S\$10,000 per work and S\$200,000 in the aggregate. A person who infringes a copyright in Singapore can also be subject to criminal penalties. A person convicted of “primary infringement” may be punished with a fine of up to S\$20,000 and/or a jail term of up to two years. A person convicted of “secondary infringement” may be punished with a fine of up to S\$10,000 per work and S\$100,000 in the aggregate and/or the jail term cannot exceed five years.

Singapore protects trademarks through the Trade Marks Act (Cap 332, 2005 Rev Ed) as amended from time to time as well as under common law (mutually independent of each other). Protection under the Trade Marks Act is conditional upon registration of the trademark with the Registry of Trade Marks within the Intellectual Property Office of Singapore, with the exception of special protection granted under the Trade Marks Act to ‘well known’ trademarks, and such protection is valid for 10 years from the date of registration and renewable for further periods of 10 years. Registration may be obtained through (i) a domestic application filed with the Registry of Trade Marks or (ii) an international application filed under the Madrid Protocol designating Singapore as a country where protection is sought, and a person who has earlier filed an application for registration in a Paris Convention/WTO country may, if he files for registration in Singapore within six months from the date of such application, claim a right of priority. Singapore follows the Nice Agreement Concerning the International Classification of Goods and Services for the Purposes of the Registration of Marks.

A registered trade mark may be assigned or licensed by the registered proprietor, and such assignment or licensing should be registered with the Registry of Trade Marks in order to be effective against a person acquiring a conflicting interest in the trade mark unaware of such assignment or license.

A registered proprietor of trademarks can look to a range of civil remedies for infringement, such as injunctions, either damages or an account of profits, or an order for delivery up and/or disposal of infringing articles in relation to the registered design. Where the infringement involves the use of a counterfeit trademark, the court may even award statutory damages of up to S\$1 million without proof of actual loss. Aside from these civil remedies, the registered proprietor may also enforce his trademark rights in criminal proceedings for infringing activities such as (i) counterfeiting a registered trademark, (ii) falsely applying a registered trade mark to goods or services, (iii) making or possessing articles for such infringement offense and (iv) importing or selling goods with falsely applied trademark. Conviction for any of these offenses attracts a fine of up to S\$100,000 and/or imprisonment for a maximum term of five years.

#### Industrial Designs

Protection of industrial designs is available under the Registered Designs Act (Cap 266, 2005 Rev Ed), as amended from time to time. This Act is modelled on the UK Registered Designs Act 1949 (as amended in 1988). Registration may be obtained through (i) a domestic application filed with the Registry of Designs within the Intellectual Property Office of Singapore or (ii) an international application filed under the Geneva Act of the Hague Agreement Concerning the International Registration of Industrial Designs designating Singapore as a country where protection is sought, and a person who has earlier filed an application for registration in a Paris Convention/WTO country may, if he files for registration in Singapore within six months from the date of such application, claim a right of priority. The maximum duration of the protection conferred by registration is 15 years from the date of registration. Singapore follows the specification and classification determined by the Locarno Agreement Establishing an International Classification for Industrial Designs.

A registered design may be assigned or licensed by the registered owner, and such assignment or licensing should be registered with the Registry of Designs in order to be effective against a person acquiring a conflicting interest in the design unaware of such assignment or license.

A registered owner can look to a range of remedies for infringement such as injunctions, either damages or an account of profits, an order for delivery up and/or disposal of infringing articles in relation to the registered design. However, if the registered owner fails in its claim of infringement, it may be liable for a counterclaim for making groundless threats of design infringement. The remedies in such a counterclaim can include an injunction against the continuance of the threats, damages as well as a declaration that the threats are unjustifiable.

Where a registered design qualifies for protection under the Registered Designs Act as well as the Copyright Act 2021, there is no cumulative protection under registered design and copyright law: protection is available under the Registered Designs Act only. Also, if a design is registrable under the Registered Designs Act but has not been registered, the design will neither be covered by the registered design nor the copyright regime.

### Copyrights

Copyrights in Indonesia are regulated under Law No. 28 of 2014 on Copyrights. Indonesia adopts the declarative system of copyright protection whereby a copyright is an exclusive right of a creator of content which arises automatically after a creation appears in a concrete form. This exclusive right consists of moral rights and economic rights. Based on Article 5 of the Indonesian Copyright Law, moral rights are eternally inherent to the creator to (i) continue to include or exclude their name on the copy with respect to the public use of the works, (ii) use an alias or pseudonym, (iii) change their creation to comply with appropriateness in the community, (iv) change the title and subtitle of their works, and (v) defend their rights in the event of distortion of creation, mutilation of creation, modification of creation or other acts which will be prejudicial to their honor or reputation. Such moral rights cannot be transferred as long as the creator is alive, but the exercise of these rights is transferrable by testament or other methods in accordance with the Indonesian regulation after their death (inheritance, grant, written agreement, etc.). Economic rights shall mean the exclusive right of the creator or the copyright holder to obtain economic benefit from the work. Such economical rights as stipulated in Article 9 of the Indonesian Copyright Law grant the creator to engage in (i) publication of the creation, (ii) reproduction of the creation in all its forms, (iii) translation of the creation, (iv) adaptation, arrangement, or transformation of the creation, (v) distribution of the creation or their copies, (vi) performance of the creation, (vii) publication of the creation, (viii) communication of the creation, and (ix) rental of the creation. The Indonesia copyright regulation protects creations in the field of science, arts and literature, which includes, among others, computer programs, video games, photography, songs or music with or without lyrics, and all forms of art. However, for certain creations, there are exceptions where protection is not granted. Based on Article 24 of the Indonesian Copyright Law, creations that are not protected under the Indonesian Copyright Law consist of (i) creations that have not been completed in tangible form, (ii) the idea, procedure, system, method, concept, principle, findings, or data, regardless of being expressed, stated, described, explained, or incorporated in a creation, and (iii) tools, objects, or products that are created solely to resolve technical problems or whose form only serve functional needs.

### Marks

Marks in Indonesia are regulated under Law number 20 of 2016 as amended by Law number 6 of 2023, or the Indonesian Mark Law. Based on Article 2 paragraph 2 of Indonesian Mark Law, marks are separated into two categories: trademark and service mark. Protected marks as stipulated in Article 2 paragraph 3 of the Indonesian Mark Law consists of a sign in the form of an image, logo, name, word, letter, number, color arrangement, in two dimensions and/or three dimensions, sounds, hologram, or a combination of two or more on those elements to distinguish goods and/or services that are produced by individuals or legal entities in goods and/or service trading activities.

### Geographical Indication

Geographical indication in Indonesia are regulated under the Indonesian Mark Law. Geographical indication as defined by the Indonesian Mark Law is an indication that identifies the area of origin of goods and/or products based on geographical environmental factors, including natural factors, human factors or a combination of those two factors, that gives certain reputation, quality and characteristics to the produced goods and/or products.

### Patents

Patents in Indonesia are regulated under Law number 13 of 2016 as amended by Law 6 of 2023, or the Indonesian Patent Law. Patents are exclusive rights granted by the state to inventors for their inventions, the ideas that are poured into an activity to solve specific problems in the field of technology in the form of products or processes, or improvements in the development of products or processes. Patents are generally divided into two categories: patent products and patent processes where these patents are warranted with a period of time to implement the invention itself or to give approval to other parties to use it.

According to Article 2 of the Indonesian Patent Law, patent protection can be categorized into two circumstances. First, for patents that are granted for new inventions, contain inventive step/act, and may be applied in industry, Article 22 of the Indonesian Patent Law provides that these patents have a protection period of 20 years and cannot be extended. Second, for simple patents that are granted for a new invention in the event that it is a development of an existing product or process, which consists of a simple product, a simple process, and a simple method, Article 23 of the Indonesian Patent Law provides that this simple patent only has protection period of 10 years and cannot be extended.

As stipulated in Article 19 of the Indonesian Patent Law, the patent holder has the exclusive right to implement the patent he owns and prohibit other parties who do not have his consent to use it in terms of making, using, selling, importing, leasing, delivering, or providing for sale or lease or delivery of products granted a patent for product patents, as well as in the case of using the patented production process to make goods or other acts in the case of process patents.

#### Trade Secret

Trade secrets in Indonesia are regulated under Law number 30 of 2000, or the Indonesian Trade Secret Law. Trade secret is information that is not known to the public in the field of technology and/or business, has economic value because it is useful in business activities, and is kept confidential by the owner of the trade secret. Article 2 of the Indonesian Trade Secret Law states that the scope of this trade secret includes: (i) production methods; (ii) processing methods; (iii) sales methods; or (iv) other information in the field of technology and/or business that has economic value and is not known by the general public. Pursuant to the Indonesian Trade Secret Law, trade secret has three elements that must be fulfilled, which consist of: (i) confidential, which means that it is only known by certain parties and not general public; (ii) has economic value, which means that the confidentiality of this information can be used to carry out commercial activities or businesses; (iii) is kept confidential through appropriate efforts. The owner of a trade secret, in addition to having the right to use the trade secret himself, can also use it for commercial purposes such as by granting licenses to other parties or prohibiting the use of his trade secret as stipulated in Article 4 of the Indonesian Trade Secret Law.

#### *Regulations on Intellectual Property—Vietnam*

Intellectual property rights in Vietnam are mainly governed by the Law on Intellectual Property, its guiding documents such as Decree 103/2016/ND-CP, Decree 100/2006/ND-CP, 65/2023/ND-CP, etc., together with certain international agreements to which Vietnam is a signatory.

In order for certain intellectual property rights to be recognized and enforceable in Vietnam, intellectual property owners must register those rights. Copyrights may be registered with the Department of Copyright of Vietnam but the registration is not compulsory. As a member of the Berne Convention, all copyrights will be protected automatically. However, copyright registration could be helpful for copyright protection, especially for proving the existence of copyrights in disputes. Industrial property, such as patents, trademarks (except for well-known trademarks) and industrial design, must be registered with the Intellectual Property Office of Vietnam in order to be protected in Vietnam, although unregistered rights may be protectable under the laws of unfair competition or passing off. A well-known trademark may be protected based on its use without registration and a trademark license is not required to be registered with the Intellectual Property Office of Vietnam in order to have validity against a third party.

#### *Regulations on Intellectual Property—Malaysia*

#### Trademarks

Trademarks in Malaysia are governed by the Trademarks Act 2019 and the Trademarks Regulations 2019. Once a trademark is registered, the registered proprietor of the trademark has the exclusive rights to use the trademark and to authorize other persons to use the trademark, in relation to the goods or services for which the trademark is registered. Registered trademarks are valid for ten (10) years from the date of filing of the application and are renewable for subsequent periods of ten (10) years each. Subject to limited exceptions, no person or enterprise other than the registered proprietor or persons authorized by the registered proprietor may use the trademark, otherwise infringement actions may be taken against such person or enterprise, including actions against counterfeiting a registered trademark.

## Copyrights

The main governing legislation for copyright law in Malaysia is the Copyright Act 1987. Pursuant to the Copyright Act 1987, authors of protected works enjoy various exclusive rights, including the rights of reproduction in any material forms, communication to the public, performance, showing or playing to the public, distribution of copies to the public by sale or other transfer of ownership, and commercial rental to the public. Literary works, musical works and artistic works are eligible for copyright protection if sufficient effort has been made to make the works original in character; and the works have been written down, recorded or otherwise reduced to a material form. There is no formal system for registration of copyright in Malaysia. Copyright is conferred automatically on a work once all statutory requirements have been met. That said, copyright owners can claim ownership by way of a Statutory Declaration or by filing a Voluntary Notification at the Intellectual Property Corporation of Malaysia. Online games and computer software or programs are eligible for copyright protection in Malaysia.

## Patents

The Patents Act 1983 and the Patents Regulations 1986 govern the protection of inventions in Malaysia. An invention is eligible for patent protection if it is new, involves an inventive step, is industrially applicable, and is not explicitly excluded by the Patents Act 1983. Examples of excluded items include discoveries, rules, and methods for doing business or playing games. Once granted, a patent is valid for a maximum of twenty (20) years from the date of filing, subject to yearly renewal. The owner of a patent is granted exclusive rights to exploit the patented invention, assign or transfer the patent, enter into licensee contracts, and deal with the patent as the subject of a security interest. Anyone seeking to deal with a patent exclusively owned by someone else must obtain prior consent. Infringement of a patent occurs when a person performs any of the acts under the exclusive control of the patent owner without authorization. Such acts include the manufacture, importation, offer for sale, sale, or use of the patented product or process. Opposition to a patent is allowed under the Patents Act by any interested person against the owner of a patent, provided that the requirements and proper procedures under the Patents Act are complied with.

### *Regulations on Contents—Malaysia*

The Communications and Multimedia Act 1998 is the main legislation regulating the communications and multimedia industry. The act provides for the Communications and Multimedia Content Forum to prepare and draw up a Content Code after appropriate consultations, and to enforce the Content Code containing governing standards and practices in the communications and multimedia industry. The Content Code sets out the guidelines and procedures for good practice and standards of content disseminated to audiences by service providers in the communications and multimedia industry in Malaysia. It covers a wide range of topics, including general principles, content standards, advertising and sponsorship, and enforcement.

### ***Mainland China Regulations***

Certain areas related to the internet, such as telecommunications, internet information services, connections to the international information networks, internet information security and censorship and cross-border smart commerce solution services, are covered extensively by a number of existing laws and regulations issued by various governmental authorities of mainland China. As of the date of this annual report, we believe the majority of our business, especially our global platforms that we operate outside mainland China, is not subject to the above regulations. Yet as we maintained some of our audio and video capabilities and functions and cross-border smart commerce solution services in mainland China, our remaining business operations in mainland China are subject to regulations issued by the below authorities, including:

- the Ministry of Industry and Information Technology;
- the Ministry of Culture, currently known as the Ministry of Culture and Tourism;
- the National Press and Publication Administration;
- the National Radio and Television Administration;
- the National Copyright Administration;

- the State Administration for Industry and Commerce, currently known as the State Administration for Market Regulation, or the SAMR;
- the State Council Information Office;
- the Ministry of Commerce;
- the Bureau of Protection of State Secrets;
- the Ministry of Public Security; and
- the State Administration of Foreign Exchange, or the SAFE.

As the online social platform, cross-border smart commerce solution services and online short micro drama business are still at an early stage of development in mainland China, new laws and regulations may be adopted from time to time to require new licenses and permits in addition to those we currently have. There are substantial uncertainties on the interpretation and implementation of any current and future Chinese laws and regulations, including those applicable to the online social platform industries, cross-border smart commerce solution services and online short micro drama business. See “Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in Jurisdictions We Operate—There are uncertainties regarding the interpretation and enforcement of PRC laws, rules and regulations.” This section sets forth the most important laws and regulations that govern our current business activities in mainland China and that affect the dividends payment to our shareholders.

#### *Regulations on Foreign Investment*

According to the Foreign Investment Law adopted by the National People’s Congress on March 15, 2019, which came into effect on January 1, 2020, the State shall implement the management systems of pre-establishment national treatment and negative list for foreign investment. The pre-establishment national treatment refers to the treatment given to foreign investors and their investments during the investment access stage, which is not lower than that given to their domestic counterparts. The negative list refers to special administrative measures for the access of foreign investment in specific fields as stipulated by the State. The State shall give national treatment to foreign investment beyond the negative list. The organization form, institutional framework and standard of conduct of a foreign-funded enterprise shall be subject to the provisions of the PRC Company Law and other laws. Foreign investors shall not invest in any field forbidden by the negative list for access of foreign investment. For any field restricted by the negative list, foreign investors shall conform to the investment conditions as required in the negative list. Fields not included in the negative list shall be managed under the principle that domestic investment and foreign investment shall be treated uniformly.

On December 30, 2019, the Ministry of Commerce and the SAMR jointly promulgated the Measures for Reporting of Foreign Investment Information, which became effective on January 1, 2020. According to the Measures for the Reporting of Foreign Investment Information, where foreign investors carry out investment activities directly or indirectly within mainland China, foreign investors or foreign-invested enterprises shall report investment information to commerce departments in accordance with these measures. A foreign investor who establishes a foreign-invested enterprise within mainland China shall submit an initial report through the enterprise registration system when undergoing formation registration of the foreign-invested enterprise. In the case of any modification of the information in the initial report, which involves the enterprise’s modification registration (recordation), the foreign-invested enterprise shall submit the modification report through the enterprise registration system when undergoing the enterprise’s modification registration (recordation).

*Regulations on Overseas Listing by Domestic Companies*

On February 17, 2023, the CSRC promulgated the Trial Administrative Measures of the Overseas Securities Offering and Listing by Domestic companies, or the Overseas Listing Trial Measures, and relevant five guidelines, which came into effect on March 31, 2023. According to the Overseas Listing Trial Measures, domestic companies in mainland China that seek to offer and list securities in overseas markets, including secondary listing and follow-on offerings, either directly or indirectly, are required to fulfill the filing procedure with the CSRC and report relevant information. The Overseas Listing Trial Measures provides that if the issuer meets both of the following criteria, the overseas securities offering and listing conducted by such issuer would be deemed as an indirect overseas offering subject to the filing procedure set forth under the Overseas Listing Trial Measures: (i) any of the operating revenue, total profit, total assets or net assets of domestic companies in mainland China for the most recent fiscal year accounts for 50% or more of the corresponding item as recorded in issuer's audited consolidated financial statements; and (ii) the issuer's business activities are substantially conducted in mainland China, or its principal place of business are located in mainland China, or the senior managers in charge of its business operations and management are mostly Chinese citizens or domiciled in mainland China. The Overseas Listing Trial Measures also provides that the determination for indirect overseas offering shall follow the "substance-over-formality" principle. Meanwhile, the guidelines of the Overseas Listing Trial Measures provides that even if the issuer does not meet such criteria, the issuer may still be subject to the filing procedures with the CSRC following the "substance-over-formality" principle, which takes a variety of other factors into consideration such as the issuer's filer status and disclosure in the offering documents.

In addition, pursuant to a press conference held by CSRC for the release of the Overseas Listing Trial Measures and the issuance of the Notice on Administration for the Filing of Overseas Offering and Listing by Domestic Companies, published on the same day, domestic companies in mainland China who had already completed the overseas securities offering and listing before the effective date of the Overseas Listing Trial Measures are not required to file with CSRC immediately but shall file with CSRC in due course in case of any activities such as follow-on financing in the future that shall be filed with CSRC according to the Overseas Listing Trial Measures.

Given the uncertainty of the interpretation and implementation of the Overseas Listing Trial Measures and our global operations, substantial uncertainties remain and we could not rule out the possibility that we may be required to file the relevant documents with the CSRC in connection with our proposed offerings and listings outside mainland China in the future.

On February 24, 2023, the CSRC, the Ministry of Finance, the National Administration of State Secrets Protection and the National Archives Administration jointly issued the Provisions on Strengthening Confidentiality and Archives Administration of Overseas Securities Offering and Listing by Domestic Companies, which came into effect on March 31, 2023. These provisions specify that during the overseas issuance of securities and listing activities of domestic enterprises, domestic enterprises and securities companies and securities service institutions that provide relevant securities services shall, by strictly abiding by the relevant laws and regulations of mainland China and the requirements therein, establish sound confidentiality and archives management systems, take necessary measures to implement confidentiality and archives management responsibilities, and shall not leak national secrets, work secrets of governmental agencies and undermine national and public interests. Work manuscripts generated in mainland China by securities companies and securities service institutions that provide relevant securities services for overseas issuance and listing of securities by domestic enterprises shall be kept in mainland China. Without the approval of relevant competent authorities, it shall not be transferred overseas. Where archives or copies need to be transferred outside mainland China, it shall be subject to the approval procedures in accordance with relevant regulations in mainland China.

In addition, on December 28, 2021, the CAC, together with 12 other government authorities, jointly issued the Measures for Cybersecurity Review, which became effective on February 15, 2022. According to the Measures for Cybersecurity Review, among others, (i) a “network platform operator” holding over one million users’ personal information shall apply for a cybersecurity review when listing their securities “in a foreign country” (ii) a critical information infrastructure operator that intends to purchase internet products and services that affect or may affect national security should apply for a cybersecurity review, and (iii) a “network platform operator” carrying out data processing activities that affect or may affect national security should apply for a cybersecurity review. Since the Measures for Cybersecurity Review are relatively new, significant uncertainties remain in relation to their interpretation and implementation. Additionally, the Measures for Cybersecurity Review do not provide the exact scope of “network platform operator” or the criteria for determining which circumstance falls within the definition of “holding over one million users’ personal information.” Furthermore, on November 14, 2021, the CAC commenced to publicly solicit comments on the Regulations on the Administration of Cyber Data Security (Draft for Comments), which regulates the specific requirements in respect of the data processing activities conducted by data processors through internet in the view of personal data protection, security of important data, data cross-border security management and obligations of internet platform operators. The draft regulations provide that, data processors conducting the following activities must apply for cybersecurity review: (i) merger, reorganization, or division of internet platform operators that have acquired a large number of data resources related to national security, economic development, or public interests, which affects or may affect national security; (ii) a foreign listing by a data processor processing personal information of over one million users; (iii) a listing in Hong Kong which affects or may affect national security; or (iv) other data processing activities that affect or may affect national security. In addition, the draft regulations require that a data processor who processes important data or whose securities are listed outside the PRC shall carry out annual data security assessment either by itself or through a third-party data security service provider and submit the assessment report to a local agency of the CAC. The draft regulations provide for a broad definition of “data processing activities” which includes collection, storage, usage, processing, transfer, provision, publication, deletion and other activities, which covers the entire life cycle of data processing. The definition of a “data processor” is also quite broad as covering individuals and entities that may autonomously determine the purpose and the method of data processing activities. However, the draft regulations were released for public comment only and its operative provisions and the anticipated adoption or effective dates may be subject to change with substantial uncertainty.

Meanwhile, according to the 2021 Negative List, where a domestic enterprise engaging in the prohibited business in the 2021 Negative List issues and lists shares overseas for trading, it shall obtain the approval of the relevant competent department of the state, and the overseas investor shall not participate in the operation and management of the domestic enterprise, and its shareholding ratio shall be subject to the relevant provisions on the administration of domestic securities investment by overseas investors.

#### *Regulation on Telecommunications Services and Foreign Ownership Restrictions*

Investment activities in mainland China by foreign investors are mainly governed by the Special Administrative Measures (Negative List) for the Access of Foreign Investment (2021), or the 2021 Negative List, which was promulgated on December 27, 2021 and became effective on January 1, 2022. According to the 2021 Negative List, the foreign stake in a value-added telecommunications service (except e-commerce, domestic multi-party communication, store-and-forward, and call center services) may not exceed 50%.

According to the Telecommunications Regulations, which became effective on September 25, 2000 and have been subsequently amended respectively on July 29, 2014 and February 6, 2016, and the Catalog of Telecommunications Business (2015 Amendment), implemented on March 1, 2016 attached to the Telecommunications Regulations and amended on June 6, 2019, internet information services are deemed a type of value-added telecommunications services. The Telecommunications Regulations require the operators of value-added telecommunications services to obtain value-added telecommunications business operation licenses from the Ministry of Industry and Information Technology or its provincial delegates prior to the commencement of such services. Under these regulations, if the value-added telecommunications services offered include mobile network information services, the operation license for value-added telecommunications business must include the provision of such services in its covered scope. We currently hold ICP Licenses, a sub-category of the value-added telecommunications business operation license, through Guangzhou Huaduo and Guangzhou BaiGuoYuan, covering the provision of internet and mobile network information services, issued by the Guangdong branch of the Ministry of Industry and Information Technology, which were last updated on December 23, 2020 and August 11, 2021, respectively.

According to the Regulations for the Administration of Foreign-Invested Telecommunications Enterprises, which took effect on January 1, 2002 and were last amended on May 1, 2022, unless otherwise stipulated, the foreign investor of a telecommunications enterprise is prohibited from holding more than 50% of the equity interest in a foreign-invested enterprise that provides value-added telecommunications services, including provision of internet content.

On July 13, 2006, the Ministry of Industry and Information Technology issued the Circular on Strengthening the Administration of Foreign Investment in Value-added Telecommunications Services, which requires that (a) foreign investors can only operate a telecommunications business in mainland China through establishing a telecommunications enterprise with a valid telecommunications business operation license; (b) domestic license holders are prohibited from leasing, transferring or selling telecommunications business operation licenses to foreign investors in any form, or providing any resource, sites or facilities to foreign investors to facilitate the unlicensed operation of telecommunications business in mainland China; (c) value-added telecommunications service providers or their shareholders must directly own the domain names and registered trademarks they use in their daily operations; (d) each value-added telecommunications service provider must have the necessary sites and facilities for its approved business operations and maintain such sites and facilities in the geographic regions covered by its license; and (e) all value-added telecommunications service providers should improve network and information security, enact relevant information safety administration regulations and set up emergency plans to ensure network and information safety. Due to the lack of any additional interpretation from the regulatory authorities, it remains unclear what impact this circular will have on us or the other PRC internet companies with similar corporate and contractual structures.

On November 18, 2023, the State Council published the Official Reply of the State Council on the Work Plan to Support Beijing in Pursuing the Initiative for the National Comprehensive Demonstration Zone for Further Opening-up of the Service Sector, according to which foreign stake restrictions on value-added telecommunications services, such as information services (limited to app stores, excluding online publishing services) and internet access services (limited to internet access services for users) in Beijing will be canceled. However, there are no further regulations and documents relating to this work plan and the interpretation and implementation remain uncertain.

To comply with such foreign ownership restrictions, we operate our online platform in mainland China through Guangzhou Huaduo in mainland China, a subsidiary of Guangzhou Tuyue. Guangzhou Tuyue is indirectly held by selected individuals from our senior management team who are PRC citizens, through limited partnership in mainland China jointly established by these individuals. See “Item 7. Major Shareholders and Related Party Transactions—B. Related Party Transactions—VIE Structure and the Contractual Arrangements.” Moreover, Guangzhou Huaduo is the registered holder of a majority of the domain names, trademarks and facilities necessary for daily operations in compliance with the Circular on Strengthening the Administration of Foreign Investment in Value-added Telecommunications Services. Based on our PRC counsel Fangda Partners’ understanding of the current laws, rules and regulations of mainland China, our corporate structure complies with all existing laws and regulations of mainland China. However, we were further advised by our PRC counsel that there are substantial uncertainties with respect to the interpretation and application of existing or future laws and regulations off mainland China and thus there is no assurance that mainland China’s governmental authorities would take a view consistent with the opinions of our PRC counsel.

#### *Internet Information Services*

The Administrative Measures on Internet Information Services, issued by the State Council on September 25, 2000 and amended on January 8, 2011, regulate the provision of internet information services. According to these administrative measures, internet information commercial service providers shall obtain a Value-added Telecommunications Business Operation License, or the ICP License, from the relevant local authorities before engaging in the providing of any commercial internet information services in mainland China, and the ICP License is subject to annual inspection within the first quarter of the next year according to the Administrative Measures for Telecommunications Business Operating Licensing, which was promulgated by the Ministry of Industry and Information Technology on March 5, 2009 and amended on July 3, 2017. In addition, if the internet information services involve provision of news, publication, education, medicine, health, pharmaceuticals, medical equipment and other services that statutorily require approvals from other additional governmental authorities, such approvals must be obtained before applying for the ICP License. Each of Guangzhou Huaduo and Guangzhou BaiGuoYuan presently holds the ICP Licenses on internet and mobile network information services issued by the Guangdong branch of the Ministry of Industry and Information Technology.

Besides, the Administrative Measures on Internet Information Services and other relevant measures also ban the internet activities that constitute publication of any content that propagates obscenity, pornography, gambling and violence, incite the commission of crimes or infringe upon the lawful rights and interests of third parties, among others. If an internet information service provider detects information transmitted on their system that falls within the specifically prohibited scope, such provider must terminate such transmission, delete such information immediately, keep records and report to the governmental authorities in charge. Any provider’s violation of these prescriptions will lead to the revocation of its ICP License and, in serious cases, the shutting down of its internet systems.

On June 27, 2022, the CAC promulgated the Administrative Provisions on Internet User Account Information, which took effect on August 1, 2022. These administrative provisions requires internet information service providers to assume their responsibilities as subjects in charge of internet user account information management, equip professional personnel and technical capabilities appropriate to the service scale, and establish, improve and strictly implement the management systems of real identity information authentication, account information verification, information content security, ecological governance, emergency response, and personal information protection.

On September 9, 2022, the CAC, the Ministry of Industry and Information Technology and SAMR jointly promulgated the Administrative Provisions on Internet Pop-Up Window Information Push Services, which took effect on September 30, 2022. According to these administrative provisions, the internet pop-up window information pushing service providers shall fulfill their responsibilities as subjects of information content administration, and establish and improve their management systems for information content review, ecological governance, data security and personal information protection and minor protection.

#### *Regulations Related to Mobile Internet Applications Information Services*

The mobile internet applications are specially regulated by the Administrative Provisions on Mobile Internet Applications Information Services, which were promulgated by the Cyberspace Administration of China, or the CAC, on June 14, 2022 and became effective on August 1, 2022. These administrative provisions set forth the relevant requirements on the mobile internet application information service providers. The CAC and local offices of cyberspace administration shall be responsible for the supervision and administration of nationwide and local mobile internet application information, respectively.

The mobile internet application information service providers shall satisfy relevant qualifications required by laws and regulations, carry out the information security management responsibilities strictly and fulfill their obligations in various aspects relating to authentic identity information certification, protection of users' information, examination and management of information content, as follows: (i) shall authenticate the identity information of the registered users including their mobile phone number, identity card number, uniform social credit number and other identity information; (ii) shall fulfill data security protection obligations, establish and perfect the whole-process data security management, take technical measures and other security measures to ensure data security and strengthen risk monitoring and shall not harm national security and public interest or damage the legitimate rights and interests of others; (iii) while handling personal information, shall follow the principles of legality, legitimacy, necessity and integrity, have clear and reasonable purposes, disclose processing rules, comply with relevant provisions on the scope of necessary personal information, regulate personal information processing activities, and take necessary measures to protect the security of personal information, and shall not force users to agree on the processing of personal information for any reason or refuse users' use of its basic functions and services due to users' disagreement on providing non-essential personal information; (iv) shall establish and perfect the mechanism for the examination and management of information content, establish and perfect the management measures for user registration, account management, information examination, routine inspection, and emergency response, and have professionals and technical capabilities commensurate with the scale of services; (v) shall not induce users to download the mobile internet application by false publicity, bundled download, and other behavior, through automatic or manual ranking and views inflating, review control and other methods, or by using illegal and harmful information; (vi) shall immediately take remedial measures, notify users in a timely manner, and report to competent department according to the provisions when risks of the mobile internet application such as security defects and vulnerabilities has been found. (vii) shall insist on the principle that is most beneficial to minors, pay attention to the healthy growth of minors, fulfill various obligations of network protection for minors, and strictly implement the requirements for registration and login of minors' user accounts with real identity information according to the law, and shall not provide minor users with related products and services that induce their addiction in any form or produce, copy, publish, or spread any information containing content that harms the physical and mental health of minors; (viii) shall conduct security assessment in accordance with relevant provisions when new technologies, a new mobile internet application, and new functions with public opinion attributes or social mobilization capabilities are launched; and (ix) shall, in accordance with the laws and regulations and the relevant rules of the state, develop and disclose management rules, and enter into service agreements with registered users to specify the relevant rights and obligations of both parties.

On November 28, 2019, the Secretary Bureau of the Cyberspace Administration of China, the Ministry of Industry and Information Technology, the Ministry of Public Security and the SAMR jointly promulgated the Measures for the Determination of the Collection and Use of Personal Information by Mobile Internet Applications in Violation of Laws and Regulations, which came into effect on the same day. The Measures explicitly classify acts that may be determined as "failing to make public the collection and use rules," "failing to explicitly show the purposes, methods and scope of the collection and use of personal information," "failing to collect and using personal information with a user's consent," "collecting personal information unrelated to the services it provides against the necessary principle" and "providing personal information to others without consent."

On July 21, 2024, the Ministry of Industry and Information Technology promulgated the Notice on the Filing of Mobile Internet Applications, which came into effect on the same day. The notice requires the mobile application developers that engage in internet information services to fulfill the filing procedure with the local branch of the Ministry of Industry and Information Technology and publish their filing number in a prominent position of the mobile applications and link the URL of the filing system below the filing number for public inquiry and verification.

#### *Real-name Registration System*

Pursuant to the Provisions on Administration over the Internet User Public Account Information Services, which was promulgated by the State Internet Information Office on September 7, 2017 and became effective on October 8, 2017 and amended on February 22, 2021, the network platforms providing the services of registration of the Internet user accounts shall conduct real identity verification over the registered users and require providing the identity information and mobile phone number. If a user fails to provide real identity information, the network platforms shall not provide the information release services to such user.

#### *Online Music and Entertainment*

On November 20, 2006, the Ministry of Culture issued Several Suggestions of the Ministry of Culture on the Development and Administration of Internet Music, which became effective on the same date. These suggestions, among other things, reiterate the requirement for an internet service provider to obtain an Internet Culture Operation License to carry out any business relating to internet music products. In addition, foreign investors are prohibited from operating internet culture businesses. However, the laws and regulations on internet music products are still evolving, and there have not been any provisions clarifying whether music products will be regulated by these suggestions or how such regulation would be carried out.

On October 23, 2015, the Ministry of Culture promulgated the Notice on Further Strengthening and Improving the Content Management of Online Music, which stipulated that operating entities shall carry out self-examination in respect of the content management of online music, which shall be regulated by the cultural administration departments in process or afterwards.

Guangzhou Huaduo holds a valid Internet Culture Operation License covering our provision of online music. Most of the music offered on our websites is sung by grassroots performers along with recorded music. If any music provided through our platforms is found to lack necessary filings and/or approvals, we could be requested to cease providing such music or be subject to claims from third parties or penalties from the Ministry of Culture or its local branches. See “Item 3. Key Information—D. Risk Factors—Risks Related to Our Corporate Structure—If the variable interest entities fail to obtain and maintain the requisite licenses and approvals required under the complex regulatory environment for internet-based businesses in mainland China, our business, financial condition and results of operations in mainland China may be adversely affected.” Moreover, the unauthorized posting of online music on our platforms by third parties may expose us to the risk of administrative penalties and intellectual property infringement lawsuits. See “Item 3. Key Information—Item 3. D. Risk Factors—Risks Related to Our Business and Industry—We may face significant risks related to the content, information, communications and other activities on our platforms.” and “—Mainland China Regulations—Intellectual Property Rights—Copyright.”

In 2011, the Ministry of Culture greatly intensified its regulation of the provision of online music products. According to the series of Notices on Clearing Online Music Products that are in Violation of Relevant Regulations promulgated by the Ministry of Culture since January 7, 2011, entities that provide any of the following will be subject to relevant penalties or sanctions imposed by the Ministry of Culture: (a) online music products or relevant services without obtaining corresponding qualifications, (b) imported online music products that have not passed the content review of the Ministry of Culture or (c) domestically developed online music products that have not been filed with the Ministry of Culture. Thus far, we believe that we have eliminated from our platforms any online music products that may fall into the scope of those prohibited online music products thereunder.

#### *Online Transmission of Audio-Visual Programs*

According to the Administrative Provisions on Private Network and Targeted Publication of Audio-Visual Programs Services, which was promulgated by the State Administration of Press, Publication, Radio, Film and Television on April 25, 2016 and put into effect on June 1, 2016 and amended on March 23, 2021, to engage in the transmission and distribution of audio-visual programs, a License for the Online Transmission of Audio-Visual Programs is required. Foreign invested enterprises are not allowed to carry out such business.

To further regulate the provision of audio-visual program services to the public via the internet, including through mobile networks, within the territory of mainland China, the State Administration of Radio, Film and Television and the Ministry of Industry and Information Technology jointly promulgated the Administrative Provisions on Internet Audio-Visual Program Service, or the Audio-Visual Program Provisions, on December 20, 2007, which came into effect on January 31, 2008 and subsequently amended on August 28, 2015. Providers of internet audio-visual program services are required to obtain a License for Online Transmission of Audio-Visual Programs issued by the State Administration of Radio, Film and Television, or complete certain registration procedures with the State Administration of Radio, Film and Television. In general, providers of internet audio-visual program services must be either state-owned or state-controlled entities, and the business to be carried out by such providers must satisfy the overall planning and guidance catalog for internet audio-visual program service determined by the State Administration of Radio, Film and Television. On March 30, 2009, the State Administration of Radio, Film and Television promulgated the Notice on Strengthening the Administration of the Content of Internet Audio-Visual Programs, which reiterates the pre-approval requirements for the audio-visual programs transmitted via the internet, including through mobile networks, where applicable, and prohibits certain types of internet audio-visual programs containing violence, pornography, gambling, terrorism, superstition or other similarly prohibited elements.

The Internet Audio-visual Program Services Categories (Provisional), or the Provisional Categories issued by the State Administration of Radio, Film and Television on March 17, 2010 and subsequently revised on March 10, 2017 classified internet audio-visual program services into four categories.

Administrative Measures for the Business Activities of Online Performances was promulgated by the Ministry of Culture on December 2, 2016 and became effective on January 1, 2017, regulating that the entity engaging in the operation of online performances shall establish content review system, and be staffed with qualified reviewers for self-censorship. Pursuant to these administrative measures, online performances shall not contain any illegal elements set forth in these administrative measures. Once the online performances in violation of laws are found, the entity engaging in the operation of online performances shall immediately suspends the provision of such performance, and report relevant information to the authorized governmental departments.

Guangzhou Huaduo holds a valid License for Online Transmission of Audio-Visual Programs with the business classification of converging and play-on-demand service for certain kinds of audio-visual programs-literary, artistic and entertaining-as prescribed in the Provisional Categories.

#### *Regulation on Production and Broadcast of Online Short Dramas*

In August 2020, the State Administration of Radio and Television added a module for rapid registration and filing for online short micro dramas in the Key Online Film and Television Dramas Information Filing System. On November 2, 2020, the General Office of the State Administration of Radio and Television promulgated the Circular on Issues Relating to the Audit of the Content of Micro Short Dramas in Online Film and Television Dramas, which further clarifies the definition of online short dramas, the review standards, review details and puts online short dramas under the administrative departments of radio and television's supervision.

On April 29, 2022, the General Office of the State Administration of Radio and Television promulgated the Notice on Matters Relating to the Administration of Licensing Services for the Distribution of Domestic Online Dramas and Films, which came into effect on June 1, 2022. According to the notice, License for Online Dramas Distribution is a prerequisite for the distribution and broadcast of online dramas, online micro short dramas, online movie and online animation under certain circumstances, such as, among others, the investment amount of the online short dramas is large, the online short dramas are recommended on the homepage, special sections or special columns of the website, or the audience shall pay for the online short dramas watching.

On November 14, 2022, the State Administration of Radio and Television promulgated the Notice on Further Strengthening the Management of Online Micro Short Dramas and Implementing the Creative Enhancement Plan, which came into effect on the same day. According to the notice, the entities operating online micro short drama services, including the micro short dramas Mini Program, shall obtain a License for Online Transmission of Audio-Visual Programs. All online micro short dramas shall pass the content examination by the administrative departments of radio and television and obtain the License for Online Drama Distribution or complete the filing of online audio-visual programs in accordance with the relevant management regulations of the online dramas prior to broadcasting, including through Mini Program. For the mini programs micro short dramas that do not hold the License for Online Transmission of Audio-Visual Programs or regulated by the administrative departments of radio and television, or the micro short dramas uploaded by individual users, the online platforms shall perform the responsibility as an operator or the production institutions to access, distribute, link, aggregate and disseminate such online micro short dramas. The online platforms shall implement the management system of online micro short dramas, reviewing before broadcasting, and immediately implement measures such as disconnecting the link, taking offline, and stopping the access for illegal online micro short dramas. The notice further stipulates that the illegal online micro short dramas could be subject to the order to rectify or take offline by the administrative departments of radio and television. The operators or mini programs broadcasting the illegal online micro short dramas could be subject to penalties such as disconnecting the link, taking offline, taking down, canceling the recordation, stopping the access, revocation of license, and joint disciplinary measures.

#### *Regulation on Advertising Business and Conditions on Foreign Investment*

The SAMR is the primary governmental authority regulating advertising activities in mainland China. Regulations that apply to advertising business primarily include:

- Advertisement Law of the People's Republic of China, promulgated by the Standing Committee of the National People's Congress on October 27, 1994 and amended on April 24, 2015 which became effective since September 1, 2015, on October 26, 2018 and on April 29, 2021, respectively;
- Administrative Regulations for Advertising, promulgated by the State Council on October 26, 1987 and effective since December 1, 1987.

According to the above regulations, companies that engage in advertising activities must each obtain, from the SAMR or its local branches, a business license which specifically includes operating an advertising business in its business scope. An enterprise engaging in advertising business within the specifications in its business scope does not need to apply for an advertising operation license, provided that such enterprise is not a radio station, television station, newspaper or magazine publisher or any other entity otherwise specified in the relevant laws or administrative regulations. Enterprises conducting advertising activities without such license may be subject to penalties, including fines, confiscation of advertising income and orders to cease advertising operations. The business license of an advertising company is valid for the duration of its existence, unless the license is suspended or revoked due to a violation of any relevant laws or regulations.

Advertisers, advertising agencies, and advertising distributors are required to ensure that the content of the advertisements they prepare or distribute is true and in complete compliance with applicable laws. In providing advertising services, advertising operators and advertising distributors must review the supporting documents provided by advertisers for advertisements and verify that the content of the advertisements complies with applicable PRC laws and regulations. Prior to distributing advertisements that are subject to government censorship and approval, advertising distributors are obligated to verify that such censorship has been performed and approval has been obtained. Violation of these regulations may result in penalties, including fines, confiscation of advertising income, orders to cease dissemination of the advertisements and orders to publish an advertisement correcting the misleading information. Where serious violations occur, the SAMR or its local branches may revoke such offenders' business licenses.

On February 25, 2023, the SAMR promulgated the Internet Advertisement Management Measures, which came into effect on May 1, 2023. The Internet Advertisement Management Measures further enhances the oversight over internet advertising activities covering all commercial advertising activities within mainland China for direct or indirect introduction of products or services via websites, web pages, internet apps and other internet media in the form of text, pictures, audio, video or other forms.

### *Regulation on Customs and Goods Export and Import*

The Customs Law of the PRC was promulgated by the PRC National People's Congress on January 22, 1987 and came into effect on July 1, 1987, as last amended on April 29, 2021. Pursuant to the Customs Law, unless otherwise provided, the import and export goods shall be declaration by consignees and consignors themselves, or by their entrusted customs clearance agencies. In addition, the consignor or consignee of the goods exported or imported and the customs declaration enterprise shall fulfill recordation formalities for customs declaration. Failure to apply for recordation with relevant authorities may result in fines by the Customs. However, pursuant to the Announcement of Including the Recordation of Customs Declaration Entities in the Certificates Integrating Reform promulgated jointly by the GAC and the SAMR in December 20, 2021 which came into effect on January 1, 2022, application for recordation of the customs declaration entity is incorporated into the business registration with the market administration authority. Enterprises are not required to file another recordation application to the customs.

In addition, according to the Measures for the Recordation and Registration of Foreign Trade Operators promulgated by the Ministry of Commerce on June 25, 2004 and amended respectively on August 18, 2016, November 30, 2019, and May 10, 2021, a foreign trade operator who engages in the import and export of goods shall go through the formalities for recordation and registration with the Ministry of Commerce or an authority authorized by the Ministry of Commerce. If a foreign trade operator fails to go through the aforesaid formalities for recordation and registration, the customs shall refuse to handle the declaration and clearance procedures of its imports and exports.

### *Intellectual Property Rights*

#### Software

The State Council and the National Copyright Administration have promulgated various rules and regulations relating to protection of software in mainland China. According to these rules and regulations, software owners, licensees and transferees may register their rights in software with the copyright administration department of the State Council or its local branches and obtain software copyright registration certificates. Although such registration is not mandatory under PRC law, software owners, licensees and transferees are encouraged to go through the registration process and registered software rights to be entitled to better protections. For the number of software programs for which we had registered rights as of December 31, 2023, see "Item 4. Information on the Company—B. Business Overview—Intellectual Property."

#### Patents

The National People's Congress adopted the Patent Law of the People's Republic of China in 1984 and amended it in 1992, 2000, 2008 and 2020, respectively. The most recently amended Patent Law of the People's Republic of China came into force on June 1, 2021. A patentable invention, utility model or design must meet three conditions: novelty, inventiveness and practical applicability. The Patent Office under the State Intellectual Property Office is responsible for receiving, examining and approving patent applications. According to the Patent Law of the People's Republic of China, a patent is valid for a twenty-year term for an invention, a ten-year term for a utility model and a fifteen-year term for design, starting from the application date. Except under certain specific circumstances provided by law, any third-party user must obtain consent or a proper license from the patent owner to use the patent, or else the use will constitute an infringement of the rights of the patent holder. For the number of patents we had and the number of patent applications we made as of December 31, 2023, see "Item 4. Information on the Company—B. Business Overview—Intellectual Property."

#### Copyright

The most recently amended Copyright Law came into effect on June 1, 2021. The Copyright law covers internet activities, products disseminated over the internet and software products, among the subjects entitled to copyright protections. Registration of copyright is voluntary, and is administrated by the China Copyright Protection Center.

To further clarify some key internet copyright issues, on December 17, 2012, the PRC Supreme People's Court promulgated the Regulation on Several Issues Concerning Applicable Laws on Trial of Civil Disputes over the Infringement of Information Network Transmission Right, or the Information Network Transmission Right Infringement Regulation. The Information Network Transmission Right Infringement Regulation took effect on January 1, 2013. The Information Network Transmission Right Infringement Regulation was amended on December 29, 2020 and came into effect on January 1, 2021. Under the Information Network Transmission Right Infringement Regulation, where an internet information service provider works in cooperation with others to jointly provide works, performances, audio and video products of which the right holders have information network transmission right, such behavior will constitute joint infringement of third parties' information network transmission right, and the PRC court shall order such internet information service provider to assume joint liability for such infringement. The PRC court shall determine whether an internet information service provider is liable for abetting or contributory infringement according to its findings on the degree of fault of the internet information service provider. The fault of the internet information service provider is determined according to various criteria, including situations where such provider knew or should have known of the network user's infringement against third party's information network transmission right. If an internet information service provider can prove that it has only provided network services through automatic access, automatic transmission, data storage space, search functions, links, document sharing technology, etc., and thereby argues that it has not been involved in any alleged joint infringement, the PRC court shall find in favor of such internet information service provider. If an internet information service provider fails to take necessary measures, the PRC court shall find that it acknowledges such infringement.

Under the Copyright Law and its implementation rules, anyone infringing upon the copyrights of others is subject to various civil liabilities, which include stopping the infringement, eliminating the damages, apologizing to the copyright owners and compensating the copyright owners for such owners' actual or the income received by the offender as a result of the copyright infringement; or if such actual loss or income is in itself difficult to calculate, the relevant PRC court may decide the amount of the actual loss up to RMB5,000,000 for each infringement.

An internet information service operator may be subject to cease-and-desist orders and other administrative penalties such as confiscation of illegal income and fines, if it is clearly aware of a copyright infringement through the internet or, although not aware of such infringement, it fails to take measures to remove relevant content upon receipt of the copyright owner's notice of infringement and, as a result, damages public interests.

On May 18, 2006, the State Council issued the Protection of the Right of Communication through Information Network, which took effect on July 1, 2006 and amended on January 30, 2013. Under this regulation, an internet information service provider may be exempt from indemnification liabilities under the certain circumstances.

We have adopted measures to mitigate copyright infringement risks. For instance, we have established a routine reporting and registration system that is updated on a monthly basis, and we require performers, channel owners and users to acknowledge and agree that (a) they would not perform or upload copyrighted content without proper authorization and (b) that they will indemnify us for any relevant copyright infringement claims in relation to their activities on our platforms.

If, despite these precautions, such procedures fail to effectively prevent unauthorized posting or use of copyrighted content or the infringement of other third-party rights on our platforms, and the PRC courts find that certain safe harbor exemptions under PRC laws are not applicable to us because, for instance, a court finds that we knew or should have known about such infringement or that we have directly derived economic benefits from allowing such infringement activities on our platforms, we may be held jointly and severally liable with the performers, channel owners or other infringement parties in lawsuits initiated by the relevant third-party copyright holders or authorized users. See "Item 3. Key Information—D. Risk Factors—Risks Related to Our Business and Industry—We have been and may be subject to intellectual property infringement, misappropriation or other claims or allegations in multiple jurisdictions, which could result in our payment of substantial damages, penalties and fines, removal of relevant content from our website or seeking license arrangements which may not be available on commercially reasonable terms."

## Domain Name

The Measures for Administration of Domain Names, or the Domain Name Measures, was promulgated by the Ministry of Industry and Information Technology on August 24, 2017 and became effective on November 1, 2017. The Ministry of Industry and Information Technology is the major regulatory authority responsible for the administration of the PRC Internet domain names. The registration of domain names in PRC is on a “first-apply-first-registration” basis. A domain name applicant will become the domain name holder upon the completion of the application procedure. For the number of domain names we registered as of December 31, 2023, see “Item 4. Information on the Company—B. Business Overview—Intellectual Property.”

## Trademark

The PRC Trademark Law, adopted in 1982 and amended in 1993, 2001, 2013 and 2019, with its implementation rules adopted in 2002 and amended in 2014, protects registered trademarks. The Trademark Office of the State Administration for Industry and Commerce (currently known as the Trademark Office of National Intellectual Property Administration) handles trademark registrations and grants a protection term of ten years to registered trademarks. Trademark license agreements must be filed with the Trademark Office for record. For the number of trademarks we had and trademark applications we had made as of December 31, 2023, see “Item 4. Information on the Company—B. Business Overview—Intellectual Property.”

## *Internet Infringement*

On May 28, 2020, the National People’s Congress of the People’s Republic of China promulgated the PRC Civil Code, which became effective on January 1, 2021. Under the Civil Code, an internet user or an internet service provider that infringes upon the civil rights or interests of others through using the internet assumes tort liability. If an internet user infringes upon the civil rights or interests of another through using the internet, the person being infringed upon has the right to notify and request the internet service provider to take necessary measures including the deletion, blocking or disconnection of an internet link. If, after being notified, the internet service provider fails to take necessary measures in a timely manner to end the infringement, it will be jointly and severally liable for any additional harm caused by its failure to act.

## *Regulation of Internet Content*

The PRC government has promulgated measures relating to internet content through a number of governmental agencies, including the Ministry of Industry and Information Technology, the Ministry of Culture and the General Administration of Press and Publication. These measures specifically prohibit internet activities that result in the publication of any content which is found to contain, among others, propagate obscenity, gambling or violence, instigate crimes, undermine public morality or the cultural traditions of the PRC, or compromise state security or secrets. If an ICP License holder violates these measures, its ICP License may be revoked and its websites may be shut down by the relevant government agencies.

On December 15, 2019, the Cyberspace Administration of China promulgated the Provisions of Ecological Governance of Internet Information Content, which came into effect on March 1, 2020. Under these provisions, an internet information content platform shall set up the mechanism of ecological governance of internet information content, develop the detailed rules for ecological governance of the internet information content on the platform and improve the systems of user registration, account management, information release and examination, etc. The platform shall set up the person in charge of the ecological governance of internet information content, equip itself with the professional personnel commensurate with the business scope and service scale, strengthen training and examination and improve the quality of practitioners, set up convenient channels for filing complaints and reports in prominent places and publish the ways of filing complaints and reports, and compile an annual report on the ecological governance of network information content. If an internet information content platform violates the provisions, the cyberspace authorities shall hold interviews, give warnings, order it to suspend information update, take measures including restricting it from engaging in internet information services, and impose online behavior restrictions and industry bans.

*Information Security and Censorship*

Internet content in mainland China is regulated and restricted from a state security standpoint. The Decisions on Maintaining Internet Security which was enacted by the Standing Committee of the PRC National People's Congress in December 2000 and amended in August 2009, may subject violators to criminal punishment in mainland China for any effort to: (i) gain improper entry into a computer or system of strategic importance; (ii) disseminate politically disruptive information; (iii) leak state secrets; (iv) spread false commercial information; or (v) infringe intellectual property rights.

Internet companies in mainland China are required to complete security filing procedures and regularly update information security and censorship systems for their websites with local public security bureau. The PRC Law on Preservation of State Secrets, which became effective on October 1, 2010 requires an internet information services providers to discontinue disseminating any information that may be deemed to be leaked state secrets and to report such incidents in a timely manner to the state security and public security authorities. Failure to do so in a timely and adequate manner may subject the internet information services providers to liability and certain penalties given by the Ministry of State Security, the Ministry of Public Security and/or the Ministry of Industry and Information Technology or their respective local branches.

On June 22, 2007, the Ministry of Public Security, the State Secrecy Bureau, the State Cipher Code Administration and the Information Office of the State Council jointly promulgated the Circular on Printing and Distributing the Administrative Measures for the Graded Protection of Information Security. According to this circular, the security protection grade of an information system may be classified into five grades. To newly build an information system of Grade II or above, its operator or user shall, within 30 days after it is put into operation, handle the record-filing procedures at the local public security organ at the level of municipality divided into districts or above of its locality.

The Cyber Security Law, issued by the Standing Committee of the National People's Congress on November 7, 2016 and became effective on June 1, 2017, emphasizes the implementation of classified protection with respect to Internet security. According to the Cyber Security Law, internet operators shall fulfill relevant mandatory security protection obligations.

The Administration Measures on the Security Protection of Computer Information Network with Internationally Connections, which was issued by the Ministry of Public Security in December 1997, and amended on January 8, 2011, prohibits using the internet in ways which, among others, result in a leakage of state secrets or a spread of socially destabilizing content. The Ministry of Public Security has supervision and inspection powers in this regard, and relevant local security bureaus may also have jurisdiction. If an ICP license holder violates these measures, the PRC government may revoke its ICP license and shut down its websites.

On December 28, 2012, the Standing Committee of the National People's Congress reiterated relevant rules on the protection of internet information by issuing the Decision on Strengthening the Protection of Network Information. This decision distinctly clarified certain relevant obligations of the internet information service provider. Once it discovers any transmission or disclosure of information prohibited by the relevant laws and regulations, the internet information service provider shall stop transmission of such information, take measures such as elimination, keeping relevant record, and reporting to relevant authorities.

On June 14, 2022, the CAC promulgated the Provisions on the Administration of Mobile Internet Applications Information Services, which came into effect on August 1, 2022. According to these provisions, mobile internet application providers and internet application distribution platforms shall not use mobile internet applications to carry out illegal activities that endanger national security, disturb public order, and infringe upon others' lawful rights and interests, shall perform the main responsibility for information content management, establish and improve management systems for information content security management, information content ecological governance, network data security, personal information protection, and minors protection to ensure information content security.

On July 12, 2021, the Ministry of Industry and Information Technology, the CAC and the Ministry of Public Security jointly issued the Notice on Issuing the Provisions on the Management of Security Vulnerabilities of Network Products, which requires that, among others, no organization or individual may use network product security vulnerabilities to engage in activities that endanger network security, and may not illegally collect, sell, or publish network product security vulnerability information, and network product providers, network operators and network product security vulnerability collection platforms shall establish and improve network product security vulnerability information receiving channels and keep them open, and keep network product security vulnerability information receiving logs for no less than six months.

The Opinions on Further Compacting the Main Responsibility of the Website Platform on Information Content Management, issued by the CAC on September 15, 2021, further regulates the content and quality of the information, further requires the website platform to improve the content review mechanism, and strictly prohibits websites and platforms from producing and disseminating illegal information and require websites and platforms be responsible for determining how information content is displayed and shall ensure the security of information content. In addition, the website platform shall improve the manual content review system, further expand the scope of manual review, refine the review standards, improve the review process and ensure the quality of review. A dynamic update mechanism for the sample database of illegal and non-compliant information and a hierarchical classification system shall be established and regularly enriched and expanded to improve the efficiency and quality of technical review.

On September 17, 2021, the CAC and several other administrations jointly promulgated the Guiding Opinions on Strengthening the Comprehensive Governance of Network Information Service Algorithms. According to these opinions, enterprises shall establish an algorithm security accountability system and a system for the review of scientific and technological ethics, enhance the organizational structure for algorithm security, intensify efforts in the prevention of risks and the handling of risks, and increase the capacity and level in handling algorithm security emergencies. Enterprises shall also raise their awareness of responsibility and assume primary responsibilities for outcomes caused by the application of algorithms. On December 31, 2021, the CAC, together with the Ministry of Industry and Information Technology, the Ministry of Public Security and the SAMR, jointly issued the Administrative Provisions on Algorithm Recommendation of Internet Information Services, with effect from March 1, 2022, which provides that algorithm recommendation service providers are not allowed to use algorithms to register false user accounts, block information, give excessive recommendations, and that users should be given the option to easily turn off algorithm recommendation services.

In June 2021, the Standing Committee of the National People's Congress promulgated the PRC Data Security Law, which took effect in September 2021. The PRC Data Security Law, among other things, provides for security review procedure for data-related activities that may affect national security.

On December 8, 2022, the Ministry of Industry and Information Technology issued the Administrative Measures for Data Security in the Industry and Information Technology Field (Trial), which took effect on January 1, 2023. According to these measures, a data processor in the field of industry and information technology shall file its catalogue of important data and core data to the local industrial regulatory department for recordation. Where there is any material change of the filing, the data processor in the field of industry and information technology shall undergo the change filing procedures within three months of such change. Important data and core data collected and produced by a data processor in the field of industry and information technology within mainland China shall be stored within mainland China, and shall conduct the security assessment if the cross-border transfer of data is necessary.

On October 9, 2023, the Ministry of Industry and Information Technology issued the Implementing Rules for the Risk Assessment of Data Security in the Field of Industry and Information Technology (Trial Implementation) (Draft for Comments). The draft implementing rules apply to the data security risk assessment activities conducted by important data and core data processors in the field of industry and information in mainland China. General data processors may also refer to these rules to conduct data security risk assessment. The draft implementing rules establish the work mechanism of data security risk assessment at the ministerial and provincial levels, refine the assessment obligations of processors of important data and core data, and clarify the mechanism and procedures for competent industrial authorities to supervise and administer such assessment activities. The draft implementing rules were released for public comments only. It is uncertain when the final provisions will be issued and take effect, how it will be enacted, interpreted and implemented, and whether or to what extent it will affect us.

To comply with the above laws and regulations, we have established an internet information security department to implement measures on information filtering. For example, we have adopted a voice monitor system, and installed on our platforms various alerts on sensitive words or abnormal activities of users, channels or groups. We also have a dedicated team that maintains 24-hour surveillance on the information posted on our platforms, with different categories for monitoring purposes, according to subject and content. We have also established and follow a strict review process and storage system of relevant records which, in combination with various information security measures, have effectively prevented the public dissemination of statutory prohibited information through our websites in the past. We intend to continue to further update our measurements and system and work closely with relevant authorities to avoid any violation of relevant laws and regulations in the future.

*Privacy Protection*

Pursuant to the Decision on Strengthening the Protection of Online Information issued by the Standing Committee of the National People's Congress on December 28, 2012 and the Order for the Protection of Telecommunication and Internet User Personal Information issued by the Ministry of Industry and Information Technology on July 16, 2013 and became effective on September 1, 2013, any collection and use of user personal information must be subject to the consent of the user, abide by the principles of legality, rationality and necessity and be within the specified purposes, methods and scopes. An Internet information service provider must also keep such information strictly confidential, and is further prohibited from divulging, tampering or destroying any such information, or selling or providing such information to other parties. An Internet information service provider is required to take technical and other measures to prevent the collected personal information from any unauthorized disclosure, damage or loss. Any violation of these laws and regulations may subject the Internet information service provider to warnings, fines, confiscation of illegal gains, revocation of licenses, cancellation of filings, closedown of websites or even criminal liabilities.

Pursuant to the Interpretation of the Supreme People's Court and the Supreme People's Procuratorate on Several Issues regarding Legal Application in Criminal Cases Infringing upon the Personal Information of Citizens, which was issued on May 8, 2017 and took effect on June 1, 2017, the following activities may constitute the crime of infringing upon a citizen's personal information: (i) providing a citizen's personal information to specified persons or releasing a citizen's personal information online or through other methods in violation of relevant national provisions; (ii) providing legitimately collected information relating to a citizen to others without such citizen's consent (unless the information is processed, not traceable to a specific person and not recoverable); (iii) collecting a citizen's personal information in violation of applicable rules and regulations when performing a duty or providing services; or (iv) collecting a citizen's personal information by purchasing, accepting or exchanging such information in violation of applicable rules and regulations.

In addition, according to the General Provisions of the PRC Civil Code, promulgated by the National People's Congress of the People's Republic of China on May 28, 2020, which became effective on January 1, 2021, the personal information of a natural person shall be protected. Any organization or individual needing to obtain the personal information of others shall legally obtain and ensure the security of such information, and shall not illegally collect, use, process, or transmit the personal information of other persons, nor illegally buy, sell, provide, or publish the personal information of other persons.

Pursuant to the PRC Cyber Security Law issued by the PRC National People's Congress in November 2016, effective June 2017, personal information refers to all kinds of information recorded by electronic or otherwise that can be used to independently identify or be combined with other information to identify natural persons' personal information including, but not limited to, natural persons' names, dates of birth, ID numbers, biologically identified personal information, addresses and telephone numbers, etc. The Cyber Security Law also provides that: (i) to collect and use personal information, network operators shall follow the principles of legitimacy, rightfulness and necessity, disclose their rules of data collection and use, clearly express the purposes, means and scope of collecting and using the information, and obtain the consent of the persons whose data is gathered; (ii) network operators shall neither gather personal information unrelated to the services they provide, nor gather or use personal information in violation of the provisions of laws and administrative regulations or the scopes of consent given by the persons whose data is gathered; and shall dispose of personal information they have saved in accordance with the provisions of laws and administrative regulations and agreements reached with users; (iii) network operators shall not divulge, tamper with or damage the personal information they have collected, and shall not provide the personal information to others without the consent of the persons whose data is collected. However, if the information has been processed and cannot be recovered and thus it is impossible to match such information with specific persons, such circumstance is an exception.

On March 12, 2021, the CAC and other governmental authorities promulgated Necessary Personal Information Range Provisions of Common Types of Apps, effective on May 1, 2021, which specify the scope of necessary personal information for common types of mobile apps.

In addition, the Identification Method of Illegal Collection and Use of Personal Information Through Apps jointly promulgated by the Secretary Bureau of the CAC, the General Office of the Ministry of Industry and Information Technology, the General Office of the Ministry of Public Security and the General Office of the SAMR in November 2019 provides guidance for the regulatory authorities to identify the illegal collection and use of personal information through mobile apps, and for the app operators to conduct self-examination and self-correction and for other participants to voluntarily monitor compliance. The Identification Method of Illegal Collection and Use of Personal Information Through Apps lists six types of acts conducted by app operators through app which may be identified as illegal, including, (i) failure to make public the rules of collection and use of personal information, (ii) failure to explicitly inform the purposes, methods and scope of collection and use of personal information; (iii) failure to obtain users' consent to collect and use their personal information; (iv) collection of personal information which is irrelevant to the services the app provides against the principle of necessity; (v) failure to obtain users' prior consent before providing users' personal information to the third parties; and (vi) failure to provide the function of deleting or correcting personal information in accordance with the laws and regulations, or failure to publish information such as ways for complaint and whistle-blowing.

On August 20, 2021, the PRC National People's Congress adopted the Personal Information Protection Law, which became effective on November 1, 2021. The Personal Information Protection Law reiterates the circumstances under which a personal information processor could process personal information and the requirements for such circumstances. The Personal Information Protection Law clarifies the scope of application, the definition of personal information and sensitive personal information, the legal basis of personal information processing and the basic requirements of notice and consent. According to the Personal Information Protection Law, where personal information is processed based on an individual's consent, such consent shall be voluntarily and explicitly given by the individual on a fully informed basis, and the individual shall have the right to withdraw his or her consent without affecting the effectiveness of personal information processing activities that have been conducted based on his or her consent before. Furthermore, the Personal Information Protection Law clarifies that personal information of minors under the age of fourteen is sensitive information, and such sensitive information may not be processed unless there are specific purposes and sufficient necessity and strict protection measures are taken.

On August 3, 2023, the CAC published for public comment the Administrative Measures for the Compliance Audit of Personal Information Protection (Draft for Comments), which stipulate the personal information processor shall carry out regular compliance audits of personal information protection by itself or entrust a specialized agency to do so.

On December 8, 2023, the CAC issued the Administrative Measures for Cybersecurity Incident Reporting (Draft for Comments), which require the cyber operator to promptly activate its emergency plan for disposal upon occurrence of a cybersecurity incident and report the incident to the cyberspace administration.

On November 14, 2021, the CAC published for public comment the Regulations on the Administration of Cyber Data Security (Draft for Comments), which applies to activities relating to the use of networks to carry out data processing activities within the territory of the PRC and the requirement of cyber security review, including in case of data processors who process personal information of more than one million people seeking for listing abroad. As of the date of this annual report, there are uncertainties as to whether the Regulations on the Administration of Cyber Data Security (Draft for Comments) would be further amended, revised or updated and substantial uncertainties exist with respect to the enactment timetable and final content of such drafts. On November 1, 2021, the Ministry of Industry and Information Technology published the Notice on the Implementation of Actions to Improve the Perception of Information and Communication Services, which stipulates that enterprises shall provide a list of personal information collected and a list of personal information shared with third parties, and shall display such lists in the second-level menu of the mobile internet application for users' access ("Dual Lists Obligation"). Furthermore, the Notice on the Implementation of Actions to Improve the Perception of Information and Communication Services requires certain enterprises as enumerated in its schedule to fulfill the Dual Lists Obligation by the end of 2021, but it does not provide a clear deadline for other enterprises.

On December 28, 2021, the CAC published the Revised Measures for Cyber Security Review, which became effective on February 15, 2022 and repeals the Measures for Cyber Security Review promulgated on April 13, 2020. The revised measures provide that a critical information infrastructure operator purchasing network products and services, and platform operators carrying out data processing activities, which affect or may affect national security, shall apply for cyber security review and that a platform operator with more than one million users' personal information aiming to list abroad must apply for cyber security review.

We require our users to accept a user agreement and privacy policy whereby they agree to provide certain personal information to us. PRC laws and regulations prohibit internet content providers from disclosing any information transmitted by users through their networks to any third parties without their authorization unless otherwise permitted by law. If an internet content provider violates these regulations, the Ministry of Industry and Information Technology or its local bureaus may impose penalties and the internet content provider may be liable for damages caused to its users.

*Anti-Monopoly Matters related to Internet Platform Companies*

The PRC Anti-monopoly Law, which took effect on August 1, 2008 and was amended on August 1, 2022, prohibits monopolistic conduct such as entering into monopoly agreements, abusing market dominance and concentration of undertakings that may have the effect of eliminating or restricting competition. On February 7, 2021, the Anti-monopoly Commission of the State Council officially promulgated the Guidelines to Anti-Monopoly in the Field of Internet Platforms, or the Anti-Monopoly Guidelines for Internet Platforms. Pursuant to an official interpretation from the Anti-monopoly Commission of the State Council, the Anti-Monopoly Guidelines for Internet Platforms mainly covers five aspects, including general provisions, monopoly agreements, abusing market dominance, concentration of undertakings, and abuse of administrative powers eliminating or restricting competition. The Anti-Monopoly Guidelines for Internet Platforms prohibits certain monopolistic acts of internet platforms operated in mainland China so as to protect market competition and safeguard interests of users and undertakings participating in internet platform economy, including, without limitation, prohibiting platforms with dominant position from abusing their market dominance (such as discriminating customers in terms of pricing and other transactional conditions using big data and analytics, coercing counterparties into exclusivity arrangements, using technology means to block competitors' interface, favorable positioning in search results of goods displays, using bundle services to sell services or products, compulsory collection of unnecessary user data). In addition, the Anti-monopoly Guidelines for Internet Platforms also reinforces antitrust merger review for internet platform related transactions to safeguard market competition.

*Regulation of Foreign Currency Exchange and Dividend Distribution*

**Foreign Currency Exchange.** The core regulations governing foreign currency exchange in mainland China are the Foreign Exchange Administration Regulations, as amended in August 2008. Under the Foreign Exchange Administration Regulations, the Renminbi is freely convertible for current account items, including the distribution of dividends, interest payments, trade and service-related foreign exchange transactions, but not for capital account items, such as direct investments, loans, repatriation of investments and investments in securities outside of mainland China, unless the prior approval of the SAFE is obtained and prior registration with the SAFE is made.

On March 30, 2015, SAFE issued the Circular on the Reforming of the Management Method of the Settlement of Foreign Currency Capital of Foreign-Invested Enterprises, which took effect on June 1, 2015 and was amended on December 4, 2023. Under this circular, a foreign-invested enterprise, within the scope of business, may choose to convert its registered capital from foreign currency to RMB on a discretionary basis, and the RMB capital so converted can be used for equity investments within PRC, which will be regarded as the reinvestment of foreign-invested enterprise.

SAFE promulgated the Notice of the State Administration of Foreign Exchange on Reforming and Standardizing the Foreign Exchange Settlement Management Policy of Capital Account, which came into effect on June 9, 2016 and was amended on December 4, 2023, which provides that discretionary foreign exchange settlement applies to foreign exchange capital, foreign debt offering proceeds and remitted foreign listing proceeds, and the corresponding RMB capital converted from foreign exchange are not restricted from extending loans to related parties or repaying the inter-company loans (including advances by third parties).

In January 2017, SAFE promulgated the Circular on Further Improving Reform of Foreign Exchange Administration and Optimizing Genuineness and Compliance Verification, which stipulates several capital control measures with respect to the outbound remittance of profit from domestic entities to offshore entities, including (i) under the principle of genuine transaction, banks shall check board resolutions regarding profit distribution, the original version of tax filing records and audited financial statements; and (ii) domestic entities shall hold income to account for previous years' losses before remitting the profits. Moreover, pursuant to this circular, domestic entities shall make detailed explanations of the sources of capital and utilization arrangements, and provide board resolutions, contracts and other proof when completing the registration procedures in connection with an outbound investment.

On December 4, 2023, SAFE issued the Notice on Further Deepening Reforms to Promote the Convenience of Cross-border Trade and Investment, or SAFE Notice 28, which provides that qualified high-tech, “professional, sophisticated, unique and new” and technology-based small and medium-sized enterprises in Guangdong (including Shenzhen), and certain other areas can borrow foreign debt on their own within an amount not exceeding the equivalent of US\$10 million. Additionally, SAFE Notice 28 restructured the asset realization account of capital accounts to the settlement account of capital accounts. The equity transfer consideration funds in foreign currency received by a domestic equity transferor (including institutions and individuals) from domestic parties, as well as the foreign exchange funds raised by domestic enterprises through overseas listing may be directly remitted to the settlement account of capital accounts. Funds in the settlement account of capital accounts may be settled and used at discretion. The equity transfer consideration funds received by a domestic equity transferor from foreign-invested enterprises which are paid with RMB funds derived from the settlement of foreign exchange (i.e., RMB funds derived from direct settlement of foreign exchange or from settlement account for pending payment) may be transferred directly to the RMB account of the domestic equity transferor.

**Dividend Distribution.** The principal regulations governing distribution of dividends paid by wholly foreign-invested enterprises include the PRC Company Law, promulgated in 1993 and last amended in 2023, and the Foreign Investment Law and its Implementation Rules.

Under these regulations, a wholly foreign-invested enterprise in mainland China, or a WFOE, may pay dividends only out of its accumulated profits, if any, determined in accordance with PRC accounting standards and regulations. In addition, a WFOE is required to allocate at least 10% of its accumulated profits each year, if any, to statutory reserve funds unless its reserves have reached 50% of the registered capital of the enterprises. These reserves are not distributable as cash dividends. The proportional ratio for withdrawal of rewards and welfare funds for employees shall be determined at the discretion of the WFOE. Profits of a WFOE shall not be distributed before the losses thereof before the previous accounting years have been made up. Any undistributed profit for the previous accounting years may be distributed together with the distributable profit for the current accounting year.

**Circular 37.** Pursuant to SAFE’s Notice on Relevant Issues Relating to Domestic Residents’ Investment and Financing and Round-Trip Investment through Special Purpose Vehicles, or SAFE Circular 37, issued and effective on July 4, 2014, and its appendixes, and the Notice on Further Simplifying and Improving the Administration of the Foreign Exchange Concerning Direct Investment, promulgated by SAFE in February 2015, which took effect on June 1, 2015, PRC residents, including PRC institutions and individuals, must register with qualified banks in connection with their direct establishment or indirect control of an offshore entity, for the purpose of overseas investment and financing, with such PRC residents’ legally owned assets or equity interest in domestic enterprises or offshore assets or interests, referred to in the SAFE Circular 37 as a “special purpose vehicle.” SAFE Circular 37 further requires amendment to the registration in the event of any significant changes with respect to the special purpose vehicle, such as increase or decrease of capital contributed by PRC individuals, share transfer or exchange, merger, division or other material event.

In the event that a PRC shareholder holding interests in a special purpose vehicle fails to fulfill the required SAFE registration, the PRC subsidiaries of that special purpose vehicle may be prohibited from making distributions of profit to the offshore parent and from carrying out subsequent cross-border foreign exchange activities and the special purpose vehicle may be restricted in their ability to contribute additional capital into its PRC subsidiary. Further, failure to comply with the various SAFE registration requirements described above could result in liability under PRC law for foreign exchange evasion. These regulations apply to our direct and indirect shareholders who are PRC residents and may apply to any offshore acquisitions and share transfer that we make in the future if our shares are issued to PRC residents. See “Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in Jurisdictions We Operate—Regulations of mainland China in relation to offshore investment activities by mainland China residents and direct investment and loans by offshore holding companies to entities in mainland China may delay or limit our ability to effectively use the proceeds of our offshore financing activities.”

We have completed the foreign exchange registration of PRC resident shareholders of Guangzhou Huaduo, as required by SAFE Circular 37, for our financings that were completed before the end of 2010. The SAFE Circular 37 registration in relation to the issuance of common shares to Tiger Global Six YY Holdings was completed on February 6, 2012. Our PRC resident shareholders further updated their SAFE Circular 37 registrations in March 2015 to reflect shareholding changes in our company resulting from our initial public offering.

**Stock Option Rules.** The Administration Measures on Individual Foreign Exchange Control were promulgated by the PBOC on December 25, 2006, and their Implementation Rules, issued by the SAFE on January 5, 2007, became effective on February 1, 2007 and amended on May 29, 2016. Under these regulations, all foreign exchange matters involved in employee stock ownership plans and stock option plans participated in by onshore individuals, among others, require approval from the SAFE or its authorized branch. Furthermore, pursuant to the Notices on Issues concerning the Foreign Exchange Administration for Domestic Individuals Participating in Stock Incentive Plans of Overseas Publicly-Listed Companies, which were promulgated by SAFE on February 15, 2012, PRC residents who are granted shares or stock options by companies listed on overseas stock exchanges based on the stock incentive plans are required to register with SAFE or its local branches, and PRC residents participating in the stock incentive plans of overseas listed companies shall retain a qualified PRC agent, which could be a PRC subsidiary of such overseas publicly-listed company or another qualified institution selected by such PRC subsidiary, to conduct the SAFE registration and other procedures with respect to the stock incentive plans on behalf of these participants. Such participants must also retain an overseas entrusted institution to handle matters in connection with their exercise of stock options, purchase and sale of corresponding stocks or interests, and fund transfer. In addition, the PRC agents are required to amend the SAFE registration with respect to the stock incentive plan if there is any material change to the stock incentive plan, the PRC agents or the overseas entrusted institution or other material changes. The PRC agents shall, on behalf of the PRC residents who have the right to exercise the employee share options, apply to SAFE or its local branches for an annual quota for the payment of foreign currencies in connection with the PRC residents' exercise of the employee share options. The foreign exchange proceeds received by the PRC residents from the sale of shares under the stock incentive plans granted and dividends distributed by the overseas listed companies must be remitted into the bank accounts in the PRC opened by the PRC agents before distribution to such PRC residents. In addition, the PRC agents shall file each quarter the form for record-filing of information of the Domestic Individuals Participating in the Stock Incentive Plans of Overseas Listed Companies with SAFE or its local branches.

We and our PRC citizen employees who have been granted share options, restricted shares or restricted share units are subject to the aforementioned rules. If we or our PRC optionees fail to comply with the Individual Foreign Exchange Rule and the aforementioned rules, we and/or our PRC optionees may be subject to fines and other legal sanctions. See “Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in Jurisdictions We Operate—Regulations of mainland China in relation to offshore investment activities by mainland China residents and direct investment and loans by offshore holding companies to entities in mainland China may delay or limit our ability to effectively use the proceeds of our offshore financing activities.”

In addition, the State Administration for Taxation has issued circulars concerning employee share options, under which our employees working in the PRC who exercise share options will be subject to PRC individual income tax. Our PRC subsidiaries have obligations to file documents related to employee share options with relevant tax authorities and to withhold individual income taxes of those employees who exercise their share options. If our employees fail to pay or if we fail to withhold their income taxes as required by relevant laws and regulations, we may face sanctions imposed by the PRC tax authorities or other PRC government authorities.

#### *Regulation on Tax*

##### PRC Enterprise Income Tax

The PRC enterprise income tax is calculated based on the taxable income determined under the applicable the PRC Enterprise Income Tax Law and its implementation rules. The PRC Enterprise Income Tax Law imposes a uniform enterprise income tax rate of 25% on all resident enterprises in mainland China, including foreign-invested enterprises and domestic enterprises, unless they qualify for certain exceptions. According to the PRC Enterprise Income Tax Law and relevant regulations, subject to the approval of competent tax authorities, the income tax of an enterprise that has been determined to be a high and new technology enterprise shall be reduced to a preferential rate of 15%.

Moreover, under the PRC Enterprise Income Tax Law, enterprises organized under the laws of jurisdictions outside mainland China with their “de facto management bodies” located within mainland China may be considered PRC resident enterprises and are therefore subject to PRC enterprise income tax at the rate of 25% on their worldwide income. Though the implementation rules of the PRC Enterprise Income Tax Law define “de facto management bodies” as “establishments that carry out substantial and overall management and control over the manufacturing and business operations, personnel, accounting, properties, etc. of an enterprise,” the main guidance currently available for the definition of “de facto management body” as well as the determination of offshore incorporated PRC tax resident status and its administration are set forth in the Notice Regarding the Determination of Chinese-Controlled Overseas Incorporated Enterprises as PRC Tax Resident Enterprise on the Basis of De Facto Management Bodies, or SAT Circular 82, and the Administrative Measures for Enterprise Income Tax of Chinese-Controlled Offshore Incorporated Resident Enterprises (Trial), both issued by the SAT, which provide main guidance on the administration as well as determination of the tax residency status of a Chinese-controlled offshore-incorporated enterprise, defined as an enterprise that is incorporated under the law of a foreign country or territory and that has a PRC company or PRC corporate group as its primary controlling shareholder.

According to SAT Circular 82, a Chinese-controlled offshore-incorporated enterprise will be regarded as a PRC tax resident by virtue of having its “de facto management body” in mainland China and will be subject to PRC enterprise income tax on its global income only if certain conditions set forth in SAT Circular 82 are met.

In addition, the Administrative Measures for Enterprise Income Tax of Chinese-Controlled Offshore Incorporated Resident Enterprises (Trial) provide clarification on the resident status determination, post-determination administration, and competent tax authorities.

Although we do not believe that our company should be treated as a PRC resident enterprise for PRC tax purposes, uncertainty exists as to whether we will be deemed to be such by the relevant authorities. In the event that we are considered a PRC resident enterprise, we would be subject to the PRC enterprise income tax at the rate of 25% on our worldwide income. See “Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in Jurisdictions We Operate—Under the PRC enterprise income tax law, we may be classified as a PRC ‘resident enterprise,’ which could result in unfavorable tax consequences to us and our shareholders and have a material adverse effect on our results of operations and the value of your investment.”

In addition, although the PRC Enterprise Income Tax Law provides that dividend income between “qualified resident enterprises” is exempted income, and the implementation rules refer to “qualified resident enterprises” as enterprises with “direct equity interest,” it is unclear whether dividends we receive from our PRC subsidiaries are eligible for exemption.

According to the Notice on Strengthening Administration of Enterprise Income Tax for Share Transfers by Non-PRC Resident Enterprises issued by the PRC State Administration of Taxation on December 10, 2009, with retroactive effect from January 1, 2008, or SAT Circular 698, and the Notice on Several Issues Concerning Enterprise Income Tax for Indirect Share Transfer by Non-PRC Resident Enterprises, issued by the PRC State Administration of Taxation on February 3, 2015, or SAT Circular 7, an “indirect transfer” of assets of a PRC resident enterprise, including equity interests in a PRC resident enterprise, by non-PRC resident enterprises may be re-characterized and treated as a direct transfer of PRC taxable properties, if such transaction arrangement lacks of reasonable commercial purpose and was established for the purpose of reducing, avoiding or deferring PRC enterprise income tax. As a result, gains derived from such indirect transfer may be subject to PRC enterprise income tax, and tax filing or withholding obligations may be triggered, depending on the nature of the PRC taxable properties being transferred. In respect of an indirect offshore transfer of assets of a PRC establishment or place of business of a foreign enterprise, the resulting gain is to be included with the annual enterprise filing of the PRC establishment or place of business being transferred, and would consequently be subject to PRC enterprise income tax at a rate of 25%. Where the underlying transfer relates to PRC real properties or to equity investments in a PRC resident enterprise, which is not related to a PRC establishment or place of business of a non-resident enterprise, a PRC enterprise income tax at 10% would apply, subject to available preferential tax treatment under applicable tax treaties or similar arrangements, and the party who is obligated to make the transfer payments has the withholding obligation. Where the payor fails to withhold any or sufficient tax, the transferor shall declare and pay such tax to the competent tax authority by itself within the statutory time limit. Late payment of applicable tax will subject the transferor to default interest. Currently, neither SAT Circular 698 nor SAT Circular 7 applies to transactions of sale of shares by investors through a public stock exchange where such shares were acquired from a transaction through a public stock exchange. In October 2017, SAT issued the Announcement on Issues Relating to Withholding at Source of Income Tax of Nonresident Enterprises, or SAT Circular 37, effective December 2017, superseded the Non-resident Enterprises Measures and SAT Circular 698 as a whole and partially amended some provisions in SAT Circular 7. Specifically, SAT Circular 37 provides that where the transfer income subject to withholding at source is derived by a non-PRC resident enterprise in instalments, the instalments may first be treated as recovery of costs of previous investments. Upon recovery of all costs, the tax amount to be withheld must then be computed and withheld.

We cannot assure you that the PRC tax authorities will not, at their discretion, adjust any capital gains and impose tax return filing and withholding or tax payment obligations on the transferors and transferees, while our PRC subsidiaries may be requested to assist in the filing. Any PRC tax imposed on a transfer of our shares or any adjustment of such gains would cause us to incur additional costs and may have a negative impact on the value of your investment in us.

#### Value-added Tax

The Provisional Regulations on Value-added Tax, as amended, and the Detailed Implementing Rules of the Provisional Regulations on Value-added Tax, as amended, set out that all taxpayers selling goods or providing processing, repairing or replacement labor services, sales of services, intangible assets and immovable assets and importing goods in China shall pay a value-added tax.

According to the Notice of the Ministry of Finance and the State Administration of Taxation on Adjusting Value added Tax Rates, issued on April 4, 2018 and became effective on May 1, 2018, the deduction rates of 17% and 11% applicable to the taxpayers who have value-added tax taxable sales activities or imported goods are adjusted to 16% and 10%, respectively. According to the Notice of the Ministry of Finance, the State Administration of Taxation and the General Administration of Customs on Relevant Policies for Deepening Value Added Tax Reform, issued on March 20, 2019 and became effective on April 1, 2019, the value added tax rate was reduced to 13% and 9%, respectively.

#### Cultural Development Fee

According to applicable PRC tax regulations or rules, advertising service providers are generally required to pay a cultural development fee at the rate of 3% on the revenues (a) which are generated from providing advertising services and (b) which are also subject to value-added tax after the value-added tax reform program.

#### Dividends Withholding Tax

Pursuant to the PRC Enterprise Income Tax Law and its implementation rules, dividends generated after January 1, 2008 and distributed to us by our PRC subsidiaries are subject to withholding tax at a rate of 10%, unless otherwise exempted or reduced according to treaties or arrangements between the PRC central government and governments of other countries or regions where the non-mainland-China-resident holding enterprises are incorporated.

Although we do not believe that our company should be treated as a PRC resident enterprise for PRC tax purposes. As uncertainties remain regarding the interpretation and implementation of the PRC Enterprise Income Tax Law and its implementation rules, we cannot assure you that, if we are deemed a PRC resident enterprise, any dividends to be distributed by us to our non-PRC shareholders and ADS holders would not be subject to any PRC withholding tax. See “Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in Jurisdictions We Operate—Under the PRC enterprise income tax law, we may be classified as a PRC ‘resident enterprise,’ which could result in unfavorable tax consequences to us and our shareholders and have a material adverse effect on our results of operations and the value of your investment.”

#### *Labor Laws and Social Insurance*

According to the Labor Law, as amended, and Labor Contract Law, as amended, employers must execute written labor contracts with full-time employees. All employers must compensate their employees with wages equal to at least the local minimum wage standards. All employers are required to establish a system for labor safety and sanitation, strictly comply with state rules and standards and provide employees with workplace safety training. Violations of the Labor Contract Law and the Labor Law may result in the imposition of fines and other administrative penalties. For serious violations, criminal liability may arise.

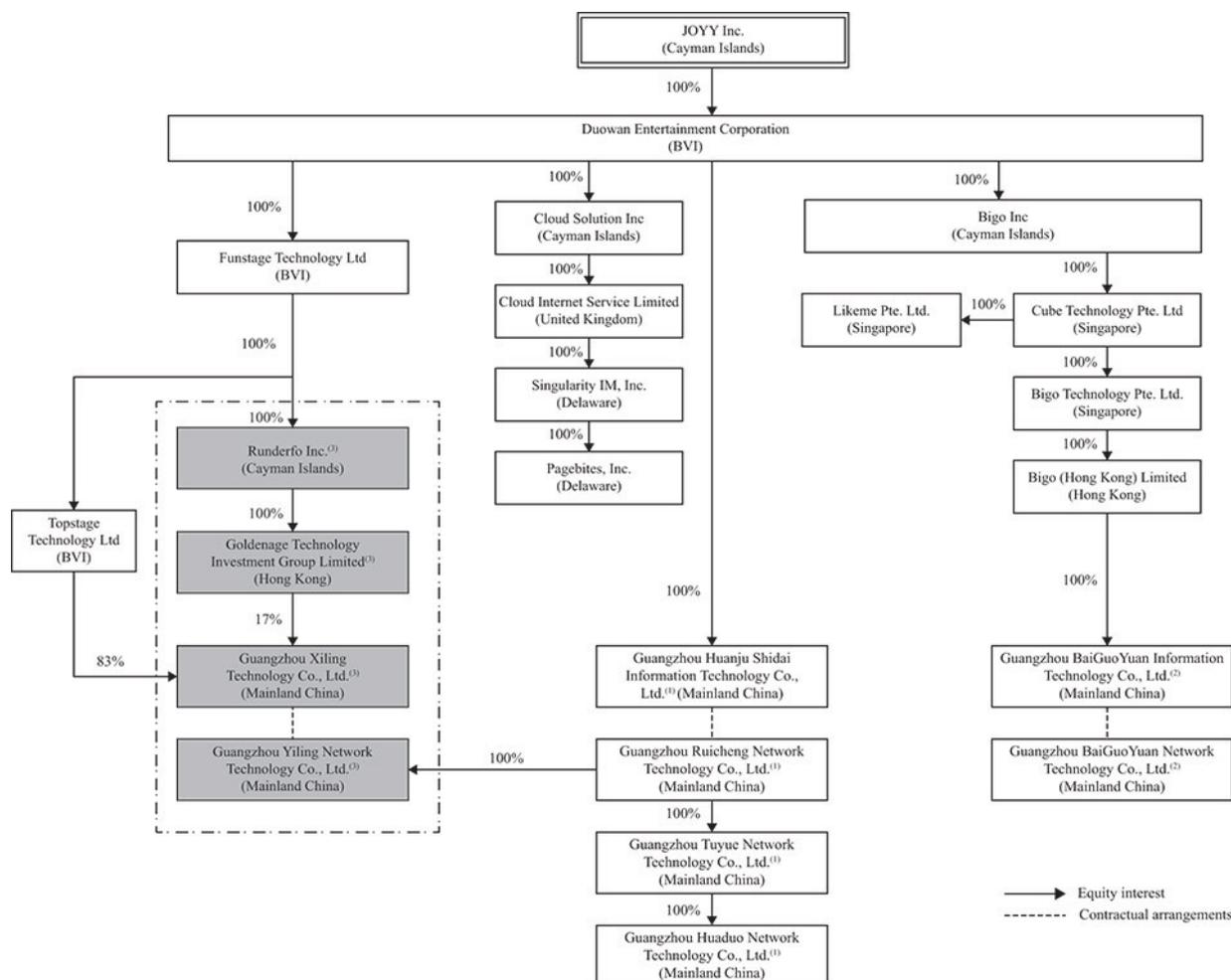
The Law on Social Insurance of the PRC, which was promulgated in October 28, 2010, effectively July 1, 2011 and amended on December 29, 2018, has consolidated pertinent provisions for basic pension insurance, unemployment insurance, maternity insurance, workplace injury insurance and basic medical insurance and has elaborated in detail the legal obligations and liabilities of employers who do not comply with relevant laws and regulations on social insurance. Pursuant to the Reform Plan for Collection and Management System of National and Local Taxes released by General Office of the Communist Party of China and the State Council on July 20, 2018, all social insurance premiums, such as basic pension insurance premium, basic medical insurance premium, unemployment insurance premium, work-related injury insurance premium and maternity insurance premium, shall be collected uniformly by the relevant tax authorities starting from January 1, 2019.

We have caused all of our full-time employees to enter into written labor contracts with us and have provided and currently provide our employees with the proper welfare and employment benefits.

### C. Organizational Structure

#### Corporate Structure

The following diagram illustrates our corporate structure as of the date of this annual report, including our significant subsidiaries and the primary operating variable interest entities and their significant subsidiaries:



- (1) Guangzhou Ruicheng is a variable interest entity with which we maintain contractual arrangements. Each of Guangzhou Yueyi Network Technology Partnership (LP) and Guangzhou Xuanyi Network Technology Partnership (LP) holds 50% of equity interest in Guangzhou Ruicheng. We also enter into contractual arrangements with the nominee shareholders of the variable interest entities and other stakeholders in order to enhance the stability and proper governance of the variable interest entities. For details, see “Item 7. Major Shareholders and Related Party Transactions—B. Related Party Transactions—VIE Structure and the Contractual Arrangements.”
- (2) Guangzhou BaiGuoYuan is a variable interest entity with which we maintain contractual arrangements. Guangzhou BaiGuoYuan is wholly owned by Guangzhou Qianxun Network Technology Co., Ltd., which is in turn owned by Guangzhou Fangu Network Technology Partnership (LP) and Guangzhou Wanyin Network Technology Partnership (LP), each holding 50% of equity interest in Guangzhou Qianxun Network Technology Co., Ltd. We also enter into contractual arrangements with the nominee shareholders of the variable interest entities and other stakeholders in order to enhance the stability and proper governance of the variable interest entities. For details, see “Item 7. Major Shareholders and Related Party Transactions—B. Related Party Transactions—VIE Structure and the Contractual Arrangements.”
- (3) These entities representing the holding/operating entities for YY Live. For the latest development in connection with YY Live, see “Item 4. Information on the Company—A. History and Development of the Company.”

#### **D. Property, Equipment and Land Use Right**

Our corporate headquarters is located in 30 Pasir Panjang Road #15-31A Mapletree Business City, Singapore 117440. We have leased office space across the globe with an aggregate area of 48,708 square meters.

The corporate headquarters of BIGO are located at the same premises in Singapore. BIGO also has local offices in the United States, the United Kingdom, Japan, South Korea, Australia, Malaysia, Indonesia, Jordan, mainland China, and many other regions. As of the date of this annual report, BIGO has leased office space with an aggregate area of 27,527 square meters. BIGO's physical servers are primarily hosted at internet data centers located in Singapore, among others.

We own the use right of several parcel of lands, and several buildings located in mainland China. We own a property located in Panyu District, Guangzhou, China, which comprises 37,548 square meters. In the second half of 2015, we acquired the use right of a parcel of land in Pazhou, Guangzhou, and started constructing the building with an aggregate floor area of approximately 142,000 square meters, which was completed in 2023. We acquired a building in Zhuhai in October 2017 as one of our branch offices, which comprises 27,206 square meters. We also acquired the use right of a parcel of land located in Foshan in April 2021. Our capital commitment in connection with the construction of buildings located on the parcels of lands to which we acquired use right was US\$170.5 million as of December 31, 2023. We currently expect to complete the planned construction in Foshan in 2026.

We believe that our existing facilities, including facilities under construction, are sufficient for our current and prospective needs in the foreseeable future and we will obtain adequate facilities, principally through leasing, to accommodate our future expansion plans.

See Notes 13 and 14 to our audited consolidated financial statements included elsewhere in this annual report for further information about our property and equipment and land use right.

#### **ITEM 4A. UNRESOLVED STAFF COMMENTS**

None.

#### **ITEM 5. OPERATING AND FINANCIAL REVIEW AND PROSPECTS**

You should read the following discussion and analysis of our financial condition and results of operations in conjunction with our consolidated financial statements and the related notes included elsewhere in this annual report. This discussion contains forward-looking statements that involve risks and uncertainties. Our actual results and the timing of selected events could differ materially from those anticipated in these forward-looking statements as a result of various factors, including those set forth under "Item 3. Key Information—D. Risk Factors" and elsewhere in this annual report.

The following discussion and analysis of our financial condition and results of operations is presented on a continuing operations basis, unless otherwise specifically stated. For the avoidance of confusion, the continuing operations for the year ended December 31, 2021, 2022 and 2023 as presented in this annual report consisted of the BIGO segment and the All others segment, and did not include YY Live. The discontinued operations reported in our consolidated financial statements included in this annual report consist of the results of YY Live from January 1, 2021 to February 8, 2021. For the latest development in connection with YY Live, see "Item 4. Information on the Company—A. History and Development of the Company."

##### **A. Operating Results**

###### **Overview**

We are a global technology company with a mission to enrich lives through technology. We operate leading online social entertainment platforms that offer live streaming, short videos, instant messaging, casual games and beyond. We also operate a global smart commerce platform that enables merchants to easily build their brands online and sell their products to customers around the world.

Today, we operate in a number of markets across the globe, including North America, Europe, the Middle East, Southeast Asia, Eastern Pacific regions and others. The global average mobile monthly active users on our social entertainment platforms reached 274.9 million in the fourth quarter of 2023, including 38.4 million of average monthly active users of Bigo Live, 39.1 million of average monthly active users of Likee, 4.6 million of average monthly active users of Hago and 192.7 million of average monthly active users of imo.

Our total net revenues amounted to US\$2.6 billion in 2021, US\$2.4 billion in 2022 and US\$2.3 billion in 2023. We recorded net loss from continuing operations attributable to common shareholders of our company of US\$125.1 million in 2021, and realized net income from continuing operations attributable to common shareholders of our company of US\$119.5 million in 2022 and US\$347.4 million in 2023.

Our business model optimizes the seamless integration of traffic generation, user engagement and monetization. While the basic functions of our platforms are currently free in order to attract traffic, we monetize our user base primarily through virtual tips for live streaming. We derived our revenues primarily from live streaming services, accounting for 94.6%, 92.3% and 87.3% of our total net revenues in 2021, 2022 and 2023, respectively. We have been exploring additional monetization opportunities and diversifying our revenue sources in order to capitalize on the large and highly-engaged user base of our platforms. We generate other revenues mainly from advertising services and e-commerce, and to a lesser extent, our online game business, memberships and other services. These other revenues collectively accounted for 5.4%, 7.7% and 12.7% of our total net revenues in 2021, 2022 and 2023, respectively.

### **Major Factors Affecting our Results of Operations**

Our business and results of operations are affected by general factors that, among others, influence the social entertainment and smart commerce industry in our target markets. Such general factors include:

- overall macroeconomic growth and users paying sentiment;
- growth of mobile internet usage and penetration rate;
- changes in user preferences;
- growth and competitive landscape of the social networking, entertainment and smart commerce industry;
- governmental regulations, policies, actions or restrictions globally and in markets where we operate; and
- fluctuations in the exchange rates of foreign currency in which the revenue we earn is denominated.

While our business and results of operations are influenced by the general factors summarized above, we believe that our results of operations are more directly affected by company-specific factors, which are mostly relevant to our live streaming business as we derived 94.6%, 92.3% and 87.3% of our total net revenues in 2021, 2022 and 2023, respectively, from our live streaming business. The specific factors that more directly affect our business and results of operations include:

- our ability to increase our popularity by offering new and attractive contents, products and services that allow us to monetize our platforms;
- our ability to attract and retain a large and engaged user base;
- our ability to attract and retain certain popular performers, agencies, channel owners and other business partners;
- changes of our business strategy, such as launching new services or products, expanding into new markets, or discontinuing services in certain markets or products; and
- our cost and expense structure, and other resources directed to our operations.

## Discussion of Selected Statements of Operations Items

### Revenues

Our live streaming revenues are primarily comprised of revenues from our social entertainment platforms, primarily including Bigo Live, Likee, Hago, imo and others. Other revenues primarily include revenues from advertising, e-commerce, online games and membership.

The following table sets forth the principal components of our total net revenues by amount and as a percentage of our total net revenues for the periods presented.

	For the Year Ended December 31,					
	2021		2022		2023	
	US\$	% of total net revenues	US\$	% of total net revenues	US\$	% of total net revenues
	(in thousands, except for percentages)					
Live streaming	2,476,790	94.6	2,225,518	92.3	1,979,371	87.3
Others	142,261	5.4	185,998	7.7	288,499	12.7
Total net revenues <sup>(1)</sup>	2,619,051	100.0	2,411,516	100.0	2,267,870	100.0

(1) Revenues are presented net of rebates and discounts.

The following table sets forth the geographic locations from which we generated our net revenues by amount and as a percentage of our total net revenues for the periods presented.

	For the Year Ended December 31,					
	2021		2022		2023	
	US\$	% of total net revenues	US\$	% of total net revenues	US\$	% of total net revenues
	(in thousands, except for percentages)					
Developed countries and regions <sup>(1)</sup>	913,947	35.0	866,107	35.8	968,225	42.7
Middle East <sup>(2)</sup>	621,775	23.7	514,992	21.4	441,277	19.5
Mainland China	440,797	16.8	473,941	19.7	347,825	15.3
Southeast Asia and others <sup>(3)</sup>	642,532	24.5	556,476	23.1	510,543	22.5
Total net revenues	2,619,051	100.0	2,411,516	100.0	2,267,870	100.0

(1) Developed countries and regions mainly include the United States of America, the Great Britain, Japan, South Korea and Australia.

(2) Middle East mainly include Saudi Arabia and other countries located in the region.

(3) Southeast Asia and others mainly include countries located in Southeast Asia and India.

*Live streaming revenues.* We generate live streaming revenues from the sales of virtual items that can be gifted to streamers on our live streaming platforms. Users access content on our platforms free of charge, but are charged for purchases of virtual items.

The most significant factors that directly affect our live streaming revenues include the number of our paying users and average revenue per paying user, or ARPU. Our management regularly monitor these operating metrics, which are important and direct performance indicators, in managing our live streaming business and in making relevant operational and production decisions.

- *The number of paying users.* In 2023, we had 3.9 million paying users for our live streaming services on Bigo Live, Likee and imo. We calculate the number of paying users during a given period as the cumulative number of registered user accounts that have purchased virtual items or other products and services on the above-mentioned platforms at least once during the relevant period.

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- *ARPU.* ARPU is calculated by dividing our total revenues from live streaming on Bigo Live, Likee and imo during a given period by the number of paying users for our live streaming services on the above-mentioned platforms for that period. As we begin to generate revenues from an increasing variety of live streaming services, our ARPU may fluctuate from period to period due to the mix of live streaming services purchased by our paying users. In 2023, our ARPU for live streaming was US\$403.

We create and offer to users virtual items that can be used on various channels. Users can purchase consumable virtual items from us to show support for their favorite performers or time-based virtual items that provide users with recognized status, such as priority speaking rights or special symbols on the music and entertainment channels.

*Other revenues.* We generate other revenues mainly from advertising services, and to a lesser extent, our online game business and memberships.

- *Advertising revenues.* Advertising revenues were generated from sales of various forms of advertising and provision of promotion campaigns on our live streaming platforms.
- *E-commerce business revenues.* We operate several e-commerce platforms providing service solutions for merchants, including a global smart commerce platform that enables merchants to easily build their brands online and sell their products to users around the world.
- *Online games revenues.* We generate online games revenues from the sales of in-game virtual items used for games developed by us or by third parties under revenue-sharing arrangements on our platforms. Users play online games free of charge, but are charged for purchases of virtual items. The online games we currently offer are primarily web games that can be run from an internet browser and require an internet connection to play.
- *Membership revenues.* We generate membership revenues from the membership subscription fees paid by our users. In our membership program, users pay a flat monthly subscription fee in order to become members, and in exchange, we give them access to various privileges and enhanced features on our channels, including virtual items exclusively available to members, dedicated customer services and priority entrance to certain live performances.

### **Cost of Revenues**

Cost of revenues consists primarily of (i) revenue sharing fees and content costs including payments to various channel owners and performers, and content providers, (ii) bandwidth costs, (iii) payment handling costs, (iv) salary and welfare, (v) technical service fee, (vi) depreciation and amortization expense for servers, other equipment and intangibles directly related to operating the platform, (vii) share-based compensation, (viii) other taxes and surcharges, and (ix) other costs.

### **Operating Expenses**

Our operating expenses consist of (i) research and development expenses, (ii) sales and marketing expenses, (iii) general and administrative expenses, and (iv) goodwill impairment.

#### *Research and Development Expenses*

Research and development expenses consist primarily of (i) salary and welfare for research and development personnel, (ii) share-based compensation for research and development personnel, (iii) depreciation of office premises and servers utilized by research and development personnel, and (iv) rental expenses. Costs incurred during the research stage are expensed as incurred.

#### *Sales and Marketing Expenses*

Sales and marketing expenses consist primarily of (i) advertising and promotion expenses, (ii) amortization of intangible assets from business acquisition, and (iii) salary and welfare for sales and marketing personnel.

[Table of Contents](#)*General and Administrative Expenses*

General and administrative expenses consist primarily of (i) salary and welfare for general and administrative personnel, (ii) share-based compensation for management and administrative personnel, (iii) impairment charge, and (iv) professional service fees.

*Share-based Compensation Expenses*

We grant stock-based awards, such as share options, restricted shares, restricted share units to eligible employees, officers, directors, and non-employee consultants. Awards granted to employees, officers, and directors are initially accounted for as equity-classified awards, which are measured at the grant date fair value of the award and are recognized using the graded vesting method, net of estimated forfeitures, over the requisite service period, which is generally the vesting period. Awards granted to non-employees are initially measured at fair value on the grant date and periodically re-measured thereafter until the earlier of the performance commitment date or the date the service is completed and recognized over the period in which the service is provided.

Our operating expenses include share-based compensation expenses as follows:

	For the Year Ended December 31,		
	2021	2022	2023
	US\$	US\$	US\$
		(in thousands)	
Research and development expenses	279,781	261,807	295,503
Sales and marketing expenses	468,407	400,435	369,577
General and administrative expenses	221,731	141,826	122,661
Goodwill impairment	—	14,830	—
Total	969,919	818,898	787,741

*Other Operating Income**Gain (loss) on disposal of business*

We disposed certain businesses in 2021 and 2023, which resulted in recognition of related gain of US\$5.0 million and loss of US\$6.2 million, respectively.

*Other income*

Other income primarily consists of government grants in connection with our contributions to technology development, tax refund and investments in local business districts. These grants may not be recurring in nature.

**Taxation***Cayman Islands*

According to our Cayman Islands counsel, Maples and Calder (Hong Kong) LLP, we are incorporated as an exempted company in the Cayman Islands. The Cayman Islands currently have no income, corporation or capital gains taxes. The Cayman Islands does not impose a withholding tax on payments of dividends to shareholders.

*British Virgin Islands*

Duowan Entertainment Corporation is our wholly owned subsidiary.

As Duowan Entertainment Corporation is a British Virgin Islands business company subject to the provisions of the British Virgin Islands Business Companies Act (As Revised), it is exempt from all provisions of the Income Tax Act of the British Virgin Islands (including with respect to all dividends, interests, rents, royalties, compensation and other amounts payable by Duowan Entertainment Corporation to persons who are not persons resident in the British Virgin Islands).

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Capital gains realized with respect to any shares, debt obligations or other securities of Duowan Entertainment Corporation by persons who are not persons resident in the British Virgin Islands are also exempt from all provisions of the Income Tax Act of the British Virgin Islands.

### *Hong Kong*

Our subsidiary registered in Hong Kong is subject to Hong Kong profits tax on the taxable income as reported in its respective statutory financial statements adjusted in accordance with relevant Hong Kong tax laws. The applicable tax rate is 16.5% in Hong Kong.

### *Singapore*

According to the Development and Expansion Incentive, pursuant to the provisions of Part IIIB of the Economic Expansion Incentives (Relief from Income Tax) Act, Chapter 86, corporations engaging in new high-value-added projects, expanding or upgrading their operations, or undertaking incremental activities after their pioneer period may apply for their profits to be taxed at a reduced rate of not less than 5% for an initial period of up to ten years. The total tax relief period for each qualifying project or activity is subject to a maximum of 40 years (inclusive of the post-pioneer relief period previously granted, if applicable).

Bigo Singapore applied for the incentive and received approval in October 2018. Bigo Singapore was entitled to enjoy the beneficial tax rate of 5% as the incentive for the years 2018 through 2022. Bigo Singapore renewed its qualification in 2022 and is entitled to continue to enjoy such beneficial tax treatment from 2023 to 2027, and will need to re-apply for the incentive qualification renewal in 2028. Other subsidiaries incorporated in Singapore were subject to 17% of their taxable income.

### *Mainland China*

Current taxation primarily represented the provision for a state and local corporate income tax for subsidiaries and variable interest entities operating in mainland China. Our PRC subsidiaries and the VIEs are subject to the PRC Enterprise Income Tax Law on their taxable income as reported in their respective statutory financial statements adjusted in accordance with the relevant tax laws and regulations in mainland China. All our entities in mainland China are subject to enterprise income tax at a rate of 25%, with the exception of any preferential treatments they may receive, such as the 15% preferential tax rate that BaiGuoYuan Technology can enjoy for the periods reported as a result of its qualification as a High and New Technology Enterprise.

According to a policy promulgated by the mainland China's state tax bureau and effective from 2008 onwards, enterprises engaged in research and development activities are entitled to claim a certain percentage of the research and development expenses so incurred in a year as tax deductible expenses in determining its tax assessable profits for that year. The additional tax deducting amount of the qualified research and development expenses is 100% since January 1, 2023. Certain subsidiaries and the VIEs have claimed such tax deduction for the periods reported.

In addition, according to the PRC Enterprise Income Tax Law and its implementation rules, foreign enterprises, which have no establishment or place in mainland China but derive dividends, interest, rents, royalties and other income (including capital gains) from sources in mainland China, are subject to PRC withholding tax at 10% (a further reduced withholding tax rate may be available according to the applicable double tax treaty or arrangement). The 10% withholding tax is applicable to any dividends to be distributed from our subsidiaries in mainland China and the variable interest entities to us and our subsidiaries outside mainland China. In 2022, Guangzhou Huanju Shidai declared and distributed a cash dividend of part of its stand-alone 2020 earnings, totaling to US\$110.0 million, to its direct oversea parent company, Duowan Entertainment Corporation. As a result, Guangzhou Huanju Shidai paid a withholding tax in the amount of US\$11.0 million in 2022. We do not have any present plan to pay out the retained earnings in subsidiaries in mainland China and the variable interest entities in the foreseeable future. Accordingly, no further withholding tax has been accrued.

For more information on tax regulations of mainland China, see "Item 4. Information on the Company—B. Business Overview—Regulations in Multiple Jurisdictions Where We Operate—Mainland China Regulations—Regulation on Tax."

## Results of Operations

The following table sets forth a summary of our consolidated results of operations for the years indicated. Our business has grown rapidly since our inception, and our limited operating history makes it difficult to predict future operating results. We believe that period-to-period comparisons of results of operations should not be relied upon as indicative of future performance. Unless otherwise specifically stated, financial results discussed herein refer to our continuing operations. For the avoidance of confusion, the continuing operations of our consolidated financial statements for the year ended December 31, 2021, 2022 and 2023 primarily consisted of BIGO segment and All other segment. The discontinued operations reported in our consolidated financial statements included in this annual report consist of the results of YY Live from January 1, 2021 to February 8, 2021.

	For the Year Ended December 31,					
	2021		2022		2023	
	US\$	% of total net revenues	US\$	% of total net revenues	US\$	% of total net revenues
	(in thousands, except for percentages)					
Total net revenues <sup>(1)</sup>	2,619,051	100.0	2,411,516	100.0	2,267,870	100.0
Live streaming	2,476,790	94.6	2,225,518	92.3	1,979,371	87.3
Others	142,261	5.4	185,998	7.7	288,499	12.7
Cost of revenues	(1,781,150)	(68.0)	(1,559,388)	(64.7)	(1,454,842)	(64.2)
Gross profit	837,901	32.0	852,128	35.3	813,028	35.8
Research and development expenses	(279,781)	(10.7)	(261,807)	(10.9)	(295,503)	(13.0)
Sales and marketing expenses	(468,407)	(17.9)	(400,435)	(16.6)	(369,577)	(16.3)
General and administrative expenses	(221,731)	(8.5)	(141,826)	(5.9)	(122,661)	(5.4)
Goodwill impairment	—	—	(14,830)	(0.6)	—	—
Total operating expenses	(969,919)	(37.0)	(818,898)	(34.0)	(787,741)	(34.7)
Gain (loss) on disposal of business	4,959	0.2	—	—	(6,177)	(0.3)
Other income	20,376	0.8	17,505	0.7	9,705	0.4
Operating (loss) income	(106,683)	(4.1)	50,735	2.1	28,815	1.3
(Loss) gain on deemed disposal and disposal of investments	(23,762)	(0.9)	4,113	0.2	74,851	3.3
Gain on extinguishment of debt and derivative	5,291	0.2	63,378	2.6	—	—
(Loss) gain on fair value changes of investments	(15,435)	(0.6)	424,304	17.6	12,425	0.5
Foreign currency exchange (losses) gains, net	(13,377)	(0.5)	11,666	0.5	(2,906)	(0.1)
Interest expense	(14,475)	(0.6)	(12,770)	(0.5)	(10,420)	(0.5)
Interest income and investment income	91,233	3.5	93,148	3.9	185,212	8.2
Other non-operating expense	(381)	0.0	—	—	—	—
(Loss) income before income tax expenses	(77,589)	(3.0)	634,574	26.3	287,977	12.7
Income tax expenses	(25,745)	(1.0)	(34,575)	(1.4)	(18,856)	(0.8)
(Loss) income before share of loss in equity method investments, net of income taxes	(103,334)	(3.9)	599,999	24.9	269,121	11.9
Share of (loss) income in equity method investments, net of income taxes	(26,217)	(1.0)	(498,431)	(20.7)	3,297	0.1
Net (loss) income from continuing operations	(129,551)	(4.9)	101,568	4.2	272,418	12.0
Net income from discontinued operations	35,567	1.4	—	—	—	—
Net (loss) income	(93,984)	(3.6)	101,568	4.2	272,418	12.0
Net income attributable to the non-controlling interest shareholders and the mezzanine equity classified non-controlling interest shareholders	13,691	0.5	27,323	1.1	29,398	1.3
Net (loss) income attributable to controlling interest of the Company	(80,293)	(3.1)	128,891	5.3	301,816	13.3
Including: Net (loss) income from continuing operations attributable to controlling interest of the Company	(115,860)	(4.4)	128,891	5.3	301,816	13.3
Net income from discontinued operations attributable to controlling interest of the Company	35,567	1.4	—	—	—	—
Accretion of subsidiaries' redeemable convertible preferred shares to redemption value	(5,236)	(0.2)	(5,426)	(0.2)	(5,048)	(0.2)
Cumulative dividend on subsidiary's Series A Preferred Shares	(4,000)	(0.2)	(4,000)	(0.2)	(2,000)	(0.1)
Gain on repurchase of redeemable convertible preferred shares of a subsidiary	—	—	—	—	52,583	2.3
Net (loss) income attributable to common shareholders of the Company	(89,529)	(3.4)	119,465	5.0	347,351	15.3
Including: Net (loss) income from continuing operations attributable to common shareholders of the Company	(125,096)	(4.8)	119,465	5.0	347,351	15.3
Net income from discontinued operations attributable to common shareholders of the Company	35,567	1.4	—	—	—	—

(1) Net of rebates and discounts.

## Year Ended December 31, 2023 Compared to Year Ended December 31, 2022

**Net revenues.** Our net revenues decreased from US\$2,411.5 million in 2022 to US\$2,267.9 million in 2023. This decrease was primarily driven by decrease in live streaming revenues.

**Live streaming revenues.** Our live streaming revenues decreased from US\$2,225.5 million in 2022 to US\$1,979.4 million in 2023. The overall decrease was primarily attributable to our proactive adjustments to our non-core audio live streaming products and the decrease in the ARPU for live streaming, as global macroeconomic uncertainties and the appreciation of U.S. dollars against certain other local currencies negatively affected users' paying activities. The decrease in ARPU for live streaming from US\$452 in 2022 to US\$403 in 2023 contributed to the decrease in our live streaming revenues, to certain extent, partially offset by the increase in the total number of paying users from 3.6 million in 2022 to 3.9 million in 2023.

**Other revenues.** Other revenues increased by 55.1% from US\$186.0 million in 2022 to US\$288.5 million in 2023. The increase was mainly due to the contribution from the consolidation of Shopline and growth in our advertising revenues.

**Cost of revenues.** Our cost of revenues decreased from US\$1,559.4 million in 2022 to US\$1,454.8 million in 2023. The decrease was mainly due to a decrease in our revenue sharing fees and content costs, which decreased from US\$1,020.2 million in 2022 to US\$945.1 million in 2023. This decrease in revenue sharing fees and content costs was in line with the decrease in live streaming revenues.

**Operating expenses.** Our operating expenses decreased from US\$818.9 million in 2022 to US\$787.7 million in 2023, primarily due to the decreases in sales and marketing expenses and general and administrative expenses, partially offset by an increase in research and development expenses.

**Research and development expenses.** Our research and development expenses increased from US\$261.8 million in 2022 to US\$295.5 million in 2023. The increase was primarily due to the increase in personnel related expenses.

**Sales and marketing expenses.** Our sales and marketing expenses decreased from US\$400.4 million in 2022 to US\$369.6 million in 2023. The decrease was primarily due to our optimization of overall sales and marketing strategies across various product lines to be more focused on return-on-investment and effectiveness of user acquisition.

**General and administrative expenses.** Our general and administrative expenses decreased from US\$141.8 million in 2022 to US\$122.7 million in 2023. The decrease was primarily due to the decrease in expected credit loss of receivables.

**Foreign currency exchange gains (losses).** We had net foreign currency exchange gains of US\$11.7 million in 2022 and net foreign currency exchange losses of US\$2.9 million in 2023, primarily due to a slight depreciation of U.S. dollar.

**Interest income and investment income.** Our interest income and investment income were US\$93.1 million in 2022 and US\$185.2 million in 2023, primarily due to the increase in interest income driven by higher market interest rates.

**Income tax expenses.** We recorded income tax expenses of US\$34.6 million in 2022 and US\$18.9 million in 2023. The decrease was primarily due to the lower income before income tax expenses recorded by some of our subsidiaries and the VIEs.

**Share of income (loss) in equity method investments.** We recorded share of loss in equity method investments of US\$498.4 million in 2022 and share of income of US\$3.3 million in 2023, primarily due to an impairment loss of US\$417.2 million from an equity method investment recognized in 2022.

**Net income from continuing operations.** As a result of the foregoing, our net income from continuing operating attributable to common shareholders of our company increased from US\$119.5 million in 2022 to US\$347.4 million in 2023.

#### **Year Ended December 31, 2022 Compared to Year Ended December 31, 2021**

**Net revenues.** Our net revenues decreased from US\$2,619.1 million in 2021 to US\$2,411.5 million in 2022. This decrease was primarily driven by decrease in live streaming revenues.

**Live streaming revenues.** Our live streaming revenues decreased from US\$2,476.8 million in 2021 to US\$2,225.5 million in 2022. The overall decrease was primarily attributable to the decrease in the ARPU for live streaming, as global macroeconomic uncertainties and the appreciation of U.S. dollars against certain other local currencies negatively affected users' paying activities. The total number of paying users decreased from 3.8 million in 2021 to 3.6 million in 2022, while the ARPU for live streaming decreased from US\$509 in 2021 to US\$452 in 2022.

**Other revenues.** Other revenues increased by 30.7% from US\$142.3 million in 2021 to US\$186.0 million in 2022. The increase was mainly due to the contribution from the consolidation of Shoptline.

**Cost of revenues.** Our cost of revenues decreased from US\$1,781.2 million in 2021 to US\$1,559.4 million in 2022. The decrease was mainly due to a decrease in our revenue sharing fees and content costs, which decreased from US\$1,158.4 million in 2021 to US\$1,020.2 million in 2022. This decrease in revenue sharing fees and content costs was in line with the decrease in live streaming revenues. Bandwidth costs decreased by 19.7% from US\$96.5 million in 2021 to US\$77.5 million in 2022, primarily due to our improved efficiency in bandwidth usage. Payment handling costs was US\$165.4 million in 2022, compare with US\$212.7 million in 2021, which was in line with the decrease in live streaming revenues, as well as our proactive efforts in introducing third-party payment channels of lower-cost.

**Operating expenses.** Our operating expenses decreased from US\$969.9 million in 2021 to US\$818.9 million in 2022, primarily due to the decreases in research and development expenses, sales and marketing expenses and general and administrative expenses, partially offset by an increase in goodwill impairment.

**Research and development expenses.** Our research and development expenses decreased from US\$279.8 million in 2021 to US\$261.8 million in 2022. The decrease was primarily due to the decrease in personnel related expenses.

**Sales and marketing expenses.** Our sales and marketing expenses decreased from US\$468.4 million in 2021 to US\$400.4 million in 2022. The decrease was primarily due to our disciplined spending on user acquisition.

**General and administrative expenses.** Our general and administrative expenses decreased from US\$221.7 million in 2021 to US\$141.8 million in 2022. Our general and administrative expenses were higher in 2021 primarily due to an impairment charge for our equity investments without readily determinable fair values.

**Foreign currency exchange gains (losses).** We had net foreign currency exchange losses of US\$13.4 million in 2021 and net foreign currency exchange gains of US\$11.7 million in 2022, primarily due to appreciation of U.S. dollar.

**Interest income and investment income.** Our interest income and investment income were US\$91.2 million in 2021 and US\$93.1 million in 2022.

**Income tax expenses.** We recorded income tax expenses of US\$25.7 million in 2021 and US\$34.6 million in 2022.

**Share of loss in equity method investments.** We recorded share of loss in equity method investments of US\$26.2 million in 2021 and US\$498.4 million in 2022, primarily due to an impairment loss of US\$417.2 million from an equity method investment recognized in 2022.

**Net income (loss) from continuing operations.** As a result of the foregoing, we had a net loss from continuing operations attributable to common shareholders of our company of US\$125.1 million in 2021 and a net income of US\$119.5 million in 2022.

**Net income from discontinued operations.** We recorded net income from discontinued operations of US\$35.6 million in 2021, which was related to financial results of YY Live from January 1, 2021 to February 8, 2021. We did not record any net income from discontinued operations in 2022.

## Segment Reporting

For the years ended December 31, 2021, 2022 and 2023, there are two operating and reportable segments, which is the BIGO segment and the All other segment.

**Segment Revenues**

Revenues from the BIGO segment primarily consist of the revenues generated from several social entertainment platforms, primarily including Bigo Live, Likee, imo, and others. Revenues from the All other segment primarily consist of revenues generated from Hago, Shopline, and certain audio live streaming platforms. The table below sets forth our revenues by segment for the periods indicated:

	For the Year Ended December 31,		
	2021	2022	2023
	US\$	US\$	US\$
<b>Net Revenues:</b>		(in thousands)	
BIGO	2,323,758	1,997,021	1,924,320
All other	295,360	414,740	344,889
Elimination	(67)	(245)	(1,339)

*BIGO*

*2023 compared to 2022.* BIGO revenues decreased from US\$1,997.0 million in 2022 to US\$1,924.3 million in 2023, primarily due to the decrease in the ARPU for live streaming, as global macroeconomic uncertainties and the appreciation of U.S. dollars against certain other local currencies negatively affected users' paying activities.

*2022 compared to 2021.* BIGO revenues decreased from US\$2,323.8 million in 2021 to US\$1,997.0 million in 2022, primarily due to the decrease in the ARPU for live streaming, as global macroeconomic uncertainties and the appreciation of U.S. dollars against certain other local currencies negatively affected users' paying activities.

*All other*

*2023 compared to 2022.* Revenues of All other segment decreased from US\$414.7 million in 2022 to US\$344.9 million in 2023, primarily due to our proactive adjustments to certain non-core products, partially offset by the increased revenue contribution from the consolidation of Shopline.

*2022 compared to 2021.* Revenues of All other segment increased by 40.4% from US\$295.4 million in 2021 to US\$414.7 million in 2022, primarily due to the contribution from the consolidation of Shopline.

**Segment Operating Costs and Expenses**

The following table sets forth our operating costs and expenses by segment for the periods indicated:

	For the Year Ended December 31,		
	2021	2022	2023
	US\$	US\$	US\$
<b>Operating Costs and Expenses:</b>		(in thousands)	
BIGO	2,203,088	1,789,897	1,701,435
All other	548,048	588,634	542,487
Elimination	(67)	(245)	(1,339)

*BIGO*

Operating costs and expenses of BIGO mainly consist of revenue sharing, salaries and benefits, marketing and promotion expenses, bandwidth costs, depreciation and amortization, payment handling costs and other costs.

*Cost of revenues.*

*2023 compared to 2022.* The cost of revenues of BIGO decreased from US\$1,249.4 million in 2022 to US\$1,189.5 million in 2023, which was in line with the decrease in revenues.

*2022 compared to 2021.* The cost of revenues of BIGO decreased from US\$1,539.2 million in 2021 to US\$1,249.4 million in 2022, which was in line with the decrease in revenues.

*Research and development expenses.*

*2023 compared to 2022.* The research and development expenses of BIGO decreased from US\$168.1 million in 2022 to US\$163.6 million in 2023, primarily due to the decrease in salaries and welfare of research and development personnel.

*2022 compared to 2021.* The research and development expenses of BIGO decreased from US\$204.6 million in 2021 to US\$168.1 million in 2022, primarily due to the decrease in salaries and welfare of research and development personnel.

*Sales and marketing expenses.*

*2023 compared to 2022.* The sales and marketing expenses of BIGO decreased from US\$311.5 million in 2022 to US\$295.4 million in 2023, primarily due to our optimization of overall sales and marketing strategies across various product lines to focus more on return-on-investment and effectiveness of user acquisition.

*2022 compared to 2021.* The sales and marketing expenses of BIGO decreased from US\$402.5 million in 2021 to US\$311.5 million in 2022, primarily due to our disciplined spending on user acquisition via advertisement for Likee.

*General and administrative expenses.*

*2023 compared to 2022.* The general and administrative expenses of BIGO decreased from US\$60.8 million in 2022 to US\$52.9 million in 2023, primarily due to the decrease in expected credit loss of receivables.

*2022 compared to 2021.* The general and administrative expenses of BIGO increased from US\$56.8 million in 2021 to US\$60.8 million in 2022, primarily due to the increase in share-based compensation expenses.

*All other*

Operating costs and expenses of All other segment mainly consist of revenue sharing fees and content costs, salaries and benefits, marketing and promotion expenses, bandwidth costs, depreciation and amortization, impairment charge and other costs.

*Cost of revenues*

*2023 compared to 2022.* The cost of revenues of All other segment decreased from US\$310.3 million in 2022 to US\$265.7 million in 2023, which was in line with the decrease in revenues.

*2022 compared to 2021.* The cost of revenues of All other segment increased by 28.2% from US\$242.0 million in 2021 to US\$310.3 million in 2022, which was in line with the increase in revenues.

*Research and development expense*

*2023 compared to 2022.* The research and development expenses of All other segment increased from US\$93.7 million in 2022 to US\$132.6 million in 2023, primarily due to the increase in staff-related expenses for research and development personnel.

*2022 compared to 2021.* The research and development expenses of All other segment increased from US\$75.2 million in 2021 to US\$93.7 million in 2022, primarily due to the increase in staff-related expenses for research and development personnel.

*Sales and marketing expenses*

*2023 compared to 2022.* The sales and marketing expenses of All other segment decreased from US\$88.9 million in 2022 to US\$74.3 million in 2023, primarily due to reduced spending on some of our non-core audio live streaming products.

*2022 compared to 2021.* The sales and marketing expenses of All other segment increased from US\$65.9 million in 2021 to US\$88.9 million in 2022, primarily due to increased efforts in sales and marketing activities for most of the other products, partially offset by our disciplined spending on user acquisition.

*General and administrative expenses*

*2023 compared to 2022.* The general and administrative expenses of All other segment decreased from US\$81.0 million in 2022 to US\$69.9 million in 2023, primarily due to efficiency improvement for general and administrative expenses.

*2022 compared to 2021.* The general and administrative expenses of All other segment decreased from US\$164.9 million in 2021 to US\$81.0 million in 2022, primarily due to a decrease in impairment charge for equity investments.

**Recently Issued Accounting Pronouncements**

The recently issued accounting pronouncements that are relevant to us are included in Note 2(II) to our audited consolidated financial statements, which are included elsewhere in this annual report.

**B. Liquidity and Capital Resources**

**Cash Flows and Working Capital**

In recent years, we have financed our operations primarily through cash flows from operations, the proceeds from our convertible senior notes offerings, and gain on disposal of businesses. See “Item 4. Information on the Company—A. History and Development of the Company” for more information about our material transactions in the past few years.

We expect to require cash to fund our ongoing operational needs, particularly our revenue sharing fees and content costs, salaries and benefits, bandwidth costs and potential acquisitions or strategic investments. We believe that our current cash and cash equivalents and the anticipated cash flow from operations will be sufficient to meet our anticipated working capital requirements and capital expenditures needs for the next 12 months. However, we may require additional cash resources due to changing business conditions or other future developments, including any investments or acquisitions we may decide to selectively pursue. If our existing cash resources are insufficient to meet our requirements, we may seek to sell equity or equity-linked securities, debt securities or borrow from banks.

As of December 31, 2021, 2022 and 2023, we had US\$2,134.5 million, US\$1,565.6 million and US\$1,440.4 million, respectively, in cash, cash equivalents, restricted cash, and restricted short-term deposits of continuing operation.

As of December 31, 2023, our subsidiaries, the VIEs, and the VIEs’ subsidiaries located in mainland China held cash and cash equivalents, restricted cash and restricted short-term deposits in the amount of US\$154.0 million. Aggregate undistributed earnings and reserves of our subsidiaries, the VIEs, and the VIEs’ subsidiaries located in mainland China that are available for distribution to our company as of December 31, 2023 were US\$2,139.1 million. We would need to accrue and pay withholding taxes if we were to distribute funds from our subsidiaries in mainland China to our offshore subsidiaries. However, we plan to indefinitely utilize undistributed earnings in mainland China to meet our obligations and commitments there, including our capital expenditure in connection with the construction of buildings located in mainland China and working capital requirements for our research and development team.

The following table sets forth a summary of our cash flows for the years indicated:

	<b>For the Year Ended December 31,</b>		
	<b>2021</b>	<b>2022</b>	<b>2023</b>
	<b>US\$</b>	<b>US\$</b>	<b>US\$</b>
		<b>(in thousands)</b>	
Net cash provided by continuing operating activities	146,127	316,494	295,579
Net cash (used in) provided by continuing investing activities	(846,857)	(510,284)	420,373
Net cash used in continuing financing activities	(723,536)	(321,909)	(841,745)
Net decrease in cash, cash equivalents and restricted cash in continuing operations	(1,424,266)	(515,699)	(125,793)
Net increase in cash, cash equivalents and restricted cash in discontinuing operations	1,700,739	—	—
Cash, cash equivalents and restricted cash at the beginning of the year	1,819,571	2,134,492	1,565,560
Effect of exchange rate changes on cash, cash equivalents and restricted cash	38,448	(53,233)	682
Cash, cash equivalents and restricted cash at the end of the year	2,134,492	1,565,560	1,440,449

### Operating Activities

Net cash used in continuing operating activities consists primarily of our net income with certain adjustments, such as gain on disposal and deemed disposal of investments, and gain on fair value changes of investments, and mitigated by non-cash adjustments, such as share-based compensation, depreciation of property and equipment, and amortization of acquired intangible assets and land use rights.

Net cash provided by continuing operating activities amounted to US\$295.6 million for the year ended December 31, 2023. In 2023, the difference between our net cash provided by continuing operating activities and our net income from continuing operations of US\$272.4 million was primarily due to a non-cash item adjustment in amortization of acquired intangible assets and land use rights of US\$73.4 million, a non-cash item adjustment in depreciation of property and equipment of US\$46.6 million, and a non-cash item adjustment in share-based compensation of US\$32.0 million, partially offset by a non-cash item adjustment in gain on partial disposal of investments of US\$74.9 million, an increase in accounts receivable of US\$32.4 million, and an increase in prepayments and other assets of US\$30.7 million.

Net cash provided by continuing operating activities amounted to US\$316.5 million for the year ended December 31, 2022. In 2022, the difference between our net cash provided by continuing operating activities and our net income from continuing operations of US\$101.6 million was primarily due to a non-cash item adjustment in depreciation of property and equipment of US\$83.4 million, a non-cash item adjustment in amortization of acquired intangible assets and land use rights of US\$65.2 million, a non-cash item adjustment in share-based compensation of US\$44.1 million, a non-cash item adjustment in share of loss in equity method investments of US\$498.4 million, partially offset by a non-cash item adjustment in gain on fair value change of investments of US\$424.3 million, and a non-cash item adjustment in gain on extinguishment of debt and derivative of US\$63.4 million.

Net cash provided by continuing operating activities amounted to US\$146.1 million for the year ended December 31, 2021. In 2021, the difference between our net cash provided by continuing operating activities and our net loss from continuing operations of US\$129.6 million was primarily due to a non-cash item adjustment in share-based compensation of US\$33.4 million, a non-cash item adjustment in amortization of acquired intangible assets and land use rights of US\$67.2 million, a non-cash item adjustment in depreciation of property and equipment of US\$108.7 million, a non-cash item adjustment in loss on fair value change of investments of US\$15.4 million, a non-cash item adjustment in impairment of investments of US\$93.6 million, and a non-cash adjustment in loss on disposal and deemed disposal of investments of US\$23.8 million, partially offset by a decrease in accrued liabilities and other current liabilities of US\$89.5 million.

### Investing Activities

Net cash used in continuing investing activities largely reflects placements of short-term deposits, placements of short-term investments, purchases of property and equipment and other non-current assets in connection with the expansion and upgrade of our technology infrastructure, and our acquisitions of and investments in certain companies.

Net cash provided by continuing investing activities largely reflects maturities of short-term deposits, maturities of short-term investments, and cash received from disposal of investments.

Net cash provided by continuing investing activities amounted to US\$420.4 million in the year ended December 31, 2023. Net cash provided by continuing investing activities primarily resulted from the maturities of short-term deposits and short-term investments in various banks in the amount of US\$4,045.6 million and the cash received for disposal of investments of US\$222.1 million, partially offset by the placement of short-term deposits and short-term investments in various banks in the amount of US\$3,704.2 million, the payments for purchase of property and equipment of US\$81.6 million and the cash payment of US\$66.0 million for investments.

Net cash used in continuing investing activities amounted to US\$510.3 million in the year ended December 31, 2022. Net cash used in continuing investing activities primarily resulted from the placement of short-term deposits and short-term investments in various banks in the amount of US\$4,843.8 million, payments for purchase of property and equipment, other non-current assets of US\$78.9 million, and cash paid for certain acquisitions and strategic investments of US\$175.7 million, partially offset by the maturities of short-term deposits and short-term investments in various banks in the amount of US\$4,601.5 million.

Net cash used in continuing investing activities amounted to US\$846.9 million in the year ended December 31, 2021. Net cash used in continuing investing activities primarily resulted from the placement of short-term deposits and short-term investments in various banks in the amount of US\$3,678.2 million, payments for purchase of property and equipment, intangible assets and land use right of US\$184.9 million, and cash paid for certain acquisitions and strategic investments of US\$89.7 million, partially offset by the maturities of short-term deposits and short-term investments in various banks in the amount of US\$2,990.8 million and cash received from disposal of investments of US\$156.5 million.

### **Financing Activities**

Net cash used in continuing financing activities was US\$841.7 million in 2023, primarily attributable to cash paid for extinguishment of convertible bonds of US\$432.2 million, cash paid for share repurchase of US\$273.9 million, dividends paid to shareholders of US\$84.2 million, and repayment of bank borrowings of US\$82.5 million, partially offset by the proceeds from bank borrowings of US\$95.2 million.

Net cash used in continuing financing activities was US\$321.9 million in 2022, primarily attributable to cash paid for share repurchase of US\$138.1 million, dividends paid to shareholders of US\$145.9 million and cash paid for convertible bonds repurchase of US\$87.7 million, partially offset by the proceeds of US\$44.5 million from bank borrowings.

Net cash used in continuing financing activities was US\$723.5 million in 2021, primarily attributable to cash paid for share repurchase of US\$398.6 million, dividends paid to shareholders of US\$160.1 million, and US\$147.6 million repayment of bank borrowings.

### **Material Cash Requirements**

Our material cash requirements as of December 31, 2023 and any subsequent interim period primarily include our operating lease commitments, capital commitment, loan obligations and convertible notes obligations.

Our operating lease commitments consist of lease of offices under operating lease agreements, where a significant portion of the risks and rewards of ownership are retained by the lessor. Payments made under operating leases are charged to our consolidated statements of operations on a straight-line basis over the period of the lease, including any free lease periods. Payment due by December 31, 2023 for our operating lease commitments amounted to US\$34.6 million, representing undiscounted cash payments of both leases recognized as lease liabilities on our consolidated balance sheet and lease commitments not recognized as lease liabilities.

Our capital commitments primarily consist of capital expenditures related to properties and additional investments in equity investments. We had outstanding capital commitments totaling to US\$244.9 million as of December 31, 2023. Our capital expenditures are primarily used to purchase office space, computers, servers, office furniture, operating rights, domain names and other assets, whose due dates will be generally based on the progress of the underlying construction.

Our loan obligations primarily consist of the principal amount and cash interests in connection with banks. As of December 31, 2023, the total payments due for our loan obligations amounted to US\$54.0 million. We expect all of these loan obligations to become due within one year from December 31, 2023. Short-term deposits of US\$57 million were pledged as collateral for the loans, which were classified as restricted short-term deposits.

Our convertible notes obligations primarily consist of the 1.375% convertible senior notes due 2026, or the 2026 Notes, that we issued in June 2019. As of December 31, 2023 and as of the date of this annual report, the outstanding principal amount of the 2026 Notes was US\$406,038,000. The 2026 Notes bear interest at a rate of 1.375% per year, payable semiannually in arrears on June 15 and December 15 of each year. The 2026 Notes will mature on June 15, 2026, unless repurchased, redeemed or converted in accordance with their terms prior to such date. Each holder of the 2026 Notes has the right, at the option of such holder, to require us to repurchase for cash on June 15, 2024 all of such holder's 2026 Notes or any portion thereof that is an integral multiple of US\$1,000 principal amount. The holders' repurchase right in relation to the 2026 Notes becomes exercisable at 9:00 a.m., New York City time, on Friday, May 10, 2024 and expires at 5:00 p.m., New York City time, on Thursday, June 13, 2024. We expect all or substantially all of the holders of the 2026 Notes to exercise this right, and the aggregate maximum purchase price would be US\$406,038,000.

We have not entered into any financial guarantees or other commitments to guarantee the payment obligations of any third parties. We have not entered into any derivative contracts that are indexed to our shares and classified as shareholders' (deficit)/equity, or that are not reflected in our consolidated financial statements. Furthermore, we do not have any retained or contingent interest in assets transferred to an unconsolidated entity that serves as credit, liquidity or market risk support to such entity. We do not have any variable interest in any unconsolidated entity that provides financing, liquidity, market risk or credit support to us or engages in leasing, hedging or research and development services with us.

Other than the obligations set forth above, we did not have any significant operating lease obligations, purchase obligations or other long-term obligations as of December 31, 2023.

### **Holding Company Structure**

JOYY Inc. is a holding company with no material operations of its own. We conduct our operations primarily through (i) our subsidiaries in Singapore, the United States, the United Kingdom, and many other regions for a majority of our global business; and (ii) the variable interest entities and their subsidiaries for some of our remaining business in mainland China. As a result, JOYY Inc.'s ability to pay dividends depends upon dividends paid by our subsidiaries, which is subject to restrictions imposed by the applicable laws and regulations in these markets. In certain jurisdictions, such as Singapore, there are currently no foreign exchange control regulations which restrict the ability of our subsidiaries in these jurisdictions to distribute dividends to us. However, the relevant regulations may be changed and the ability of these subsidiaries to distribute dividends to us may be restricted in the future. As for the jurisdiction of mainland China, under the laws and regulations of mainland China, if our existing subsidiaries or any newly formed ones incur debt on their own behalf in the future, the instruments governing their debt may restrict their ability to pay dividends to us. In addition, our wholly foreign-owned subsidiaries in mainland China are permitted to pay dividends to us only out of its retained earnings, if any, as determined in accordance with PRC accounting standards and regulations. Under law of mainland China, each of our subsidiaries and the variable interest entities in mainland China is required to set aside at least 10% of its after-tax profits each year, if any, to fund certain statutory reserve funds until such reserve funds reach 50% of their registered capital. In addition, our wholly foreign-owned subsidiaries in mainland China may allocate a portion of their after-tax profits based on PRC accounting standards to enterprise expansion funds and staff bonus and welfare funds at their discretion, and the variable interest entities may allocate a portion of its after-tax profits based on PRC accounting standards to a surplus fund at their discretion. The statutory reserve funds and the discretionary funds are not distributable as cash dividends. Remittance of dividends by a wholly foreign-owned company out of mainland China is subject to examination by the banks designated by SAFE. Our subsidiaries in mainland China have not paid dividends and will not be able to pay dividends until they generate accumulated profits and meet the requirements for statutory reserve funds.

### **C. Research and Development, Patents and Licenses, Etc.**

In order to support the kind of multi-user, real-time online voice and video communications on a scale necessary for our platforms, we build and develop our own network infrastructure. See "Item 4. Information on the Company—B. Business Overview—Intellectual Property" for a description of the protection of our intellectual property.

Research and development expenses consist primarily of salaries and benefits for research and development personnel and rental and depreciation of office premises and servers utilized by the research and development personnel. We incurred research and development expenses of US\$279.8 million, US\$261.8 million and US\$295.5 million in 2021, 2022 and 2023, respectively.

#### **D. Trend Information**

Other than as disclosed elsewhere in this annual report, we are not aware of any trends, uncertainties, demands, commitments or events for the period from January 1, 2024 till the date of this annual report that are reasonably likely to have a material effect on our net revenues, income from operations, profitability, liquidity or capital resources, or that would cause the disclosed financial information to be not necessarily indicative of future operating results or financial condition.

#### **E. Critical Accounting Estimates**

##### **Critical Accounting Policies and Estimates**

We prepare our financial statements in conformity with U.S. GAAP, which requires us to make estimates and assumptions that affect our reporting of, among other things, assets and liabilities, revenues and expenses. We regularly evaluate these estimates and assumptions based on the most recently available information, our own historical experiences and other factors that we believe to be relevant under the circumstances. Since our financial reporting process inherently relies on the use of estimates and assumptions, our actual results could differ from these estimates. This is especially true with some accounting policies that require higher degrees of judgment than others in their application. We consider the policies discussed below to be critical to an understanding of our audited consolidated financial statements because they involve the greatest reliance on our management's judgment.

##### **Revenue Recognition and Deferred Revenue**

Revenues are recognized when control of the promised virtual items or services is transferred to our customers, in an amount that reflects the consideration we expect to be entitled to in exchange for those virtual items or services.

We have a recharge system for users to purchase our virtual currency. Users can recharge via various online payment platforms provided by third parties. Virtual currency is non-refundable and without expiry. As the virtual currency is often consumed soon after it is purchased based on history of turnover, we consider the impact of the breakage amount for virtual currency coupons is insignificant. Unconsumed virtual currency is recorded as deferred revenue. Virtual currencies used to purchase virtual items are recognized as revenue according to the prescribed revenue recognition policies of virtual items addressed below unless otherwise stated.

##### ***Live Streaming***

We generate our live streaming revenue from sales of virtual items on our live streaming platforms. Our users can access the platforms and view the live streaming content showed by the performers. We share a portion of the sales proceeds of virtual items ("revenue sharing fee") with performers and talent agencies in accordance with their revenue sharing arrangements. Those performers who do not have revenue sharing arrangements with us are not entitled to any revenue sharing fee.

We evaluate and determine that we are the principal and view users to be our customers. We report live streaming revenues on a gross basis. Accordingly, the amounts billed to users are recorded as revenues and revenue sharing fee paid to performers and talent agencies are recorded as cost of revenues. Where we are the principal, we control the virtual items before they are transferred to users. Our control is evidenced by our sole ability to monetize the virtual items before they are transferred to users, and is further supported by us being primarily responsible to users and having a level of discretion in establishing pricing.

We design, create and offer various virtual items for sales to users with pre-determined selling price. Sales proceeds are recorded as deferred revenue and recognized as revenue based on the consumption of the virtual items. Virtual items are categorized as consumable and time-based items. Consumable items are consumed upon purchase and use while time-based items could be used for a fixed period of time. Users can purchase and present consumable items to performers to show support for their favorite performers, or purchase time-based virtual items for one or multiple months for a monthly fee, which provide users with recognized status, such as priority speaking rights or special symbols over a period of time. Accordingly, live streaming revenue is recognized immediately when the consumable virtual item is used, or in the case of time-based virtual items, revenue is recognized ratably over the fixed period on a straight-line basis. We do not have further obligations to the user after the virtual items are consumed immediately or after the stated period of time for time-based items.

We may also enter into contracts that can include various combinations of virtual items, which are generally capable of being distinct and accounted for as separate performance obligations, such as noble member program. Judgments are required as follow: (1) determining whether those virtual items are considered distinct performance obligations that should be accounted for separately versus together, (2) determining the standalone selling price for each distinct performance obligation, and (3) allocating of the arrangement consideration to the separate accounting of each distinct performance obligation based on their relative standalone selling prices. Certain virtual items are provided to customers over time and have the same pattern of transfer to customers. We exercise judgment in determining the number of distinct performance obligations by accounting for services that have the same pattern of transfer to customers as a single performance obligation. In instances where standalone selling price is not directly observable as we do not sell the virtual item separately, we determine the standalone selling price based on pricing strategies, market factors and strategic objectives. We recognize revenue for each of the distinct performance obligations identified in accordance with the applicable revenue recognition method relevant for that obligation.

As our live streaming virtual items are generally sold without right of return and we do not provide any other credit and incentive to its users, therefore accounting of variable consideration when estimating the amount of revenue to recognize is not applicable to our live streaming business.

#### **Others**

Other revenues mainly generated from advertising, e-commerce business and membership.

##### *Advertising revenues*

We primarily generate advertising revenues from sales of various forms of advertising and provision of promotion campaigns on the live streaming platforms by way of advertisement display or integrated promotion activities in shows and programs on the live streaming platforms. Advertisements on our platforms are generally charged on the basis of duration, and advertising contracts are signed to establish the fixed price and the advertising services to be provided. Where collectability is reasonably assured, advertising revenues from advertising contracts are recognized ratably over the contract period of display.

We enter into advertising contracts directly with advertisers or third-party advertising agencies that represent advertisers. Payment terms and conditions vary by contract type, although the terms generally include a requirement of payment within one to three months. Both third-party advertising agencies and direct advertisers are generally billed at the end of the display period and payments are due usually within three months. In instances where the timing of revenue recognition differs from the timing of billing, we have determined the advertising contracts generally do not include a significant financing component. The primary purpose of the credits terms is to provide customers with simplified and predictable ways of purchasing our advertising services, not to receive financing from our customers or to provide customers with financing.

Certain customers may receive sales incentives in the forms of discounts and rebates to advertisers or advertising agencies based on purchase volume, which are accounted for as variable consideration. We estimate these amounts based on the expected amount to be provided to customers considering the contracted rebate rates and estimated sales volume based on historical experience, and reduce revenues recognized. We believe that there will not be significant changes to its estimates of variable consideration.

##### *E-commerce business revenues*

We operate several e-commerce platforms providing service solutions for merchants, including a global smart commerce platform that enables merchants to easily build their brands online and sell their products to users around the world. We recognize revenue when the identified performance obligation is satisfied by rendering the promised service to the customer and when specific criteria have been met. Services are rendered when or as the customers benefit from the services rendered.

We also operate an e-commerce platform and display goods for end customers to select and order. We are responsible to arrange delivery of the goods to the end customers after customers place an order in the platforms. We recognize e-commerce business revenue equal to the sales price (net of sales discount) to the end customers when control of the inventory is transferred. Revenues derived from the e-commerce business are recorded on a gross basis, because (i) we are primarily responsible for fulfilling the promise to provide the specified good, (ii) we are subject to inventory risks before the specified goods have been transferred to a customer or after transfer of control to the customers, and (iii) we have discretion in establishing the price of the specified goods.

##### *Membership*

We operate a membership subscription program where subscription members can have enhanced user privileges. The membership fee is collected up-front from subscribers. The receipt of the revenue is initially recorded as deferred revenue and revenue is recognized ratably over the period of the subscription when services are rendered. Unrecognized portion beyond 12 months from balance sheet date is classified as deferred revenue-non current.

## Goodwill

Goodwill represents the excess of the purchase price over the amounts assigned to the fair value of the assets acquired and the liabilities assumed of an acquired business.

We assess goodwill for impairment in accordance with ASC Subtopic 350-20, Intangibles-Goodwill and Other: Goodwill (“ASC 350-20”), which requires that goodwill be tested for impairment at the reporting unit level at least annually and more frequently upon the occurrence of certain events, as defined by ASC 350-20. A reporting unit is defined as an operating segment or one level below an operating segment referred to as a component. We determine our reporting units by first identifying its operating segments, and then assesses whether any components of these segments constituted a business for which discrete financial information is available and where our segment manager regularly reviews the operating results of that component. We determined that we have three reporting units.

We have the option to assess qualitative factors first to determine whether it is necessary to perform the quantitative impairment test in accordance with ASC 350-20. If we believe, as a result of the qualitative assessment, that it is more-likely-than-not that the fair value of the reporting unit is less than its carrying amount, the quantitative impairment test described above is required. Otherwise, no further testing is required. In the qualitative assessment, we consider primary factors such as industry and market considerations, overall financial performance of the reporting unit, and other specific information related to the operations. The quantitative goodwill impairment test, used to identify both the existence of impairment and the amount of impairment loss, compares the fair value of a reporting unit with its carrying amount, including goodwill. If the carrying amount of a reporting unit is greater than zero and its fair value exceeds its carrying amount, goodwill of the reporting unit is considered not impaired.

We perform annual goodwill impairment test of each reporting unit in the fourth quarter, or more frequently, if certain events or circumstances warrant. Events or changes in circumstances which might indicate potential impairment in goodwill include the entity-specific factors, including, but not limited to, stock price volatility, market capitalization relative to net book value, and projected revenue, market growth and operating results.

We have performed a goodwill impairment analysis in the fourth quarter of 2021, 2022 and 2023. When determining the fair value of BIGO reporting unit, we used the income approach. The income approach determines fair value based on discounted cash flow model derived from the reporting units’ long-term forecasts which included a five-year future cash flow projection and an estimated terminal value impairment analysis. The discounted cash flow model included a number of significant unobservable inputs. Key assumptions used to determine the estimated fair value include: (a) the five-year future cash flows forecasts including expected revenue growth, (b) an estimated terminal value using a terminal year long-term future growth rate determined based on the growth prospects of the reporting units; and (c) a discount rate that reflects the weighted-average cost of capital adjusted for the relevant risk associated with each reporting unit’s operations and the uncertainty inherent in our internally developed forecasts. These key assumptions are subject to uncertainties and actual results may not be the same as the forecasted amounts. For example, our efforts to attract more paying users and increase the spending level of paying users may not be as successful as forecasted and therefore the actual revenue growth may not be as high as forecasted. Based on our assessment, the fair value of BIGO segment reporting unit exceeded its carrying value by around 3% of the carrying value of the BIGO segment reporting unit as of December 31, 2023. Changes in these estimates and assumptions could materially affect the determination of fair value of the reporting unit. If the revenue growth increased or decreased by 15 basis points, our headroom would have increased or decreased by US\$67.7 million and US\$67.4 million. If the discount rate increased or decreased by 50 basis points, our headroom would have decreased or increased by US\$55.9 million and US\$59.2 million. If the growth rate used to calculate the terminal value increased or decreased by 100 basis points, our headroom would have increased or decreased by US\$77.4 million and US\$69.0 million. These potential changes in assumptions in comparison with those used by the company would not result in the BIGO reporting unit carrying amount exceeding its determined fair value. When determining the fair value of the Shopline reporting unit, we used the market approach, which considered certain market multiples of revenue of comparable companies engaged in similar operations and having similar economic characteristics. A key assumption used to determine the estimated fair value include the selection of appropriate market multiples. Based on our assessment, the fair value of the Shopline reporting unit exceeded its related carrying value by approximately 1% at December 31, 2023. In addition, we also assessed the reasonableness of the fair value derived from our reporting unit after giving consideration to our net book value and market capitalization.

In the annual goodwill impairment assessment of our reporting units, the fair value of each of our reporting unit was greater than the respective carrying values, and therefore goodwill related to each of our reporting units was determined not to be impaired.

## ITEM 6. DIRECTORS, SENIOR MANAGEMENT AND EMPLOYEES

### A. Directors and Senior Management

The following table sets forth information regarding our directors and executive officers as of the date of this annual report. There are no family relationships among any of the directors or executive officers of our company.

Directors and Executive Officers	Age	Position/Title
David Xueling Li	49	Chairman of the Board and Director, Chief Executive Officer
Ting Li	41	Chief Operating Officer and Director
Qin Liu	51	Director
Peter Andrew Schloss	63	Independent Director
Richard Weidong Ji	56	Independent Director
David Tang	69	Independent Director
Fuyong Liu	39	Vice President of Finance

*Mr. David Xueling Li* is our co-founder and has been our chairman since August 2016. Mr. Li served as our chief executive officer since our inception to August 2016 and as our acting chief executive officer from May 2017 to April 2019. Currently, Mr. Li serves as our chief executive officer, focusing on broader corporate strategy and the development of new and emerging applications and products. Mr. Li also heads our international business, overseeing its business operations and development strategy. Before founding our company, Mr. Li worked at Netease.com, Inc. from July 2003 to April 2005 and served as its chief editor. In 2000, Mr. Li founded CFP.cn, a website that provided a copyright trading platform for journalists and amateur photographers. Mr. Li received a bachelor's degree in philosophy from Renmin University of China in 1997.

*Ms. Ting Li* has served as our chief operating officer since 2016 and has been appointed as our director since November 2023. Ms. Li has been focusing on our ecosystem development and the enrichment of our content and product offerings since she joined us in 2011. In 2017, Ms. Li led the strategic update and launch of YY Live 7.0, which observed and satisfied user demand for personalized interactions with streamers for the first time in the industry. Prior to joining us, Ms. Li served as product manager at Tencent from 2006 to 2011. Ms. Li received a bachelor's degree from South China University of Technology in 2006.

*Mr. Qin Liu* has served as our director since June 2008. Mr. Liu co-founded 5Y Capital (formerly known as Morningside Venture Capital) in June 2007. Before co-founding 5Y Capital, Mr. Liu served various roles including as a business development director for investment at Morningside IT Management Services (Shanghai) Co. Ltd. from July 2000 to November 2008. Mr. Liu became a director of Xiaomi Corporation (HKEX: 1810) in May 2010, and currently serves as a non-executive director of Xiaomi Corporation. Since December 2014, Mr. Liu has served as a director of Agora, Inc. (Nasdaq: API). Mr. Liu received his bachelor's degree in industrial electrical automation from University of Science and Technology Beijing in July 1993, and his master's degree in business administration from China Europe International Business School in April 2000.

*Mr. Peter Andrew Schloss* has served as our independent director since November 2012. Mr. Schloss is managing director and CEO of Castle Hill Partners. Previously Mr. Schloss was an independent director and audit committee chairman of Giant Interactive Group Inc. and an independent director of Zhaopin Limited. From 2008 to 2012, Mr. Schloss served as the chief executive officer of Allied Pacific Sports Network Limited, a leading internet and wireless provider of live and on-demand sports programs in Asia. Prior to joining Allied Pacific Sports Network Limited, Mr. Schloss worked at TOM Online Inc., serving as the chief financial officer from 2003 to 2005, as an executive director from 2004 to 2007 and as the chief legal officer from 2005 to 2007. Mr. Schloss received a bachelor's degree in political science and a juris doctor degree from Tulane University.

*Mr. Richard Weidong Ji* has served as our independent director since May 2013. Mr. Ji currently also serves on the board of directors of Full Truck Alliance Co. Ltd. (NYSE: YMM). Mr. Ji is the cofounder and managing partner of All-Stars Investment Limited, which focuses on investing in technology leaders, such as Didi, Xiaomi, Full Truck Alliance and Grab. From 2005 to 2012, Mr. Ji served as managing director and head of Asia-Pacific Internet/media investment research at Morgan Stanley Asia Limited. During his time with Morgan Stanley, Mr. Ji was consistently rated as one of the top internet analysts covering the Chinese internet according to the Institutional Investor and Greenwich Associates' annual surveys. Over Mr. Ji's career, he has received many awards from reputable publications and research groups including the Financial Times, South China Morning Post, Asiamoney, Absolute Return & Alpha magazine and iResearch Consulting Group. Mr. Ji holds a doctor of sciences degree from Harvard University, an MBA from the Wharton School of Business at the University of Pennsylvania and a bachelor's degree in of Science from Fudan University in China.

*Mr. David Tang* has served as our independent director since May 2013. Mr. Tang currently serves as partner and chief value officer of Kaiyun Energy, focusing on hydrogen for commercial applications. Prior to that, he was a managing director of Nokia Growth Partners, a global venture capital firm that specializes in investing in mobile technologies and mobile businesses. From 2011 to 2012, Mr. Tang was the vice president of the European Union Chamber of Commerce in China, vice chairman of the China Association of Enterprises with Foreign Investments, and vice chairman of the Beijing International Chamber of Commerce. Mr. Tang has spent nearly a decade with the Nokia group, having served as the vice chairman of Nokia (China) Investment Co., Ltd. and chairman of Nokia Telecommunications Ltd. where he was responsible for government relations, strategic partnerships, corporate development, and sustainability. Prior to serving in those roles, he was the vice president of sales for Nokia in the greater China region from 2005 to 2009. Mr. Tang has also held executive positions in other leading global technology firms such as Apple, AMD, 3Com, DEC, and AST. Mr. Tang received his bachelor's degree in Computer Science and Engineering from California State University at Long Beach and a master's degree in Business from California State University at Fullerton.

*Mr. Fuyong Liu* has served as our vice president of the finance since April 2023, responsible for our company's overall finance activities, investor communications and procurement. He previously served as our general manager of finance since September 2019. Prior to joining us, Mr. Liu was with Huawei, most recently as chief financial officer of its Norway Region from April 2018 to September 2019, and prior to that, he held various finance positions for Huawei in China, Singapore and South America between 2009 and 2018. Mr. Liu received a master's degree in Economics from Nankai University in China.

## **B. Compensation of Directors and Executive Officers**

For the fiscal year ended December 31, 2023, we paid an aggregate of US\$2.3 million in cash, including salaries and bonuses, to our directors and executive officers. For details on JOYY's share incentive grants to our directors and officers, see "—Share Incentive Plans." Other than the share incentive awards granted pursuant to JOYY's share incentive plans, Ms. Ting Li and Mr. Fuyong Liu also received share incentive awards entitling them to certain number of shares in Shoptline, which represented insignificant value as of the date of this annual report. For the fiscal year ended December 31, 2023, we made contributions for our directors and executive officers for their pension insurance, medical insurance, housing fund, unemployment and other statutory benefits in an aggregate amount of US\$0.1 million. We did not set aside or accrue any other pension or retirement benefits for our directors and executive officers for the fiscal year ended December 31, 2023.

### **Employment Agreements**

We have entered into employment agreements with our senior executive officers. We may terminate a senior executive officer's employment for cause at any time without remuneration for certain acts of the officer, such as being convicted of any criminal conduct, any act of gross or willful misconduct or any serious, willful, grossly negligent or persistent breach of any employment agreement provision, or engaging in any conduct which may make the continued employment of such officer detrimental to our company. We may also terminate a senior executive officer's employment by giving three months' prior written notice. A senior executive officer may terminate his or her employment at any time by giving three months' written notice, provided that such notice may only be given by the officer any time after the third anniversary of his or her employment.

Each senior executive officer has agreed to hold all information, know-how and records in any way connected with the business of our company, including, without limitation, all formulae, designs, specifications, drawings, data, operations and testing procedures, manuals and instructions and all customer and supplier lists, sales information, business plans and forecasts and all technical or other expertise and all computer software of our company, in strict confidence during and after his or her employment. Each officer also agrees that we shall own all the intellectual property developed by such officer during his or her employment.

### **Share Incentive Plans**

We adopted three share incentive plans in 2009, in 2011 (amended and restated in 2021), and in 2019. The purpose of these share incentive plans is to attract and retain personnel by linking the personal interests of the members of the board, officers, employees and consultants to the success of our business and by providing such individuals with an incentive for outstanding performance.

As of March 31, 2024, options to purchase 8,574,220 Class A common shares, 5,968,858 restricted shares and 43,061,343 restricted share units were outstanding under these three share incentive plans.

### **2009 Employee Equity Incentive Scheme**

We adopted the 2009 Employee Equity Incentive Scheme in December 2009. In September 2011, YY Inc. (currently known as JOYY Inc.) assumed all the rights and obligations of Duowan Entertainment Corporation under all share-based compensation previously issued by Duowan Entertainment Corporation, including under the relevant award agreement and under the 2009 Employee Equity Incentive Scheme, if applicable, and undertook to issue its own common shares upon the exercise of any share-based compensation awards previously issued by Duowan Entertainment Corporation, subject to compliance with the terms and conditions of the relevant award agreements and the 2009 Employee Equity Incentive Scheme, if applicable. The 2009 Employee Equity Incentive Scheme expired in December 2019. No further awards will be granted under the 2009 Employee Equity Incentive Scheme and the provisions under the 2009 Employee Equity Incentive Scheme will remain in effect to the extent necessary to effect the exercise of any options granted prior to their expiration or otherwise as may be required in accordance with the 2009 Employee Equity Incentive Scheme.

### **Amended and Restated 2011 Share Incentive Plan**

We adopted the original 2011 share incentive plan in September 2011, which was amended in October 2012 and further amended and restated in September 2021. Upon the adoption of the Amended and Restated 2011 Share Incentive Plan, or the Amended and Restated 2011 Plan, it replaced the previously adopted 2011 share incentive plan in its entirety and the awards granted and outstanding thereunder remain effective and binding under the Amended and Restated 2011 Plan. Under the Amended and Restated 2011 Plan, the maximum number of common shares reserved for issuance under the plan is 131,950,949, plus an annual increase of 20,000,000 on the first day of each fiscal year, beginning in 2022, or such smaller number of common shares as determined by our board of directors. As of March 31, 2024, the maximum aggregate number of shares which may be issued under the Amended and Restated 2011 Plan is 191,950,949, subject to further adjustments.

The following paragraphs summarize the terms of the Amended and Restated 2011 Plan.

**Types of Awards.** The following briefly describe the principal features of the various awards that may be granted under the Amended and Restated 2011 Plan.

- **Options.** Options provide for the right to purchase a specified number of our common shares at a specified price and usually will become exercisable at the discretion of our plan administrator in one or more installments after the grant date. The option exercise price may be paid, subject to the discretion of the plan administrator, in cash or check, in our common shares which have been held by the option holder for such period of time as may be required to avoid adverse accounting consequences, in other property with value equal to the exercise price, through a broker-assisted cashless exercise, or by any combination of the foregoing.
- **Restricted Shares.** A restricted share award is the grant of our common shares which are subject to certain restrictions and may be subject to risk of forfeiture. Unless otherwise determined by our plan administrator, a restricted share is nontransferable and may be forfeited or repurchased by us upon termination of employment or service during a restricted period. Our plan administrator may also impose other restrictions on the restricted shares, such as limitations on the right to vote or the right to receive dividends.
- **Restricted Share Units.** A restricted share unit award is the grant of the right to receive a common share at a future date and may be subject to forfeiture. Our plan administrator has the discretion to set performance objectives or other vesting criteria that will determine the number or value of restricted share units to be granted. Unless otherwise determined by our plan administrator, a restricted share unit is nontransferable and may be forfeited or repurchased by us upon termination of employment or service during a restricted period. Our plan administrator, at the time of grant, specifies the dates on which the restricted share units become fully vested.

**Plan Administration.** Our board or a committee of one or more members of our board duly authorized for the purpose of the Amended and Restated 2011 Plan can act as the plan administrator.

**Award Agreement.** Options, restricted shares or restricted shares units granted under the Amended and Restated 2011 Plan are evidenced by an award agreement that sets forth the terms, conditions and limitations for each grant.

**Option Exercise Price.** The exercise price in respect of any option shall be determined by the plan administrator and set forth in the award agreement which may be a fixed or variable price related to the fair market value of the shares. The exercise price per share subject to an option may be amended or adjusted in the absolute discretion of the plan administrator, the determination of which shall be final, binding and conclusive.

**Eligibility.** We may grant awards to our employees, consultants or directors.

**Term of the Awards.** The Amended and Restated 2011 Plan shall be valid and effective for a period of ten years from the date of effectiveness, which is the date of its adoption by our board of directors. The term of each option grant shall not exceed ten years from the date of the grant.

**Vesting Schedule.** In general, the plan administrator determines the vesting schedule, which is set forth in the award agreement.

**Transfer Restrictions.** Awards for options, restricted shares or restricted share units may not be transferred in any manner by the award holders and may be exercised only by such holders, subject to limited exceptions. Restricted shares may not be transferred during the period of restriction.

**Termination.** The plan administrator may at any time terminate the operation of the Amended and Restated 2011 Plan.

### **2019 Share Incentive Awards Arrangement**

We adopted the 2019 Share Incentive Awards Arrangement in March 2019, pursuant to which we can offer share-based awards to employees of BIGO. The 2019 Share Incentive Awards Arrangement reserved 65,922,045 Class A common shares for incentive awards to be granted.

In the event of any dividend, share split, combination or exchange of common shares, amalgamation, arrangement or consolidation, spin-off, recapitalization or other distribution (other than normal cash dividends) of our assets to our shareholders, or any other change affecting the shares of common shares or the share price of a common share, the board of directors shall make such proportionate adjustments, if any, as the board of directors in its discretion may deem appropriate to reflect such change with respect to (a) the aggregate number and type of shares that may be issued under the 2019 Share Incentive Awards Arrangement; (b) the terms and conditions of any outstanding awards (including, without limitation, any applicable performance targets or criteria with respect thereto); and (c) the grant or exercise price per share for any outstanding awards under the 2019 Share Incentive Awards Arrangement.

### **Grants of Options**

The following table summarizes, as of March 31, 2024, the outstanding options granted to our executive officers, directors and other individuals as a group under the Amended and Restated 2011 Plan.

	<b>Common Shares Underlying Options Awarded</b>	<b>Exercise Price (US\$/Share)</b>	<b>Date of Grant</b>	<b>Date of Expiration</b>
Ting Li	*	4.7025	June 30, 2018	June 30, 2026
	*	3.5350	June 30, 2018	June 30, 2025
	*	3.5350	June 30, 2019	June 30, 2025

\* The aggregate number of common shares underlying the outstanding options held by this individual is less than 1% of our total outstanding shares.

### **Grants of Restricted Shares**

As of March 31, 2024, the total amount of outstanding restricted shares granted to our executive officers, directors and other individuals as a group under the 2009 Employee Equity Incentive Scheme, the Amended and Restated 2011 Plan and the 2019 Share Incentive Awards Arrangement is 5,968,858, among which no restricted shares are granted to our directors or management team.

**Grants of Restricted Share Units**

The following table summarizes, as of March 31, 2024, the outstanding restricted share units granted to our executive officers, directors and other individuals as a group under the 2009 Employee Equity Incentive Scheme and the Amended and Restated 2011 Plan.

Name	Common Shares Underlying Restricted Share Units Granted	Date of Grant
David Xueling Li	*	April 30, 2013
	*	June 20, 2014
Ting Li	*	April 30, 2013
	*	June 20, 2014
	*	July 1, 2015
	*	June 30, 2018
	*	June 30, 2019
Qin Liu	*	August 6, 2015
Peter Andrew Schloss	*	November 7, 2012
	*	June 16, 2014
	*	November 7, 2015
Richard Weidong Ji	*	May 23, 2013
	*	June 16, 2014
David Tang	*	May 23, 2013
	*	June 16, 2014
Fuyong Liu	*	December 30, 2019
	*	July 20, 2022
	*	July 20, 2023
Other Individuals as a Group	36,616,763	January 1, 2011 to March 31, 2024
Total	43,061,343	

\* The aggregate number of common shares underlying the outstanding restricted share units, or RSUs, held by each of these individuals is less than 1% of our total outstanding shares.

**C. Board Practices**

Our board of directors currently consists of six directors. A director is not required to hold any shares in our company to qualify to serve as a director. A director may vote with respect to any contract, proposed contract, or arrangement in which he or she is materially interested. A director may exercise all the powers of the company to borrow money, mortgage its business, property and uncalled capital, and issue debentures or other securities whenever money is borrowed or as security for any obligation of the company or of any third party. See “Item 6. Directors, Senior Management and Employees—B. Compensation of Directors and Executive Officers” for a description of the employment agreements we have entered into with our senior executive officers.

**Committees of the Board of Directors**

We have established an audit committee, a compensation committee, a corporate governance and nominating committee and an investment committee under the board of directors. We have adopted a charter for each of the audit committee, compensation committee and the corporate governance and nominating committee. Each committee’s members and functions are described below.

**Audit Committee.** Our audit committee consists of Mr. Peter Andrew Schloss, Mr. David Tang and Mr. Richard Weidong Ji, and is chaired by Mr. Schloss. We have determined that each of Mr. Schloss, Mr. Tang and Mr. Ji satisfies the “independence” requirements of Rule 5605(c)(2) of the Listing Rules of the Nasdaq Global Select Market and meet the independence standards under Rule 10A-3 under the Securities Exchange Act of 1934, as amended. We have determined that Mr. Schloss qualifies as an “audit committee financial expert.” The audit committee oversees our accounting and financial reporting processes and the audits of the financial statements of our company. The audit committee is responsible for, among other things:

- selecting the independent registered public accounting firm and pre-approving all auditing and non-auditing services permitted to be performed by the independent registered public accounting firm;
- reviewing with the independent registered public accounting firm any audit problems or difficulties and management’s response;

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- reviewing and approving all proposed related party transactions, as defined in Item 404 of Regulation S-K under the Securities Act;
- discussing the annual audited financial statements with management and the independent registered public accounting firm;
- reviewing major issues as to the adequacy of our internal controls and any special audit steps adopted in light of any material control deficiencies;
- annually reviewing and reassessing the adequacy of our audit committee charter;
- meeting separately and periodically with management and the independent registered public accounting firm; and
- reporting regularly to the board.

**Compensation Committee.** Our compensation committee consists of Mr. David Xueling Li and Mr. David Tang, and is chaired by Mr. David Xueling Li. We have determined that Mr. Tang satisfies the “independence” requirements of Rule 5605(c)(2) of the Listing Rules of the Nasdaq Global Select Market. The compensation committee assists the board in reviewing and approving the compensation structure, including all forms of compensation, relating to our directors and executive officers. Our directors may not be present at any committee meeting during which their compensation is deliberated upon. The compensation committee is responsible for, among other things:

- reviewing the total compensation package for our executive officers and making recommendations to the board with respect to it;
- approving and overseeing the total compensation package for our executives other than the three most senior executives;
- reviewing the compensation of our directors and making recommendations to the board with respect to it;
- periodically reviewing and approving any long-term incentive compensation or equity plans, programs or similar arrangements, annual bonuses, and employee pension and welfare benefit plans; and
- selecting compensation consultant, legal counsel or other adviser only after taking into consideration all factors relevant to that person’s independence from management.

**Corporate Governance and Nominating Committee.** Our corporate governance and nominating committee consists of Mr. David Tang, Mr. Qin Liu and Mr. Peter Andrew Schloss, and is chaired by Mr. Tang. We have determined that each of Mr. Tang and Mr. Schloss satisfies the “independence” requirements of Rule 5605(c)(2) of the Listing Rules of the Nasdaq Global Select Market. The corporate governance and nominating committee assists the board in selecting individuals qualified to become our directors and in determining the composition of the board and its committees. The corporate governance and nominating committee is responsible for, among other things:

- recommending nominees to the board for election or re-election to the board, or for appointment to fill any vacancy on the board;
- reviewing annually with the board the current composition of the board with regards to characteristics such as independence, age, skills, experience and availability of service to us;
- selecting and recommending to the board the names of directors to serve as members of the audit committee and the compensation committee, as well as of the corporate governance and nominating committee itself; and
- monitoring compliance with our code of business conduct and ethics, including reviewing the adequacy and effectiveness of our procedures to ensure proper compliance.

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**Investment Committee.** Our investment committee consists of Mr. David Xueling Li and Mr. Qin Liu. The investment committee is responsible for negotiating and determining the nature, timing, amount and other terms of an investment if such investment amount ranges from US\$50 million to US\$200 million.

**Duties of Directors**

Under Cayman Islands law, our directors owe fiduciary duties to our company including a duty of loyalty, a duty to act honestly, and a duty to act in what they consider in good faith to be in our best interests. Our directors also have a duty to exercise the care and diligence that a reasonably prudent person would exercise in comparable circumstances and a duty to exercise the skill they actually possess. It was previously considered that a director need not exhibit in the performance of his duties a greater degree of skill than may reasonably be expected from a person of his knowledge and experience. However, English and Commonwealth courts have moved towards an objective standard with regard to the required skill and care and these authorities are likely to be followed in the Cayman Islands. In fulfilling their duty of care to us, our directors must ensure compliance with our memorandum and articles of association and the class rights vested thereunder in the holders of the shares. Our company has the right to seek damages if a duty owed by our directors is breached. In limited exceptional circumstances, a shareholder may have the right to seek damages in our name if a duty owed by our directors is breached.

**Terms of Directors and Officers**

Our officers are elected by and serve at the discretion of the board. Our directors are not subject to a term of office and hold office until such time as they resign or are removed from office by special resolution of our shareholders. A director will be removed from office automatically if, among other things, the director (1) becomes of unsound mind or dies, (2) without special leave of absence from our board, is absent from meetings of our board for six consecutive months and our board resolves that his office be vacated; (3) becomes bankrupt or has a receiving order made against him or suspends payment or compounds with his creditors; (4) is prohibited by law from being a director; or (5) ceases to be a director by virtue of any provision of the Companies Act or other laws of the Cayman Islands or is removed from office pursuant to our articles of association.

**Board Diversity Matrix**

Country of Principal Executive Offices	Singapore			
Foreign Private Issuer	Yes			
Disclosure Prohibited Under Home Country Law	No			
Total Number of Directors	6			
	<b>Female</b>	<b>Male</b>	<b>Non-Binary</b>	<b>Did Not Disclose Gender</b>
<b>Part I: Gender Identity</b>				
Directors	1	5	—	—
<b>Part II: Demographic Background</b>				
Underrepresented Individual in Home Country Jurisdiction			—	
LGBTQ+			—	
Did Not Disclose Demographic Background			—	

## D. Employees

The following table sets forth the numbers of our employees, categorized by function, as of December 31, 2023:

Functions	Number of Employees	Percentage
Customer services and operations	2,623	42 %
Research and development	2,565	41 %
General and administration	594	9 %
Sales and marketing	510	8 %
Total	6,292	100 %

We had a total of 7,449, 6,681 and 6,292 employees as of December 31, 2021, 2022 and 2023, respectively. The number of our global workforce was slightly down year over year as we implemented certain measures to pursue greater efficiency and to realign our business and strategic priorities. We have developed a corporate culture that encourages initiative, technical superiority and self-development. In addition, we periodically evaluate our employees' performance and provide them with training sessions tailored to each job function to enhance performance and service quality.

As of March 31, 2024, we had a certain number of employees in mainland China. As required by regulations in mainland China, we participate in various employee social security plans that are organized by municipal and provincial governments, including pension, unemployment insurance, childbirth insurance, work-related injury insurance, medical insurance and housing insurance. We are required under law of mainland China to make contributions to employee benefit plans at specified percentages of the salaries, bonuses and certain allowances of our employees, up to a maximum amount specified by the local government from time to time. We believe that we maintain a good working relationship with our employees and we have not experienced any significant labor disputes.

## E. Share Ownership

### Class A Common Shares

As of March 31, 2024, we had 854,753,293 Class A common shares issued and outstanding (excluding 463,087,171 outstanding restricted shares and treasury Class A common shares held by entities controlled by us).

### Class B Common Shares

As of March 31, 2024, we had 326,509,555 Class B common shares outstanding.

### Beneficial Ownership

The following table sets forth information concerning the beneficial ownership of our common shares as of March 31, 2024, by:

- each of our directors and executive officers; and
- each person known to us to beneficially own 5% or more of our common shares.

Beneficial ownership is determined in accordance with the rules and regulations of the SEC. In computing the number of shares beneficially owned by a person and the percentage ownership of that person, we have included shares that the person has the right to acquire or that would become unrestricted shares within 60 days after March 31, 2024, the most recent practicable date, including through the exercise of any option, warrant, or other right or the conversion of any other security. These shares, however, are not included in the computation of the percentage ownership of any other person.

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The calculations in the table below assume that there were 854,753,293 Class A common shares outstanding (excluding 463,087,171 outstanding restricted shares and treasury Class A common shares held by entities controlled by us) and 326,509,555 Class B common shares as of March 31, 2024.

	Class A	Class B	Total Common Share		Total
	Common Shares	Common Shares	Beneficially Owned		Voting
	Beneficially	Beneficially	Beneficially Owned		Power <sup>(5)</sup>
	Owned <sup>(1)</sup>	Owned <sup>(2)</sup>	Number <sup>(3)</sup>	% <sup>(4)</sup>	%
	Number	Number	Number <sup>(3)</sup>	% <sup>(4)</sup>	%
<b>Directors and Executive Officers:*</b>					
David Xueling Li <sup>(6)</sup>	160,505,284	203,768,062	364,273,346	30.7	83.0
Ting Li	**	—	**	**	**
Qin Liu	**	—	**	**	**
Peter Andrew Schloss	**	—	**	**	—
Richard Weidong Ji	**	—	**	**	**
David Tang	**	—	**	**	—
Fuyong Liu	**	—	**	**	—
All directors and executive officers as a group	179,218,069	203,768,062	382,986,131	32.0	83.3
<b>Principal Shareholders:</b>					
YYME Limited <sup>(7)</sup>	156,340,804	203,768,062	360,108,866	30.5	53.3
Top Brand Holdings Limited <sup>(8)</sup>	—	122,741,483	122,741,483	10.4	—
FMR LLC <sup>(9)</sup>	88,158,960	—	88,158,960	7.5	2.1

Notes:

- \* Except for Mr. Peter Andrew Schloss, Mr. Richard Weidong Ji, Mr. David Tang and Mr. Qin Liu, the business address of our directors and executive officers is c/o 30 Pasir Panjang Road #15-31A Mapletree Business City, Singapore 117440. The business address of Mr. Qin Liu is Suite 905-6, 9th Floor, ICBC Tower, Three Garden Road, Hong Kong S.A.R. The business address of Mr. Peter Andrew Schloss is 602 Silver Tower, No. 2 Dong San Huan Bei Lu, Chaoyang District, Beijing 100027, People's Republic of China. The business address of Mr. Richard Weidong Ji is Suite 2103, Two Exchange Square, 8 Connaught Place, Central, Hong Kong S.A.R. The business address of Mr. David Tang is 3306 Longwan Villa, Houshayu, Shunyi District, Beijing 101318, People's Republic of China.
- \*\* The aggregate number of common shares beneficially owned by each of these individuals is less than 1% of our total outstanding shares.
- (1) Represents the number of Class A common shares beneficially owned by such person or group, including shares that such person or group has the right to acquire within 60 days of March 31, 2024.
- (2) Represents the number of Class B common shares beneficially owned by such person or group, including shares that such person or group has the right to acquire within 60 days of March 31, 2024.
- (3) Represents the sum of Class A and Class B common shares beneficially owned by such person or group.
- (4) For each person and group included in this column, percentage ownership is calculated by dividing the number of total common shares beneficially owned by such person or group, by the sum of the number of common shares outstanding and the number of common shares such person or group has the right to acquire upon exercise of the stock options or warrants within 60 days after March 31, 2024.
- (5) For each person or group included in this column, the percentage of total voting power represents voting power based on both Class A and Class B common shares held by such person or group with respect to all of our outstanding Class A and Class B common shares as one class. Each holder of Class A common shares is entitled to one vote per share. Each holder of our Class B common shares is entitled to ten votes per share on all matters requiring a shareholders' vote. Our Class B common shares are convertible at any time by the holder into Class A common shares on a one-for-one basis, whereas Class A common shares are not convertible into Class B common shares under any circumstances.
- (6) Representing (i) 156,340,804 Class A common shares (including 17,800,000 Class A common shares in the form of ADSs) and 199,448,382 Class B common shares held by YY One Limited, a British Virgin Islands company, (ii) 4,319,680 Class B common shares held by New Wales Holdings Limited, a British Virgin Islands company, and (iii) 4,164,480 Class A common shares underlying options and restricted share units granted to Mr. David Xueling Li that have vested or will become vested within 60 days of March 31, 2024. Mr. David Xueling Li is the sole owner and director of YYME Limited. Each of YY One Limited and New Wales Holdings Limited is wholly-owned by YYME Limited. In August 2016, Mr. Jun Lei, who beneficially owned 122,741,483 Class B common shares as of March 31, 2024, delegated the voting rights of such shares to Mr. David Xueling Li.
- (7) Representing (i) 156,340,804 Class A common shares and 199,448,382 Class B common shares held by YY One Limited, a British Virgin Islands company, and (ii) 4,319,680 Class B common shares held by New Wales Holdings Limited, a British Virgin Islands company. Mr. David Xueling Li is the sole owner and director of YYME Limited. Each of YY One Limited and New Wales Holdings Limited is wholly owned by YYME Limited. The business address of YYME Limited is c/o David Xueling Li, 30 Pasir Panjang Road #15-31A Mapletree Business City, Singapore 117440.
- (8) Representing 122,741,483 Class B common shares held by Top Brand Holdings Limited, a BVI company wholly owned and controlled by Mr. Jun Lei. The voting rights of such 122,741,483 Class B common shares were delegated to Mr. David Xueling Li in August 2016. The business address of Top Brand Holdings Limited is c/o Jun Lei, 19E, Huating Jiayuan, No.6 of Middle Beisihuan Road, Chaoyang District, Beijing 100102, People's Republic of China.
- (9) Representing 88,158,960 Class A common shares represented by ADSs beneficially owned by FMR LLC as of December 29, 2023, as reported in a Schedule 13G filed by FMR LLC on February 9, 2024. Please see the Schedule 13G filed by FMR LLC with the SEC on February 9, 2024 for information relating to FMR LLC, certain of its subsidiaries and affiliates, and other companies. The principal business address of FMR LLC is located at 245 Summer Street, Boston, Massachusetts 02210, the United States.

As of March 31, 2024, we had a total of 1,181,262,848 common shares issued and outstanding, including 854,753,293 Class A common shares (excluding 463,087,171 outstanding restricted shares and treasury Class A common shares held by entities controlled by us) and 326,509,555 Class B common shares. Based on a review of the register of members maintained by our Cayman Islands corporate administrator, we believe that 1,166,716,520 Class A common shares (including restricted shares and treasury Class A common shares held by entities controlled by us) were held by Citi (Nominees) Limited, a record holder designed by Citibank, N.A., the depository of our ADS program that resides in the United States. The number of beneficial owners of our ADSs in the United States is likely to be much larger than the number of record holders of our common shares in the United States. None of our existing shareholders have different voting rights from other shareholders in the same class. See “Item 6. Directors, Senior Management and Employees—B. Compensation of Directors and Executive Officers—Employment Agreements” for a description of the employment agreements we have entered into with our senior executive officers.

Our common shares are divided into Class A common shares and Class B common shares. Holders of Class A common shares are entitled to one vote per share, while holders of Class B common shares are entitled to ten votes per share. We are not aware of any arrangement that may, at a subsequent date, result in a change of control of our company.

**F. Disclosure of a Registrant’s Action to Recover Erroneously Awarded Compensation**

Not applicable.

**ITEM 7. MAJOR SHAREHOLDERS AND RELATED PARTY TRANSACTIONS**

**A. Major Shareholders**

Please refer to “Item 6. Directors, Senior Management and Employees—E. Share Ownership.”

**B. Related Party Transactions**

**VIE Structure and the Contractual Arrangements**

The government of mainland China extensively regulates foreign ownership of, and the licensing and permit requirements pertaining to, companies that provide internet-based services such as our platforms to the extent that they operate in mainland China. To comply with these restrictions, we conduct our mainland China operations that are subject to these restrictions through the variable interest entities and the contractual arrangements with them. The contractual arrangements with the primary operating variable interest entities that we currently rely on to conduct our main operations in mainland China include (i) the contractual arrangements among BaiGuoYuan Technology, Guangzhou BaiGuoYuan and its direct and indirect shareholders, and (ii) the contractual arrangements among Guangzhou Huanju Shidai, Guangzhou Ruicheng and its direct and indirect shareholders, through which we direct the business operations of Guangzhou Huaduo, a wholly-owned subsidiary indirectly held by Guangzhou Ruicheng.

We have set up the structure we use to hold the major operating variable interest entities to ensure the stability and proper governance of the operating variable interest entities as an integral part of our company. Each of our operating variable interest entity is typically held by a limited liability company in mainland China. This limited liability company in mainland China is in turn directly or indirectly owned by two limited partnerships in mainland China, each of which holds 50% of the equity interest. Each of these partnerships is comprised of (i) a limited liability company in mainland China as general partner (which is formed by a number of selected individuals of our company and our management who are PRC citizens), and (ii) the same group of natural persons as limited partners. For the primary operating variable interest entities, these individuals are Ting Li, Lin Song and Di Fu (with respect to each of Guangzhou Huaduo and Guangzhou BaiGuoYuan). A designated wholly foreign-owned entity, on the one hand, and the corresponding VIE and the multiple layers of legal entities above the VIE, as well as the natural persons described above, on the other hand, enter into contractual arrangements as summarized below.

There continue to be risks associated with the VIE structure in general. See “Item 3. Key Information—D. Risk Factors—Risks Related to Our Corporate Structure.”

The following is a summary of our contractual arrangements with our primary operating VIEs.

### ***Contractual Arrangements with Guangzhou BaiGuoYuan***

The following is a summary of the currently effective contracts among (i) our subsidiary, BaiGuoYuan Technology, (ii) a variable interest entity, Guangzhou BaiGuoYuan Network Technology Co., Ltd., or Guangzhou BaiGuoYuan, and (iii) the direct and indirect shareholders of Guangzhou BaiGuoYuan.

#### ***Exclusive Service Agreement***

Under the exclusive service agreement dated January 15, 2021 entered into among BaiGuoYuan Technology, Guangzhou BaiGuoYuan and each direct and indirect shareholder of Guangzhou BaiGuoYuan, BaiGuoYuan Technology has the right to exclusively provide relevant services to Guangzhou BaiGuoYuan and each direct and indirect shareholders of Guangzhou BaiGuoYuan, including, without limitations, the licensing of software, technology support, training, research and business consulting services related to their applicable business, the scope of which is to be determined by BaiGuoYuan Technology from time to time. The service scope and service fee payable by such companies to BaiGuoYuan Technology is determined at the sole discretion of BaiGuoYuan Technology. The term of each exclusive service agreement is twenty years and will be automatically extended year by year unless BaiGuoYuan Technology delivers a prior written notice to such shareholder not to extend the term.

#### ***Proxy Agreement***

Under the proxy agreement dated January 15, 2021 entered into among BaiGuoYuan Technology, Guangzhou BaiGuoYuan and each direct and indirect shareholder of Guangzhou BaiGuoYuan, each such shareholder irrevocably authorized BaiGuoYuan Technology or its designee(s) to act on their respective behalf as proxy attorney, including, but not limited to, proposing to convene or attend shareholder meetings, voting at such meetings, appointing directors and senior management, disposal the equity interests under the respective exclusive service agreement. The term of each proxy agreement is twenty years and will be automatically extended year by year unless BaiGuoYuan Technology delivers prior written notice to the relevant parties under the proxy agreements not to extend the term.

#### ***Equity Interest Pledge Agreement***

Under the equity interest pledge agreement dated January 15, 2021 entered into among BaiGuoYuan Technology, Guangzhou BaiGuoYuan and each direct and indirect shareholder of Guangzhou BaiGuoYuan, each such shareholders of Guangzhou BaiGuoYuan pledged all of its equity interests to BaiGuoYuan Technology to guarantee the performance by such shareholder's performance of their respective contractual obligations under the respective exclusive service agreement, exclusive option agreement, and proxy agreement to which such shareholder is a party. If such shareholder breaches its contractual obligations under those agreements, BaiGuoYuan Technology, as the pledgee, will be entitled to certain rights, including the right to dispose the pledged equity interests. We have completed the registration of the equity interest pledge under the equity interest pledge agreements with the relevant office of SAMR. The pledge will remain effective until the contractual obligations have been fully performed or the secured debts have been fully paid.

#### ***Exclusive Option Agreement***

Under the exclusive option agreement dated January 15, 2021 entered into among BaiGuoYuan Technology, Guangzhou BaiGuoYuan and each direct and indirect shareholder of Guangzhou BaiGuoYuan, each such shareholder irrevocably granted BaiGuoYuan Technology or its designee(s) an exclusive call option to purchase all or any part of its equity interests, all or any part of its assets, and an exclusive call option to request the capital increase into the relevant entity, to the extent permissible by the then-applicable PRC laws and regulations, at BaiGuoYuan Technology's sole discretion.

### ***Contractual Arrangements with Guangzhou Ruicheng***

The following is a summary of the currently effective contracts among (i) our subsidiary, Guangzhou Huanju Shidai, (ii) a variable interest entity, Guangzhou Ruicheng, and (iii) the direct and indirect shareholders of Guangzhou Ruicheng.

*Exclusive Services Agreement*

Under the exclusive services agreement dated December 9, 2020 entered into among Guangzhou Huanju Shidai, Guangzhou Ruicheng and each direct and indirect shareholder of Guangzhou Ruicheng, Guangzhou Huanju Shidai had the exclusive right to provide to Guangzhou Ruicheng and each direct and indirect shareholder of Guangzhou Ruicheng services related to their applicable business. Guangzhou Huanju Shidai owns the exclusive intellectual property rights created as a result of the performance of each exclusive services agreement. The service scope and service fee payable by Guangzhou Ruicheng and each of its direct and indirect shareholders to Guangzhou Huanju Shidai is determined by the sole discretion of Guangzhou Huanju Shidai. The term of each exclusive services agreement is twenty years and will be automatically extended year by year unless Guangzhou Huanju Shidai delivers a prior written notice to Guangzhou Ruicheng or its director and indirect shareholders not to extend the term.

*Voting Rights Proxy Agreement*

Under the voting rights proxy agreement dated December 9, 2020 entered into among Guangzhou Huanju Shidai, Guangzhou Ruicheng and each direct and indirect shareholder of Guangzhou Ruicheng, each such shareholders of Guangzhou Ruicheng irrevocably executed a power of attorney and appointed Guangzhou Huanju Shidai's designated representatives as its attorney-in-fact to exercise the shareholders' rights of such shareholders, including, without limitation, the power to vote on its behalf on all matters shareholder approval under PRC laws and regulations and the articles of association and their amendments from time to time and the rights to information. The term of each voting rights proxy agreement is twenty years and will be automatically extended year by year unless Guangzhou Huanju Shidai delivers a prior written notice to the relevant parties under the voting rights proxy agreements not to extend the term or upon mutual written agreement by all parties.

*Exclusive Option Agreement*

Under the exclusive option agreement dated December 9, 2020 entered into among Guangzhou Huanju Shidai, Guangzhou Ruicheng and each direct and indirect shareholders of Guangzhou Ruicheng, each such shareholder irrevocably granted Guangzhou Huanju Shidai or its designated representative(s) an exclusive option to purchase, to the extent permitted under PRC law, all or part of its equity interests in the relevant entities. Guangzhou Huanju Shidai or its designated representative(s) had sole discretion as to when to exercise such options, either in part or in full. Without Guangzhou Huanju Shidai's prior written consent, the direct and indirect shareholders of Guangzhou Ruicheng shall not sell, transfer, mortgage or otherwise dispose their equity interests that directly or indirectly relating to Guangzhou Ruicheng. Each exclusive option agreement will remain effective until all the equity interests in or assets held by the relevant shareholders are transferred to Guangzhou Huanju Shidai or its designated representative(s) or may be terminated at Guangzhou Huanju Shidai's sole discretion.

*Equity Interest Pledge Agreement*

Under the equity interest pledge agreement dated December 9, 2020 entered into among Guangzhou Huanju Shidai, Guangzhou Ruicheng and each direct and indirect shareholder of Guangzhou Ruicheng, each such shareholder of Guangzhou Ruicheng pledged all of its equity interests to Guangzhou Huanju Shidai to guarantee the performance by such shareholders' performance of their respective contractual obligations under the exclusive service agreement, exclusive option agreement, and voting rights proxy agreement. If such shareholder breaches its contractual obligations under those agreements, Guangzhou Huanju Shidai, as the pledgee, will be entitled to certain rights, including the right to sell the pledged equity interests. The pledge will remain effective until the contractual obligations have been fully performed or the secured debts have been fully paid.

### **Other Immaterial Contractual Arrangements**

We also entered into contractual arrangements among our subsidiaries, several immaterial variable interest entities, their shareholders and primary beneficiaries, with terms and conditions substantially similar to the ones summarized above. As of the date of this annual report, those immaterial contractual arrangements include the ones among: (i) Huanju Shidai Technology (Beijing) Co., Ltd., Beijing Tuda Science and Technology Co., Ltd. and its shareholders; (ii) Haishaman (Shanghai) Information Technology Co., Ltd., Shanghai Ruogu Information Technology Co., Ltd. and its shareholders; (iii) Blue Buck Network Technology (Beijing) Co., Ltd., Guangzhou Blue Ocean Whale Riding Technology Co., Ltd., Beijing Cengcengceng Information Technology Co., Ltd. and its shareholder; (iv) Guangzhou Wangxing Information Technology Co., Ltd., Chengdu Yunbu Internet Technology Co., Ltd. and its shareholder; (v) Guangzhou Wangxing Information Technology Co., Ltd., Chengdu Luota Internet Technology Co., Ltd. and its shareholder; (vi) Guangzhou Wangxing Information Technology Co., Ltd., Chengdu Jiyue Internet Technology Co., Ltd. and its shareholder; and (viii) Guangzhou Blue Ocean Whale Riding Technology Co., Ltd., Guangzhou Blue Whale Weaving Garment Co., Ltd. and its shareholders. In connection with the contractual arrangements with those immaterial variable interest entities, the pledge of equity interest in Chengdu Jiyue Internet Technology Co., Ltd. by its shareholders, the pledge of equity interest in Chengdu Luota Internet Technology Co., Ltd. by its shareholders, the pledge of equity interest in Chengdu Yunbu Internet Technology Co., Ltd. by its shareholders, and the equity interest pledged by the shareholders of Beijing Tuda of their equity in Beijing Tuda have not been registered with the competent office of SAMR.

### **Transactions with Affiliate**

**Purchases of promotional services.** For the years ended December 31, 2021, 2022 and 2023, we purchased promotional services amounting to US\$3.1 million, US\$5.3 million and US\$8.0 million, respectively, from certain related parties.

**Loans to related parties.** For the years ended December 31, 2021, 2022 and 2023, we provided loans to certain related parties amounting to US\$34.0 million, US\$28.1 million and nil, respectively.

**Payments on behalf of related parties.** For the years ended December 31, 2021, 2022 and 2023, we made payments on behalf of certain related parties amounting to US\$55.3 million, US\$36.5 million and insignificant amount, respectively, net of repayments.

See Note 28 to our audited consolidated financial statements included elsewhere in this annual report for further information about our related party transactions.

### **Employment Agreements**

See “Item 6. Directors, Senior Management and Employees—B. Compensation of Directors and Executive Officers—Employment Agreements” for a description of the employment agreements we have entered into with our senior executive officers.

### **Share Incentives**

See “Item 6. Directors, Senior Management and Employees—B. Compensation of Directors and Executive Officers” for a description of share-based compensation awards we have granted to our directors, officers and other individuals as a group.

### **C. Interests of Experts and Counsel**

Not applicable.

## ITEM 8. FINANCIAL INFORMATION

### A. Consolidated Statements and Other Financial Information

See “Item 18. Financial Statements.”

#### Legal Proceedings

On November 20, 2020, a putative securities class action complaint captioned *Hersheve v. JOYY Inc. et al.*, No. 2:20-cv-10611 (C.D. Cal.) was filed in the United States District Court for Central District of California against us and certain of our current and former officers. The complaint asserts claims for violations of Sections 10(b) and 20(a) of the Securities Exchange Act of 1934 and Rule 10b-5 promulgated thereunder and seeks damages based on alleged material misrepresentations and omissions about our revenue, component businesses, and acquisition of BIGO. The proposed class period was April 28, 2016 through November 18, 2020, inclusive. On March 9, 2022, the court granted the defendants’ motion to dismiss and dismissed the operative complaint in its entirety with prejudice. On April 8, 2022, the co-lead plaintiffs filed a notice of appeal. The court heard oral argument on April 21, 2023. The appellate court affirmed the district court’s decision on May 9, 2023 and issued the formal mandate on May 31, 2023. This class action was resolved.

We are not currently a party to any pending material litigation or other material legal proceeding and are not aware of any pending or threatened litigation or other legal proceeding that may have a material adverse impact on our business or operations. However, we may be subject to various legal proceedings and claims that are incidental to our ordinary course of business. Regardless of the outcome, legal or administrative proceedings or claims may have an adverse impact on us because of defense and settlement costs, diversion of management attention and other factors.

#### Dividend Policy

On August 11, 2020, our board of directors approved a quarterly dividend policy for three years commencing from the distribution for the second quarter of 2020. Under the policy, total cash dividend amount expected to be paid would be approximately US\$300 million and quarterly dividends would be set at approximately US\$25 million in each fiscal quarter. This policy expired after the distribution for the first quarter of 2023. On November 20, 2020, our board of directors approved an additional quarterly dividend policy for three years commencing from the distribution for the third quarter of 2020, under which the total cash dividend amount expected to be paid would be approximately US\$200 million and quarterly dividend would be set at a fixed amount of approximately US\$16.67 million in each fiscal quarter. This policy expired after the distribution for the second quarter of 2023. We paid dividends in a net aggregate amount of US\$454.8 million in accordance with these two quarterly dividend policies.

We are a holding company incorporated in the Cayman Islands. We may receive dividends from our subsidiaries for our cash requirements, including any payment of dividends to our shareholders. Our ability to pay dividends depends upon dividends paid by our subsidiaries, which is subject to restrictions imposed by the applicable laws and regulations in these markets. In certain jurisdictions, such as Singapore, there are currently no foreign exchange control regulations which restrict the ability of our subsidiaries in these jurisdictions to distribute dividends to us. However, the relevant regulations may be changed and the ability of these subsidiaries to distribute dividends to us may be restricted in the future. As for the jurisdiction of mainland China, regulations of mainland China may restrict the ability of our subsidiary in mainland China to pay dividends to us. See “Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in Jurisdictions We Operate—Our subsidiaries and the variable interest entities in mainland China are subject to restrictions on paying dividends or making other payments to us, which may restrict our ability to satisfy our liquidity requirements” and “Item 4. Information on the Company—B. Business Overview—Regulations in Multiple Jurisdictions Where We Operate—Mainland China Regulations—Regulation of Foreign Currency Exchange and Dividend Distribution.”

Our board of directors has complete discretion on whether to distribute dividends, subject to the applicable laws. Even if our board of directors decides to pay dividends, the form, frequency and amount will depend upon our future operations and earnings, capital requirements and surplus, general financial condition, contractual restrictions and other factors that the board of directors may deem relevant. If we pay any dividends, we will pay our ADS holders to the same extent as holders of our Class A common shares, subject to the terms of the deposit agreement, including the fees and expenses payable thereunder. See “Item 12. Description of Securities Other than Equity Securities—D. American Depositary Shares.” Cash dividends on our Class A common shares, if any, will be paid in U.S. dollars.

**B. Significant Changes**

Except as disclosed elsewhere in this annual report, we have not experienced any significant changes since the date of our audited consolidated financial statements included in this annual report.

**ITEM 9. THE OFFER AND LISTING**

**A. Offering and Listing Details**

See “—C. Markets” and “Item 12. Description of Securities other than Equity Securities—D. American Depositary Shares.” We have a dual-class common share structure in which Class A common shares have different voting rights from Class B common shares. Class B common shares are each entitled to ten votes, whereas Class A common shares are each entitled to one vote. See “Item 3. Key Information—D. Risk Factors—Risks Related to Our ADSs—Our dual class common share structure with different voting rights will limit your ability to influence corporate matters and could discourage others from pursuing any change of control transactions that holders of our Class A common shares and ADSs may view as beneficial.”

**B. Plan of Distribution**

Not applicable.

**C. Markets**

Our ADSs, each representing twenty Class A common shares, have been listed on the Nasdaq Global Select Market since November 21, 2012 and trade under the symbol “YY.”

**D. Selling Shareholders**

Not applicable.

**E. Dilution**

Not applicable.

**F. Expenses of the Issue**

Not applicable.

**ITEM 10. ADDITIONAL INFORMATION**

**A. Share Capital**

Not applicable.

**B. Memorandum and Articles of Association**

We are a Cayman Islands exempted company and our affairs are governed by our memorandum and articles of association and the Companies Act (As Revised) of the Cayman Islands, referred to as the Companies Act below. The following are summaries of certain provisions of our memorandum and articles of association in effect as of the date of this annual report insofar as they relate to the material terms of our common shares.

## **Registered Office and Objects**

Our registered office in the Cayman Islands is located at Conyers Trust Company (Cayman) Limited, Cricket Square, Hutchins Drive, P.O. Box 2681, Grand Cayman, KYI-1111, Cayman Islands. The memorandum of association provides, inter alia, that the liability of the members of our company is limited to the amount, if any, for the time being unpaid on the common shares. The objects for which our company is established are unrestricted (including acting as an investment company), and we shall have and be capable of exercising all the functions of a natural person of full capacity irrespective of corporate benefit, as provided in Section 27(2) of the Companies Act and in view of the fact that we are an exempted Company, we will not trade in the Cayman Islands with any person, firm or corporation except in furtherance of our business carried on outside the Cayman Islands.

## **Board of Directors**

See “Item 6. Directors, Senior Management and Employees—C. Board Practices—Duties of Directors” and “Item 6. Directors, Senior Management and Employees—C. Board Practices—Terms of Directors and Officers.”

## **Common Shares**

### ***General***

Our common shares are divided into Class A common shares and Class B common shares. Holders of Class A common shares and Class B common shares will have the same rights except for voting and conversion rights. The holders of ADSs will not be treated as our shareholders and will be required to surrender their ADSs for cancellation and withdrawal from the depository facility in which the Class A common shares are held in accordance with the provisions of the deposit agreement in order to exercise shareholders’ rights in respect of the Class A common shares. The depository will agree, so far as it is practical, to vote or cause to be voted the amount of underlying Class A common shares represented by ADSs in accordance with the non-discretionary written instructions of the holders of such ADSs.

All of our issued and outstanding common shares are fully paid and non-assessable. Our common shares are issued in registered form and are issued when registered in our register of members (shareholders). We may not issue shares to bearer. Our shareholders who are non-residents of the Cayman Islands may freely hold and vote their common shares.

## **Meetings**

As a Cayman Islands exempted company, we are not obliged by the Companies Act to call shareholders’ annual general meetings. Our third amended and restated memorandum and articles of association provide that we may (but are not obliged to) in each year hold a general meeting as our annual general meeting in which case we shall specify the meeting as such in the notices calling it, and the annual general meeting shall be held at such time and place as may be determined by our directors. In addition, extraordinary general meetings of our shareholders may be convened by a majority of our board of directors or the chairman of our board of directors. Advance notice in writing of at least ten clear days is required for the convening of our annual general meeting and any other general meeting of our shareholders. A quorum required for a meeting of shareholders consists of at least one or more shareholders present in person or by proxy, or (in the case of a shareholder being a corporation) by its duly authorized representative representing not less than one-third in nominal value of the total issued voting shares in our company throughout the meeting.

If our directors wish to make this facility available for a specific general meeting or all general meetings of our company, attendance and participation in any such general meeting may be by means of Communication Facilities (as defined in our articles of association, including video, video-conferencing, internet or online conferencing applications, telephone or tele-conferencing and/or any other video-communications, internet or online conferencing application or telecommunications facilities by means of which all persons participating in the meeting are capable of hearing and being heard by each other), including entirely virtual meetings. A shareholder attending any such general meeting by means of Communications Facilities shall be deemed to be present at the meeting, including for quorum purposes.

Notwithstanding that a meeting is called by shorter notice than that mentioned above, it will be deemed to have been duly called, if it is so agreed (a) in the case of a meeting called as an annual general meeting by all of our shareholders entitled to attend and vote at the meeting; and (b) in the case of any other meeting, by a majority in number of the shareholders having the right to attend and vote at the meeting, being a majority together holding not less than 95% in nominal value of the issued shares giving that right.

No business other than the appointment of a chairman may be transacted at any general meeting unless a quorum is present at the commencement of business. However, the absence of a quorum will not preclude the appointment of a chairman. If present, the chairman of our board of directors shall be the chairman presiding at any shareholders' meetings.

A corporation being a shareholder shall be deemed for the purpose of our articles of association to be present in person if represented by its duly authorized representative being the person appointed by resolution of the directors or other governing body of such corporation to act as its representative at the relevant general meeting or at any relevant general meeting of any class of our shareholders. Such duly authorized representative shall be entitled to exercise the same powers on behalf of the corporation that he represents as that corporation could exercise if it were our individual shareholder.

The quorum for a separate general meeting of the holders of a separate class of shares is described in “—Modification of Rights” below.

Our articles of association do not allow our shareholders to approve matters to be determined at shareholders' meetings by way of written resolutions without a meeting.

### **Voting Rights**

In respect of all matters requiring a shareholders' vote, each Class A common share is entitled to one vote, and each Class B common share is entitled to ten votes, voting together as one class. At any shareholders' meeting, and subject to the voting rights attached to our Class A common shares and Class B common shares as described in this paragraph, on a show of hands, every shareholder present (whether in person or by proxy (or, in the case of a shareholder being a corporation, by its duly authorized representative) or by means of Communications Facilities (as defined in our articles of association), if permitted) shall have one vote and on a poll, every shareholder present (whether in person or by proxy (or, in the case of a shareholder being a corporation, by its duly authorized representative) or by means of Communications Facilities (as defined in our articles of association), if permitted) shall have one vote for each fully paid share of which such shareholder is the holder.

No shareholder shall, unless our board of directors otherwise determines, be entitled to vote or be reckoned in a quorum, in respect of any share, unless such shareholder is duly registered as our shareholder and all calls or installments due by such shareholder to us have been paid.

If a clearing house (or its nominee(s)) or a central depository entity, being a corporation, is a shareholder, it may authorize such person or persons as it thinks fit to act as its representative(s) at any meeting or at any meeting of any class of shareholders, provided that the authorization shall specify the number and class of shares in respect of which each such person is so authorized. A person so authorized is entitled to exercise the same rights and powers on behalf of the clearing house or central depository entity (or its nominee(s)) as if such person was the registered holder of our shares held by the clearing house or central depository entity (or its nominee(s)) including the right to vote individually on a show of hands.

While there is nothing under the laws of the Cayman Islands which specifically prohibits or restricts the creation of cumulative voting rights for the election of directors of our company, it is not a concept that is accepted as a common practice in the Cayman Islands, and our company has made no provisions in our articles of association to allow cumulative voting for such elections.

### **Conversion**

Each Class B common share is convertible into one Class A common share at any time by the holder thereof. Class A common shares are not convertible into Class B common shares under any circumstances. Upon any transfer, sale, pledge, assignment or disposition of Class B common shares by a holder to any person or entity which is not an affiliate of such holder and which is not any of our founders or any affiliates of our founders, such Class B common shares shall be automatically and immediately converted into the equivalent number of Class A common shares. In addition, if at any time, Messrs. David Xueling Li, Jun Lei, Tony Bin Zhao and Jin Cao and their affiliates collectively beneficially own less than 5% of the total number of the issued and outstanding Class B common shares, each issued and outstanding Class B common share will be automatically and immediately converted into one Class A common share, and we will not issue any Class B common shares thereafter. Furthermore, if at any time more than 50% of the ultimate beneficial ownership of any holder of Class B common shares (other than our founders or our founders' affiliates) changes, each such Class B common share will be automatically and immediately converted into one Class A common share.

### **Calls on Shares and Forfeiture of Shares**

Subject to our memorandum and articles of association, our directors may from time to time make such calls upon the members in respect of any amounts unpaid on the shares held by them. The shares that have been called upon and remain unpaid after it has become due and payable are subject to forfeiture.

### **Protection of Minority Shareholders**

In principle, we will normally be the proper plaintiff to sue for a wrong done to us as a company because as a general rule a derivative action may not be brought by a minority shareholder. However, based on English authorities, which would in all likelihood be of persuasive authority in the Cayman Islands, the Cayman Islands court can be expected to apply and follow the common law principles (namely the rule in *Foss v. Harbottle* and the exceptions thereto) which permit a minority shareholder to commence a class action against, or derivative actions in the name of, a company to challenge the following:

- (i) an act which is illegal or ultra vires and is therefore incapable of ratification by the shareholders;
- (ii) an act which, although not ultra vires, could only be effected duly if authorized by a special or qualified majority vote that has not been obtained; and
- (iii) an act which constitutes a fraud against, the minority where the wrongdoers are themselves in control of the company.

In the case of a company (not being a bank) having its share capital divided into shares, the Grand Court of the Cayman Islands may, on the application of members holding not less than one fifth of the shares of the company in issue, appoint an inspector to examine the affairs of the company and to report thereon in such manner as the Grand Court of the Cayman Islands shall direct.

Any of our shareholders may petition the Grand Court of the Cayman Islands which may make a winding up order if the Grand Court of the Cayman Islands is of the opinion that it is just and equitable that we should be wound up or, as an alternative to a winding up order, (a) an order regulating the conduct of our affairs in the future, (b) an order requiring us to refrain from doing or continuing an act complained of by the shareholder petitioner or to do an act which the shareholder petitioner has complained we have omitted to do, (c) an order authorizing civil proceedings to be brought in our name and on our behalf by the shareholder petitioner on such terms as the Grand Court of the Cayman Islands may direct, or (d) an order providing for the purchase of the shares of any of our shareholders by other shareholders or us and, in the case of a purchase by us, a reduction of our capital accordingly.

Generally, claims against us must be based on the general laws of contract or tort applicable in the Cayman Islands or individual rights as shareholders as established by our articles of association.

### **Pre-Emption Rights**

There are no pre-emption rights applicable to the issue of new shares of our company under either Cayman Islands law or our memorandum and articles of association.

### **Liquidation Rights**

Subject to any class or classes of shares or future shares which are issued with specific rights, privileges or restrictions as to the distribution of available surplus assets on liquidation, (a) if we are wound up and the assets available for distribution among our shareholders are more than sufficient to repay the whole of the capital paid up at the commencement of the winding up, the excess shall be distributed pari passu among those shareholders in proportion to the amount paid up at the commencement of the winding up on the shares held by them, respectively, and (b) if we are wound up and the assets available for distribution among the shareholders as such are insufficient to repay the whole of the paid-up capital, those assets shall be distributed so that, as nearly as may be, the losses shall be borne by the shareholders in proportion to the capital paid up at the commencement of the winding up on the shares held by them, respectively.

If we are wound up (whether the liquidation is voluntary or by the court), the liquidator may with the sanction of our special resolution and any other sanction required by the Companies Act, divide among our shareholders in specie or kind the whole or any part of our assets (whether or not they shall consist of property of the same kind) and may, for such purpose, set such value as the liquidator deems fair upon any property to be divided and may determine how such division shall be carried out as between the shareholders or different classes of shareholders. The liquidator may also vest the whole or any part of these assets in trustees upon such trusts for the benefit of the shareholders as the liquidator shall think fit, but so that no shareholder will be compelled to accept any assets, shares or other securities upon which there is a liability.

The consideration received by each holder of a Class A common share and a holder of a Class B common share will be the same in any liquidation event.

### **Variation of Rights**

Alterations to our memorandum and articles of association may only be made by special resolution, meaning a majority of not less than two-thirds of votes cast at a shareholders' meeting.

Subject to applicable laws and our memorandum and articles of association, all or any of the special rights for the time being attached to the shares or any class of shares may, unless otherwise provided by the terms of issue of the shares of that class, from time to time be varied, modified or abrogated by a special resolution passed at a separate general meeting of the holders of the shares of that class. All the provisions of our articles of association relating to general meetings shall, *mutatis mutandis*, apply, but so that:

- separate general meetings of the holders of a class or series of shares may be called only by (i) the chairman of our board of directors, or (ii) a majority of our board of directors (unless otherwise specifically provided by the terms of issue of the shares of such class or series). Our articles of association does not give any shareholder(s) the right to call a class or series meeting;
- the necessary quorum shall be a person or persons (or in the case of a shareholder being a corporation, its duly authorized representative) together holding or representing by proxy not less than one-third in nominal value of the issued shares of that class;
- every holder of shares of the class shall be entitled on a poll to one vote for every such share held by him; and
- any holder of shares of the class present (whether in person or by proxy (or, in the case of a shareholder being a corporation, by its authorized representative) or by means of Communication Facilities (as defined in our articles of association), if permitted) may demand a poll.

The special rights conferred upon the holders of any shares or class of shares shall not, unless otherwise expressly provided in the rights attaching to or the terms of issue of such shares, be deemed to be varied, modified or abrogated by the creation or issue of further shares ranking *pari passu* with such existing shares or class of shares.

### **Alteration of Capital**

We may from time to time by ordinary resolution in accordance with the Companies Act alter the conditions of our memorandum of association to:

- increase our capital by such sum, to be divided into shares of such amounts, as the resolution shall prescribe;
- consolidate and divide all or any of our share capital into shares of larger amounts than our existing shares;
- cancel any shares which at the date of the passing of the resolution have not been taken or agreed to be taken by any person, and diminish the amount of its share capital by the amount of the shares so canceled subject to the provisions of the Companies Act;

- sub-divide our shares or any of them into shares of smaller amount than is fixed by our memorandum of association, subject nevertheless to the Companies Act, so that the resolution whereby any share is sub-divided may determine that, as between the holders of the shares resulting from such subdivision, one or more of the shares may have any such preferred or other special rights over, or may have such deferred rights or be subject to any such restrictions as compared with the others, as we have power to attach to unissued or new shares; and
- divide our shares into several classes and without prejudice to any special rights previously conferred on the holders of existing shares, attach to the shares respectively any preferential, deferred, qualified or special rights, privileges, conditions or such restrictions that in the absence of any such determination in a general meeting may be determined by our directors.

We may, by special resolution, subject to any confirmation or consent required by the Companies Act, reduce our share capital or any capital redemption reserve in any manner authorized by law.

### **Transfer of Shares**

Subject to any applicable restrictions set forth in our articles of association, including, for example, the board of directors' discretion to refuse to register a transfer of any share (not being a fully paid up share) to a person of whom it does not approve, or any share issued under share incentive plans for employees upon which a restriction on transfer imposed thereby still subsists, or a transfer of any share to more than four joint holders, any of our shareholders may transfer all or any of his or her shares by an instrument of transfer in the usual or common form or in a form prescribed by the Nasdaq Global Select Market or in another form that our directors may approve.

Our directors may decline to register any transfer of any share which is not paid up or on which we have a lien. Our directors may also decline to register any transfer of any share unless:

- the instrument of transfer is lodged with us and is accompanied by the certificate for the shares to which it relates and such other evidence as our directors may reasonably require to show the right of the transferor to make the transfer;
- the instrument of transfer is in respect of only one class of share;
- the instrument of transfer is properly stamped (in circumstances where stamping is required); and
- fee of such maximum sum as the Nasdaq Global Select Market may determine to be payable or such lesser sum as our directors may from time to time require is paid to us in respect thereof.

If our directors refuse to register a transfer, they shall, within three months after the date on which the instrument of transfer was lodged, send to each of the transferor and the transferee notice of such refusal.

The registration of transfers may, after compliance with any notice requirement of the Nasdaq Global Select Market, be suspended and the register closed at such times and for such periods as our directors may from time to time determine; provided, however, that the registration of transfers shall not be suspended nor the register closed for more than 30 days in any year as our directors may determine.

### **Register of Members**

In accordance with Section 48 of the Companies Act, the register of members is prima facie evidence of the registered holder or member of shares of a company. Therefore, a person becomes a registered holder or member of shares of the company only upon entry being made in the register of members. Our directors will maintain one register of members, at the office of Conyers Trust Company (Cayman) Limited, Cricket Square, Hutchins Drive, P.O. Box 2681, Grand Cayman, KY1-1111, Cayman Islands, which provides us with corporate administrative services. We will perform the procedures necessary to register the shares in the register of members as required in "PART III—Distribution of Capital and Liability of Members of Companies and Associations" of the Companies Act, and will ensure that the entries on the register of members are made without any delay.

The underlying Class A common shares represented by our ADSs are not shares in bearer form, but are in registered form and are “non-negotiable” or “registered” shares and accordingly the underlying Class A common shares represented by our ADSs can only be transferred on the books of the company in accordance with Section 166 of the Companies Act.

If the name of any person is incorrectly entered in or omitted from our register of members, or if there is any default or unnecessary delay in entering on the register the fact of any person having ceased to be a member of our company, the person or member aggrieved (or any member of our company or our company itself) may apply to the Grand Court of the Cayman Islands for an order that the register be rectified, and the Court may either refuse such application or it may, if satisfied of the justice of the case, make an order for the rectification of the register.

### **Share Repurchases**

We are empowered by the Companies Act and our articles of association to purchase our own shares, subject to certain restrictions. Our directors may only exercise this power on our behalf, subject to the Companies Act, our memorandum and articles of association and to any applicable requirements imposed from time to time by the Nasdaq Global Select Market, the U.S. Securities and Exchange Commission, or by any other recognized stock exchange on which our securities are listed.

### **Dividends**

Subject to the Companies Act, our company in a general meeting or our directors may declare dividends in any currency to be paid to our shareholders, but no dividend shall be declared in excess of the amount recommended by our board of directors. Dividends may be declared and paid out of our profits, realized or unrealized, or from any reserve set aside from profits which our directors determine is no longer needed. Our board of directors may also declare and pay dividends out of our share premium account or any other fund or account that can be authorized for this purpose in accordance with the Companies Act. However, even if our company has sufficient profits or share premium, it may not pay a dividend if this would result in our company being unable to pay its debts as they fall due in the ordinary course of business.

Except in so far as the rights attaching to, or the terms of issue of, any share otherwise provides, (a) all dividends shall be declared and paid according to the amounts paid up on the shares in respect of which the dividend is paid, but no amount paid up on a share in advance of calls shall be treated for this purpose as paid up on that share and (b) all dividends shall be apportioned and paid pro rata according to the amounts paid up on the shares during any portion or portions of the period in respect of which the dividend is paid.

Our directors may also pay interim dividends, whenever our financial position, in the opinion of our directors, justifies such payment.

Our directors may deduct from any dividend or bonus payable to any shareholder all sums of money (if any) presently payable by such shareholder to us on account of calls or otherwise.

No dividend or other money payable by us on or in respect of any share shall bear interest against us.

In respect of any dividend proposed to be paid or declared on our share capital, our directors may resolve and direct that (a) such dividend be satisfied wholly or in part in the form of an allotment of shares credited as fully paid up, provided that our shareholders entitled thereto will be entitled to elect to receive such dividend (or part thereof if our directors so determine) in cash in lieu of such allotment or (b) the shareholders entitled to such dividend will be entitled to elect to receive an allotment of shares credited as fully paid up in lieu of the whole or such part of the dividend as our directors may think fit. Our shareholders may, upon the recommendation of our directors, by ordinary resolution resolve in respect of any particular dividend that, notwithstanding the foregoing, a dividend may be satisfied wholly in the form of an allotment of shares credited as fully paid up without offering any right to shareholders to elect to receive such dividend in cash in lieu of such allotment.

Any dividend interest or other sum payable in cash to the holder of shares may be paid by check or warrant sent by mail addressed to the holder at his registered address, or addressed to such person and at such addresses as the holder may direct. Every check or warrant shall, unless the holder or joint holders otherwise direct, be made payable to the order of the holder or, in the case of joint holders, to the order of the holder whose name stands first on the register in respect of such shares, and shall be sent at his or their risk and payment of the check or warrant by the bank on which it is drawn shall constitute a good discharge to us.

All dividends unclaimed for one year after having been declared may be invested or otherwise made use of by our board of directors for the benefit of our company until claimed. Any dividend unclaimed after a period of six years from the date of declaration of such dividend shall be forfeited and reverted to us.

Whenever our directors have resolved that a dividend be paid or declared, our directors may further resolve that such dividend be satisfied wholly or in part by the distribution of specific assets of any kind, and in particular of paid up shares, debentures or warrants to subscribe for our securities or securities of any other company. Where any difficulty arises with regard to such distribution, our directors may settle it as they think expedient. In particular, our directors may issue fractional certificates, ignore fractions altogether or round the same up or down, fix the value for distribution purposes of any such specific assets, determine that cash payments shall be made to any of our shareholders upon the footing of the value so fixed in order to adjust the rights of the parties, vest any such specific assets in trustees as may seem expedient to our directors, and appoint any person to sign any requisite instruments of transfer and other documents on behalf of the persons entitled to the dividend, which appointment shall be effective and binding on our shareholders.

#### **Untraceable Shareholders**

We are entitled to sell any shares of a shareholder who is untraceable, provided that no such sale shall be made unless:

- all checks or warrants in respect of dividends of such shares, not being less than three in number, for any sums payable in cash to the holder of such shares have remained un-cashed for a period of 12 years prior to the publication of the advertisement and during the three months referred to in the third bullet point below;
- we have not during that time received any indication of the existence of the shareholder or person entitled to such shares by death, bankruptcy or operation of law; and
- we, if so required by the rules of the Nasdaq Global Select Market, have given notice to, and caused an advertisement to be published in newspapers in accordance with such applicable rules giving notice of our intention to sell these shares, and a period of three months (or such shorter period as permitted under the applicable rules) has elapsed since the date of such advertisement.

The net proceeds of any such sale shall belong to us, and when we receive these net proceeds we shall become indebted to the former shareholder for an amount equal to such net proceeds.

#### **Exclusive Forum**

Unless we consent in writing to the selection of an alternative forum, the United States District Court for the Southern District of New York (or, if the United States District Court for the Southern District of New York lacks subject matter jurisdiction over a particular dispute, the state courts in New York County, New York) shall be the exclusive forum within the United States for the resolution of any complaint asserting a cause of action arising out of or relating in any way to the federal securities laws of the United States, regardless of whether such legal suit, action, or proceeding also involves parties other than us. Any person or entity purchasing or otherwise acquiring any share or other securities in our company, or purchasing or otherwise acquiring American depositary shares issued pursuant to deposit agreements, shall be deemed to have notice of and consented to the provisions of this article. Without prejudice to the foregoing, if the provision in this article is held to be illegal, invalid or unenforceable under applicable law, the legality, validity or enforceability of the rest of articles of association shall not be affected and this article shall be interpreted and construed to the maximum extent possible to apply in the relevant jurisdiction with whatever modification or deletion may be necessary so as best to give effect to our intention.

#### **Differences Between the Law of Different Jurisdictions**

The Companies Act of the Cayman Islands is derived, to a large extent, from the older Companies Acts of England but does not follow recent English statutory enactments and accordingly there are significant differences between the Companies Act of the Cayman Islands and the current Companies Act of England. In addition, the Companies Act of the Cayman Islands differs from laws applicable to U.S. corporations and their shareholders. Set forth below is a summary of the significant differences between the provisions of the Companies Act of the Cayman Islands applicable to us and the laws applicable to companies incorporated in the United States and their shareholders.

*Mergers and Similar Arrangements.* The Companies Act permits mergers and consolidations between Cayman Islands companies and between Cayman Islands companies and non-Cayman Islands companies. For these purposes, (a) “merger” means the merging of two or more constituent companies and the vesting of their undertaking, property and liabilities in one of such companies as the surviving company, and (b) a “consolidation” means the combination of two or more constituent companies into a consolidated company and the vesting of the undertaking, property and liabilities of such companies to the consolidated company. In order to effect such a merger or consolidation, the directors of each constituent company must approve a written plan of merger or consolidation, which must then be authorized by (a) a special resolution of the shareholders of each constituent company, and (b) such other authorization, if any, as may be specified in such constituent company’s articles of association. The plan must be filed with the Registrar of Companies of the Cayman Islands together with a declaration as to the solvency of the consolidated or surviving company, a list of the assets and liabilities of each constituent company and an undertaking that a copy of the certificate of merger or consolidation will be given to the members and creditors of each constituent company and that notification of the merger or consolidation will be published in the Cayman Islands Gazette. Court approval is not required for a merger or consolidation which is effected in compliance with these statutory procedures.

A merger between a Cayman parent company and its Cayman subsidiary or subsidiaries does not require authorization by a resolution of shareholders of that Cayman subsidiary if a copy of the plan of merger is given to every member of that Cayman subsidiary to be merged unless that member agrees otherwise. For this purpose a company is a “parent” of a subsidiary if it holds issued shares that together represent at least ninety percent (90%) of the votes at a general meeting of the subsidiary.

The consent of each holder of a fixed or floating security interest over a constituent company is required unless this requirement is waived by a court in the Cayman Islands.

Save in certain limited circumstances, a shareholder of a Cayman constituent company who dissents from the merger or consolidation is entitled to payment of the fair value of his shares (which, if not agreed between the parties, will be determined by the Cayman Islands court) upon dissenting to the merger or consolidation, provide the dissenting shareholder complies strictly with the procedures set out in the Companies Act. The exercise of dissenter rights will preclude the exercise by the dissenting shareholder of any other rights to which he or she might otherwise be entitled by virtue of holding shares, save for the right to seek relief on the grounds that the merger or consolidation is void or unlawful.

Separate from the statutory provisions relating to mergers and consolidations, the Companies Act also contains statutory provisions that facilitate the reconstruction and amalgamation of companies by way of schemes of arrangement, provided that the arrangement is approved by (a) 75% in value of the shareholders or class of shareholders, as the case may be, or (b) a majority in number representing 75% in value of the creditors or each class of creditors, as the case may be, with whom the arrangement is to be made, that are, in each case, present and voting either in person or by proxy at a meeting, or meetings, convened for that purpose. The convening of the meetings and subsequently the arrangement must be sanctioned by the Grand Court of the Cayman Islands. While a dissenting shareholder has the right to express to the court the view that the transaction ought not to be approved, the court can be expected to approve the arrangement if it determines that:

- the statutory provisions as to the required majority vote have been met;
- the shareholders have been fairly represented at the meeting in question and the statutory majority are acting bona fide without coercion of the minority to promote interests adverse to those of the class;
- the arrangement is such that may be reasonably approved by an intelligent and honest man of that class acting in respect of his interest; and
- the arrangement is not one that would more properly be sanctioned under some other provision of the Companies Act.

The Companies Act also contains a statutory power of compulsory acquisition which may facilitate the “squeeze out” of dissentient minority shareholder upon a tender offer. When a tender offer is made and accepted by holders of 90% of the shares affected within four months, the offeror may, within a two-month period commencing on the expiration of such four-month period, require the holders of the remaining shares to transfer such shares to the offeror on the terms of the offer. An objection can be made to the Grand Court of the Cayman Islands but this is unlikely to succeed in the case of an offer which has been so approved unless there is evidence of fraud, bad faith or collusion.

If an arrangement and reconstruction by way of scheme of arrangement is thus approved and sanctioned, or if a tender offer is made and accepted in accordance with the foregoing statutory procedures, a dissenting shareholder would have no rights comparable to appraisal rights, save that objectors to a takeover offer may apply to the Grand Court of the Cayman Islands for various orders that the Grand Court of the Cayman Islands has a broad discretion to make, which would otherwise ordinarily be available to dissenting shareholders of Delaware corporations, providing rights to receive payment in cash for the judicially determined value of the shares.

*Shareholders' Suits.* In principle, we will normally be the proper plaintiff to sue for a wrong done to us as a company and as a general rule, a derivative action may not be brought by a minority shareholder. However, based on English authorities, which would in all likelihood be of persuasive authority in the Cayman Islands, there are exceptions to the foregoing principle which permit a minority shareholder to commence a class action against, or derivative actions in the name of, a company, including when:

- a company acts or proposes to act illegally or ultra vires;
- the act complained of, although not ultra vires, could only be effected duly if authorized by more than a simple majority vote that has not been obtained; and
- those who control the company are perpetrating a “fraud on the minority.”

*Indemnification of Directors and Executive Officers and Limitation of Liability.* Cayman Islands law does not limit the extent to which a company’s memorandum and articles of association may provide for indemnification of officers and directors, except to the extent any such provision may be held by the Cayman Islands courts to be contrary to public policy, such as to provide indemnification against civil fraud or the consequences of committing a crime. Our Memorandum and Articles of Association provide that our Company shall indemnify our officers and directors from and against all actions, costs, charges, losses, damages and expenses incurred in their capacities as such unless such losses or damages arise from dishonesty or fraud of such directors or officers. This standard of conduct is generally the same as permitted under the Delaware General Corporation Law for a Delaware corporation.

In addition, we have entered into indemnification agreements with our directors and executive officers that provide such persons with additional indemnification beyond that provided in our Memorandum and Articles of Association.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers or persons controlling us under the foregoing provisions, we have been informed that in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

*Anti-Takeover Provisions in the Memorandum and Articles of Association.* Some provisions of our current Memorandum and Articles of Association may discourage, delay or prevent a change in control of our company or management that shareholders may consider favorable, including provisions that authorize our board of directors to issue preferred shares in one or more series and to designate the price, rights, preferences, privileges and restrictions of such preferred shares without any further vote or action by our shareholders.

However, under Cayman Islands law, our directors may only exercise the rights and powers granted to them under our Memorandum and Articles of Association, as amended and restated from time to time, for a proper purpose and for what they believe in good faith to be in the best interests of our company.

*Directors' Fiduciary Duties.* Under Delaware corporate law, a director of a Delaware corporation has a fiduciary duty to the corporation and its shareholders. This duty has two components: the duty of care and the duty of loyalty. The duty of care requires that a director act in good faith, with the care that an ordinarily prudent person would exercise under similar circumstances. Under this duty, a director must inform himself of and disclose to shareholders, all material information reasonably available regarding a significant transaction. The duty of loyalty requires that a director acts in a manner he reasonably believes to be in the best interests of the corporation. He must not use his corporate position for personal gain or advantage. This duty prohibits self-dealing by a director and mandates that the best interest of the corporation and its shareholders take precedence over any interest possessed by a director, officer or controlling shareholder and not shared by the shareholders generally. In general, actions of a director are presumed to have been made on an informed basis, in good faith and in the honest belief that the action taken was in the best interests of the corporation. However, this presumption may be rebutted by evidence of a breach of one of the fiduciary duties. Should such evidence be presented concerning a transaction by a director, the director must prove the procedural fairness of the transaction and that the transaction was of fair value to the corporation.

As a matter of Cayman Islands law, a director of a Cayman Islands company is in the position of a fiduciary with respect to the company and therefore it is considered that he owes the following duties to the company—a duty to act bona fide in the best interests of the company, a duty not to make a profit based on his position as director (unless the company permits him to do so) and a duty not to put himself in a position where the interests of the company conflict with his personal interest or his duty to a third party. A director of a Cayman Islands company owes to the company a duty to act with skill and care. It was previously considered that a director need not exhibit in the performance of his duties a greater degree of skill than may reasonably be expected from a person of his knowledge and experience. However, English and Commonwealth courts have moved towards an objective standard with regard to the required skill and care and these authorities are likely to be followed in the Cayman Islands.

*Shareholder Action by Written Consent.* Under the Delaware General Corporation Law, a corporation may eliminate the right of shareholders to act by written consent by amendment to its certificate of incorporation. Our Memorandum and Articles of Association do not allow our shareholders to approve matters to be determined at shareholders' meetings by way of written resolutions without a meeting.

*Shareholder Proposals.* Under the Delaware General Corporation Law, a shareholder has the right to put any proposal before the annual meeting of shareholders, provided it complies with the notice provisions in the governing documents. A special meeting may be called by the board of directors or any other person authorized to do so in the governing documents, but shareholders may be precluded from calling special meetings.

The Companies Act provides shareholders with only limited rights to requisition a general meeting, and does not provide shareholders with any right to put any proposal before a general meeting. These rights may be provided in a company's articles of association. However, our memorandum and articles of association do not allow our shareholders to requisition any general meeting of our shareholders and do not provide our shareholders with any other right to put proposals before any annual general meetings or extraordinary general meetings. As a Cayman Islands exempted company, we are not obliged by law to call shareholders' annual general meetings. Our third amended and restated memorandum and articles of association provide that we may (but are not obliged to) in each year hold a general meeting as our annual general meeting. In addition, extraordinary general meetings of our shareholders may be convened only by a majority of our board of directors or the chairman of our board of directors. Cumulative Voting. Under the Delaware General Corporation Law, cumulative voting for elections of directors is not permitted unless the corporation's certificate of incorporation specifically provides for it. Cumulative voting potentially facilitates the representation of minority shareholders on a board of directors since it permits the minority shareholder to cast all the votes to which the shareholder is entitled on a single director, which increases the shareholder's voting power with respect to electing such director. While there is nothing under the laws of the Cayman Islands which specifically prohibits or restricts the creation of cumulative voting rights for the election of directors of our company, it is not a concept that is accepted as a common practice in the Cayman Islands, and our company has made no provisions in our Memorandum and Articles of Association to allow cumulative voting for such elections. As a result, our shareholders are not afforded any less protections or rights on this issue than shareholders of a Delaware corporation.

*Removal of Directors.* Under the Delaware General Corporation Law, a director of a corporation with a classified board may be removed only for cause with the approval of a majority of the outstanding shares entitled to vote, unless the certificate of incorporation provides otherwise. Under our Memorandum and Articles of Association, a director may be removed by a special resolution of our shareholders.

*Transactions with Interested Shareholders.* The Delaware General Corporation Law contains a business combination statute applicable to Delaware corporations whereby, unless the corporation has specifically elected not to be governed by such statute by amendment to its certificate of incorporation, it is prohibited from engaging in certain business combinations with an "interested shareholder" for three years following the date that such person becomes an interested shareholder. An interested shareholder generally is a person or a group who or which owns or owned 15% or more of the target's outstanding voting share within the past three years. This has the effect of limiting the ability of a potential acquirer to make a two-tiered bid for the target in which all shareholders would not be treated equally. The statute does not apply if, among other things, prior to the date on which such shareholder becomes an interested shareholder, the board of directors approves either the business combination or the transaction which resulted in the person becoming an interested shareholder. This encourages any potential acquirer of a Delaware corporation to negotiate the terms of any acquisition transaction with the target's board of directors.

Cayman Islands law has no comparable statute. As a result, we cannot avail ourselves of the types of protections afforded by the Delaware business combination statute. However, although Cayman Islands law does not regulate transactions between a company and its significant shareholders, it does provide that such transactions must be entered into bona fide in the best interests of the company and not with the effect of constituting a fraud on the minority shareholders.

*Restructuring.* A company may present a petition to the Grand Court of the Cayman Islands for the appointment of a restructuring officer on the grounds that the company: (a) is or is likely to become unable to pay its debts; and (b) intends to present a compromise or arrangement to its creditors (or classes thereof) either pursuant to the Companies Act, the law of a foreign country or by way of a consensual restructuring.

The Grand Court may, among other things, make an order appointing a restructuring officer upon hearing of such petition, with such powers and to carry out such functions as the court may order. At any time (i) after the presentation of a petition for the appointment of a restructuring officer but before an order for the appointment of a restructuring officer has been made, and (ii) when an order for the appointment of a restructuring officer is made, until such order has been discharged, no suit, action or other proceedings (other than criminal proceedings) shall be proceeded with or commenced against the company, no resolution to wind up the company shall be passed, and no winding up petition may be presented against the company, except with the leave of the court. However, notwithstanding the presentation of a petition for the appointment of a restructuring officer or the appointment of a restructuring officer, a creditor who has security over the whole or part of the assets of the company is entitled to enforce the security without the leave of the court and without reference to the restructuring officer appointed.

*Dissolution; Winding up.* Under the Delaware General Corporation Law, unless the board of directors approves the proposal to dissolve, dissolution must be approved by shareholders holding 100% of the total voting power of the corporation. Only if the dissolution is initiated by the board of directors may it be approved by a simple majority of the corporation's outstanding shares. Delaware law allows a Delaware corporation to include in its certificate of incorporation a supermajority voting requirement in connection with dissolutions initiated by the board.

Under Cayman Islands law, a company may be wound up by either an order of the courts of the Cayman Islands or by a special resolution of its members or, if the company is unable to pay its debts as they fall due, by an ordinary resolution of its members. The court has authority to order winding up in a number of specified circumstances including where it is, in the opinion of the court, just and equitable to do so.

*Variation of Rights of Shares.* Under the Delaware General Corporation Law, a corporation may vary the rights of a class of shares with the approval of a majority of the outstanding shares of such class, unless the certificate of incorporation provides otherwise. Under our Memorandum and Articles of Association, all or any of the special rights for the time being attached to the shares or any class of shares may, unless otherwise provided by the terms of issue of the shares of that class, from time to time be varied, modified or abrogated by a special resolution passed at a separate general meeting of the holders of the shares of that class. The special rights conferred upon the holders of any shares or class of shares shall not, unless otherwise expressly provided in the rights attaching to or the terms of issue of such shares, be deemed to be varied, modified or abrogated by the creation or issue of further shares ranking pari passu with such existing class of shares.

*Amendment of Governing Documents.* Under the Delaware General Corporation Law, a corporation's governing documents may be amended with the approval of a majority of the outstanding shares entitled to vote, unless the certificate of incorporation provides otherwise. As permitted by Cayman Islands law and our Memorandum and Articles of Association, our Memorandum and Articles of Association may only be amended with a special resolution of our shareholders.

*Rights of Non-resident or Foreign Shareholders.* There are no limitations imposed by our Memorandum and Articles of Association on the rights of nonresident or foreign shareholders to hold or exercise voting rights on our shares. In addition, there are no provisions in our Memorandum and Articles of Association which require our company to disclose shareholder ownership above any particular ownership threshold.

*Exempted Company.* The Companies Act in the Cayman Islands distinguishes between ordinary resident companies and exempted companies. Any company that is registered in the Cayman Islands but conducts business mainly outside of the Cayman Islands may apply to be registered as an exempted company. The requirements for an exempted company are essentially the same as for an ordinary company except for the exemptions and privileges listed below:

- an exempted company does not have to file an annual return of its shareholders with the Registrar of Companies;
- an exempted company's register of members is not required to be open to inspection;
- an exempted company does not have to hold an annual general meeting;
- an exempted company may issue no par value shares;
- an exempted company may obtain an undertaking against the imposition of taxation on profits, capital gains or inheritance (such undertakings are given for a period of up to 30 years);
- an exempted company may register by way of continuation in another jurisdiction and be deregistered in the Cayman Islands;
- an exempted company may register as a limited duration company; and
- an exempted company may register as a segregated portfolio company.

"Limited liability" means that the liability of each shareholder is limited to the amount unpaid by the shareholder on that shareholder's shares of the company (except in exceptional circumstances, such as involving fraud, the establishment of an agency relationship or an illegal or improper purpose or other circumstances in which a court may be prepared to pierce or lift the corporate veil).

#### **Inspection of Books and Records**

Holders of our common shares will have no general right under Cayman Islands law to inspect or obtain copies of our list of shareholders or our corporate records (other than our memorandum and articles of association, special resolutions passed by our shareholders, and our register of mortgages and charges). However, we will provide our shareholders with annual audited financial statements.

#### **C. Material Contracts**

We have not entered into any material contracts other than in the ordinary course of business and other than those described elsewhere in "Item 4. Information on the Company—B. Business Overview," "Item 7. Major Shareholders and Related Party Transactions—B. Related Party Transactions," or elsewhere in this annual report.

#### **D. Exchange Controls**

See "Item 4. Information on the Company—B. Business Overview—Regulations in Multiple Jurisdictions Where We Operate—Mainland China Regulations—Regulation of Foreign Currency Exchange and Dividend Distribution."

## **E. Taxation**

The following summary of material Cayman Islands, Singapore, U.S. and mainland China tax consequences of an investment in our ADSs or ordinary shares is based upon laws and interpretations thereof in effect as of the date of this annual report, all of which are subject to change. This summary does not deal with all possible tax consequences relating to an investment in our ADSs or ordinary shares, such as the tax consequences under state, local and other tax laws.

### **Cayman Islands Taxation**

The Cayman Islands currently levies no taxes on individuals or corporations based upon profits, income, gains or appreciation and there is no taxation in the nature of inheritance tax or estate duty. There are no other taxes likely to be material to the holders of our ordinary shares or ADSs levied by the government of the Cayman Islands except for stamp duties which may be applicable on instruments executed in, or after execution brought within the jurisdiction of, the Cayman Islands.

There are no exchange control regulations or currency restrictions in the Cayman Islands.

Pursuant to Section 6 of the Tax Concessions Act (As Revised) of the Cayman Islands, we have obtained an undertaking from the Governor-in-Cabinet:

1. that no law which is enacted in the Cayman Islands imposing any tax to be levied on profits or income or gains or appreciation shall apply to us or our operations; and
2. that no tax to be levied on profits, income, gains or appreciations or which is in the nature of estate duty or inheritance tax shall be payable:
  - a) on or in respect of our shares, debentures or other obligations; or
  - b) by way of the withholding in whole or in part of any relevant payment as defined in Section 6(3) of the Tax Concessions Act (As Revised) of the Cayman Islands.

The undertaking for us is for a period of 20 years from August 2, 2011.

## Singapore Taxation

The following discussion is a summary of Singapore income tax, goods and services tax and stamp duty considerations relevant to the acquisition, ownership and disposition of ADSs or our common shares. The statements made herein regarding taxation are general in nature and based upon certain aspects of the current tax laws of Singapore and administrative guidelines issued by the relevant authorities in force as of the date hereof and are subject to any changes in such laws or administrative guidelines or the interpretation of such laws or guidelines occurring after such date, which changes could be made on a retrospective basis. The statements made herein do not purport to be a comprehensive or exhaustive description of all of the tax considerations that may be relevant to a decision to acquire, own or dispose of our ADSs or our common shares and do not purport to deal with the tax consequences applicable to all categories of investors, some of which (such as dealers in securities) may be subject to special rules. Prospective shareholders are advised to consult their own tax advisers as to the Singapore or other tax consequences of the acquisition, ownership of or disposal of our ADSs and our common shares, taking into account their own particular circumstances. It is emphasized that neither we nor any other persons involved in this annual report accept responsibility for any tax effects or liabilities resulting from the acquisition, holding or disposal of our ADSs or our common shares.

### *Income Tax*

Under the Singapore Income Tax Act (Chapter 134 of Singapore), a company established outside Singapore but whose governing body, being the board of directors, usually exercises de facto control and management of its business in Singapore could be considered tax residents in Singapore. However, such control and management of the business should not be deemed to be in Singapore if physical board meetings are mainly conducted outside Singapore. Where board resolutions are passed in the form of written consent signed by the directors each acting in their own jurisdictions, or where the board meetings are held by teleconference or videoconference, it is possible that the place of de facto control and management will be considered to be where the majority of the board are located when they sign such consent or attend such conferences.

We believe that JOYY Inc. is not a Singapore tax resident for Singapore income tax purposes. However, the tax resident status of JOYY Inc. is subject to determination by the Inland Revenue Authority of Singapore and uncertainties remain with respect to our tax residence status. It is not certain if JOYY Inc. will be classified as a Singapore tax resident. See “Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in Jurisdictions We Operate—It is not certain if we will be classified as a Singapore tax resident” for a discussion of the Singapore tax consequences to non-resident investors if JOYY Inc. is deemed to be a Singapore tax resident. The statements below are based on the assumption that JOYY Inc. is not a tax resident in Singapore for Singapore income tax purposes.

### *Dividends With Respect to Our ADSs or Our Common Shares*

Where JOYY Inc. is not considered a tax resident in Singapore for Singapore income tax purposes, the dividend payments made by JOYY Inc. would be considered sourced outside Singapore (unless our ADSs or our common shares are held as part of a trade or business carried out in Singapore, in which case the holders of our ADSs or our common shares may be taxed on the dividends distributed to them). Foreign-sourced dividends received or deemed to be received in Singapore by non-resident individuals are exempt from Singapore income tax. This exemption also applies to Singapore tax resident individuals who have received or, are deemed to have received his foreign-sourced income in Singapore on or after January 1, 2004 (except where such income is received through a partnership in Singapore).

Foreign-sourced dividends received or deemed to be received in Singapore by corporate investors who do not have a business presence in Singapore, are not tax resident in Singapore, and who do not have a permanent establishment or tax presence in Singapore, will generally not be subject to income tax in Singapore. Foreign-sourced dividends received or deemed to be received in Singapore by corporate investors who are tax residents in Singapore will generally be subject to Singapore income tax. Since JOYY Inc. is a company incorporated in the Cayman Islands, and the prevailing rate of tax in the Cayman Islands, being a tax of a similar character to the Singapore income tax, is 0%, dividends received in Singapore by resident corporate investors would be subject to Singapore income tax at the prevailing rate of 17%.

Dividends received in respect of our ADSs or our common shares whether by a Singapore tax resident or a non-Singapore tax resident as a shareholder are not subject to any withholding tax in Singapore.

*Gains With Respect to Disposition of Our ADSs or Our Common Shares*

There is no capital gain tax in Singapore and there is no specific law or regulation in Singapore dealing with the characterization of a gain as income or capital in nature. Gains arising from disposition of our ADSs or our common shares may be construed as income and subject to Singapore income tax if they arise from or are otherwise connected with a trade or business activity in Singapore. Factors that determine the existence of a trade include, inter alia, the length of ownership, the frequency of similar transactions, and the motive of acquisition.

Such gains may also be considered income in nature, even if they do not arise from an activity in the ordinary course of trade or business or an ordinary incident of some other business activity, if our ADSs or our common shares were purchased with the intention or purpose of making a profit by sale rather than holding for long-term investment purposes in Singapore. Conversely, gains from disposition of our ADSs or our common shares in Singapore, if considered as capital gains rather than income by the Inland Revenue Authority of Singapore, are not taxable in Singapore.

For corporate shareholders who are subject to Singapore income tax treatment under Section 34A or 34AA of the Income Tax Act (Chapter 134 of Singapore) in relation to the adoption of Singapore Financial Reporting Standard 39—Financial Instruments: Recognition and Measurement (FRS 39) or Singapore Financial Reporting Standard 109—Financial Instruments (FRS 109), for accounting purposes, they may be required to recognize gains or losses (not being gains or losses in the nature of capital) even though no sale or disposal of our ADSs or our common shares has been made. Our corporate shareholders who may be subject to such provisions should consult their own accounting and tax advisers regarding the Singapore income tax consequences of their acquisition, ownership and disposition of our ADSs and our common shares arising from the adoption of FRS 39 or FRS 109.

Notwithstanding the above, foreign investors may claim that the gains from disposition of their ADSs or common shares are not sourced or received in Singapore (so that such gains will not be subject to Singapore income tax) if (i) the foreign investor is not a tax resident in Singapore, (ii) the foreign investor does not maintain a permanent establishment in Singapore, to which the disposition gains may be effectively connected, and (iii) the entire process (including the negotiation, deliberation, execution of the acquisition and sale, etc.) leading up to the actual acquisition and sale of our ADSs or our common shares is performed outside of Singapore.

***Goods and Services Tax***

The issuance of our ADSs or our common shares is not subject to Singapore goods and services tax (GST).

The sale of our ADS or our common shares by a GST-registered investor in Singapore to another person belonging in Singapore is an exempt supply (i.e., not subject to GST). Any input GST (for example, GST on brokerage) incurred by the GST-registered investor in connection with the making of this exempt supply is generally not recoverable and will become an additional cost to the investor unless the investor satisfies certain conditions prescribed under the GST legislation or satisfies certain GST concessions.

Where our ADS or our common shares are sold by a GST-registered investor in the course or furtherance of a business carried on by such an investor to a person belonging outside Singapore (and who is outside Singapore at the time of supply), the sale is a taxable supply subject to GST at a zero rate (i.e., 0%). Any input GST (for example, GST on brokerage) incurred by the GST-registered investor in making this zero-rated supply for the purpose of his business will, subject to the conditions prescribed under the GST legislation, be recoverable from the Comptroller of GST.

Investors should seek their own tax advice on the recoverability of GST incurred on expenses in connection with the purchase and sale of our ADSs or our common shares.

Services such as brokerage and handling services rendered by a GST-registered person to an investor belonging in Singapore in connection with the investor's purchase or sale of our ADSs or our common shares will be subject to GST at the prevailing rate (currently at 9%). Similar services rendered contractually to an investor belonging outside Singapore should, subject to certain conditions prescribed under the GST legislation, qualify for GST at zero rate (i.e., 0%).

### ***Stamp Duty***

No stamp duty is payable on the subscription and issuance of our ADSs or our common shares. As JOYY Inc. is incorporated in the Cayman Islands and our ADSs and our common shares are not registered in any register kept in Singapore, no stamp duty is payable in Singapore on any instrument of transfer upon a sale or gift of our ADSs or our common shares. This position would remain as long as JOYY Inc. is not considered a residential property-holding entity.

### **United States Federal Income Tax Considerations**

The following is a summary of certain United States federal income tax considerations relating to the ownership and disposition of our ADSs or Class A common shares by a U.S. holder (as defined below) that holds our ADSs or Class A common shares as “capital assets” (generally, property held for investment) under the United States Internal Revenue Code of 1986, as amended (the “Code”). This summary is based upon existing United States federal income tax law, which is subject to differing interpretations or change, possibly with retroactive effect. This summary does not discuss all aspects of United States federal income taxation that may be important to particular holders in light of their particular circumstances, including holders subject to special tax rules (for example, banks and other financial institutions, insurance companies, broker-dealers, pension plans, cooperatives, real estate investment trusts, regulated investment companies, traders in securities that have elected the mark-to-market method of accounting for their securities, certain former U.S. citizens or long-term residents, partnerships and their partners, and tax-exempt organizations (including private foundations)), holders who are not U.S. holders, holders who own (directly, indirectly, or constructively) 10% or more of our stock (by vote or value), holders that hold their ADSs or Class A common shares as part of a straddle, hedge, conversion, constructive sale, or other integrated transaction for United States federal income tax purposes, persons who acquired ADSs or Class A common shares pursuant to the exercise of any employee share option or otherwise as compensation, or holders that have a functional currency other than the United States dollar, all of whom may be subject to tax rules that differ significantly from those summarized below. In addition, except to the extent described below, this summary does not discuss any state, local or non-United States tax considerations, Medicare tax, any minimum tax or any non-income tax (such as the United States federal estate or gift tax) considerations. Each U.S. holder is urged to consult its tax advisor regarding the United States federal, state, local, and non-United States income and other tax considerations relating to the ownership and disposition of our ADSs or Class A common shares.

### ***General***

For purposes of this summary, a “U.S. holder” is a beneficial owner of our ADSs or Class A common shares that is, for United States federal income tax purposes, (i) an individual who is a citizen or resident of the United States, (ii) a corporation (or other entity treated as a corporation for United States federal income tax purposes) created in, or organized under the law of, the United States or any state thereof or the District of Columbia, (iii) an estate the income of which is includible in gross income for United States federal income tax purposes regardless of its source, or (iv) a trust (A) the administration of which is subject to the primary supervision of a United States court and which has one or more United States persons who have the authority to control all substantial decisions of the trust or (B) that has otherwise elected to be treated as a United States person.

If a partnership (or other entity treated as a partnership for United States federal income tax purposes) is a beneficial owner of our ADSs or Class A common shares, the tax treatment of a partner in the partnership will generally depend upon the status of the partner and the activities of the partnership. Partnerships holding our ADSs or Class A common shares and partners in such partnerships are urged to consult their tax advisors regarding the ownership and disposition of our ADSs or Class A common shares.

It is generally expected that a holder of ADSs should be treated, for United States federal income tax purposes, as the beneficial owner of the Class A common shares represented by the ADSs. The remainder of this discussion assumes that a holder of ADSs will be treated in this manner. Predicated upon such treatment, deposits or withdrawals of common shares for ADSs will not be subject to United States federal income tax.

### ***Passive Foreign Investment Company Considerations***

A non-United States corporation, such as our company, will be classified as a “passive foreign investment company,” or “PFIC,” for United States federal income tax purposes, for any taxable year, if either (i) 75% or more of its gross income for such year consists of certain types of “passive” income or (ii) 50% or more of its assets (generally determined on the basis of a quarterly average) during such year produce or are held for the production of passive income. For this purpose, cash and assets readily convertible into cash are categorized as passive assets and the company’s unbooked intangibles are taken into account for determining the value of its assets. We will be treated as owning our proportionate share of the assets and earning our proportionate share of the income of any other corporation in which we own, directly or indirectly, 25% or more (by value) of the stock.

Although the law in this regard is unclear, we treat the variable interest entities as being owned by us for United States federal income tax purposes, not only because we exercise effective control over the operation of such entities but also because we are entitled to substantially all of their economic benefits, and, as a result, we consolidate their operating results in our consolidated financial statements.

Based on the market price of our ADSs and the nature and composition of our assets (in particular, the retention of substantial amounts of cash, deposits and investments), we believe that we were a PFIC for United States federal income tax purposes for the taxable year ended December 31, 2023, and we will likely be a PFIC for our current taxable year unless the market price of our ADSs increases and/or we invest a substantial amount of the cash and other passive assets we hold in assets that produce or are held for the production of active income.

If we are a PFIC for any year during which a U.S. holder holds our ADSs or Class A common shares, we generally would continue to be treated as a PFIC for all succeeding years during which such U.S. holder holds our ADSs or Class A common shares even if we cease to meet the threshold requirements for PFIC status, unless a U.S. holder makes a taxable “deemed sale” election that may allow the U.S. holder to eliminate the continuing PFIC status under certain circumstances.

The United States federal income tax rules that apply if we are classified as a PFIC for the current taxable year or any subsequent taxable year are generally discussed below under “Passive Foreign Investment Company Rules.”

### ***Dividends***

Subject to the discussion below under “Passive Foreign Investment Company Rules,” any cash distributions (including the amount of any taxes withheld) paid on our ADSs or Class A common shares out of our current or accumulated earnings and profits, as determined under United States federal income tax principles, will generally be includible in the gross income of a U.S. holder as dividend income on the day actually or constructively received by the U.S. holder, in the case of common shares, or by the Depositary, in the case of ADSs. Because we do not intend to determine our earnings and profits on the basis of United States federal income tax principles, any distribution paid will generally be reported as a “dividend” for United States federal income tax purposes. A non-corporate recipient of dividend income will generally be subject to tax on dividend income from a “qualified foreign corporation” at a reduced United States federal tax rate rather than the marginal tax rates generally applicable to ordinary income provided that certain holding period requirements are met.

A non-United States corporation (other than a corporation that is classified as a PFIC for the taxable year in which the dividend is paid or the preceding taxable year) will generally be considered to be a qualified foreign corporation with respect to any dividend it pays on stock (or ADSs in respect of such stock) which is readily tradable on an established securities market in the United States or, in the event that the company is deemed to be a PRC resident under the PRC Enterprise Income Tax Law, the company is eligible for the benefits of the United States-PRC treaty. Although no assurances may be given, our ADSs are expected to be readily tradable on the Nasdaq Global Select Market, which is an established securities market in the United States. Since we do not expect that our Class A common shares will be listed on established securities markets, it is unclear whether dividends that we pay on our Class A common shares that are not backed by ADSs currently meet the conditions required for these reduced tax rates. There can be no assurance that our ADSs will be considered readily tradable on an established securities market in the current taxable year or future taxable years. Furthermore, as mentioned above, we believe that we were a PFIC for the taxable year ended December 31, 2023, and we will likely be classified as a PFIC for our current taxable year. U.S. holders are urged to consult their tax advisors regarding the availability of the reduced tax rate on dividends with respect to our ADSs or Class A common shares in their particular circumstances.

Dividends received on the ADSs or Class A common shares are not expected to be eligible for the dividends received deduction allowed to corporations. Each U.S. holder is advised to consult its tax advisor regarding the rate of tax that will apply to such holder with respect to dividend distributions, if any, received from us.

Dividends generally will be treated as income from foreign sources for United States foreign tax credit purposes and generally will constitute passive category income. A U.S. holder may be eligible, subject to a number of complex limitations, to claim a foreign tax credit in respect of any foreign withholding taxes imposed on dividends received on ADSs or Class A common shares. A U.S. holder who does not elect to claim a foreign tax credit for foreign tax withheld, may instead claim a deduction, for United States federal income tax purposes, in respect of such withholdings, but only for a year in which such U.S. holder elects to do so for all creditable foreign income taxes. The rules governing the foreign tax credit are complex. Each U.S. holder is advised to consult its tax advisor regarding the availability of the foreign tax credit under their particular circumstances.

#### ***Sale or Other Disposition of ADSs or Common Shares***

Subject to the discussion below under “Passive Foreign Investment Company Rules,” a U.S. holder generally will recognize capital gain or loss upon the sale or other disposition of ADSs or Class A common shares in an amount equal to the difference between the amount realized upon the disposition and the U.S. holder’s adjusted tax basis in such ADSs or Class A common shares. Any capital gain or loss will be long-term if the ADSs or Class A common shares have been held for more than one year and will generally be United States source gain or loss for United States foreign tax credit purposes, which will generally limit the availability of foreign tax credits. Long-term capital gains of individuals and other non-corporate U.S. holders generally are eligible for a reduced rate of taxation. The deductibility of a capital loss may be subject to limitations.

As described in “Item 10. Additional Information—E. Taxation—Mainland China Taxation,” if we are deemed to be a PRC resident enterprise under the PRC Enterprise Income Tax Law, gains from the disposition of the ADSs or Class A common shares may be subject to PRC income tax and will generally be United States source, which may limit the ability to receive a foreign tax credit. If a U.S. Holder is eligible for the benefits of the U.S.-PRC treaty, such holder may be able to elect to treat such gain as PRC source income under the U.S.-PRC treaty. Pursuant to United States Treasury regulations, however, if a U.S. Holder is not eligible for the benefits of the U.S.-PRC treaty or does not elect to apply the U.S.-PRC treaty, then such holder may not be able to claim a foreign tax credit arising from any PRC tax imposed on the disposition of the ADSs or Class A common shares. The rules regarding foreign tax credits and deduction of foreign taxes are complex. U.S. Holders should consult their tax advisors regarding the availability of a foreign tax credit or deduction in light of their particular circumstances, including their eligibility for benefits under the U.S.-PRC treaty, and the potential impact of the United States Treasury regulations.

As mentioned above, we believe that we were a PFIC for the taxable year ended December 31, 2023, and we will likely be classified as a PFIC for our current taxable year. U.S. holders are urged to consult their tax advisors regarding the tax considerations of the sale or other disposition of our ADSs or Class A common shares under their particular circumstances.

#### ***Passive Foreign Investment Company Rules***

As mentioned above, we believe that we were a PFIC for the taxable year ended December 31, 2023, and we will likely be classified as a PFIC for our current taxable year. If we are classified as a PFIC for any taxable year during which a U.S. holder holds our ADSs or Class A common shares, and unless the U.S. holder makes a mark-to-market election (as described below), the U.S. holder will generally be subject to special tax rules that have a penalizing effect, regardless of whether we remain a PFIC, on (i) any excess distribution that we make to the U.S. holder (which generally means any distribution paid during a taxable year to a U.S. holder that is greater than 125% of the average annual distributions paid in the three preceding taxable years or, if shorter, the U.S. holder’s holding period for the ADSs or Class A common shares), and (ii) any gain realized on the sale or other disposition, including, under certain circumstances, a pledge, of ADSs or Class A common shares. Under the PFIC rules:

- such excess distribution and/or gain will be allocated ratably over the U.S. holder’s holding period for the ADSs or Class A common shares;
- such amount allocated to the current taxable year and any taxable years in the U.S. holder’s holding period prior to the first taxable year in which we are classified as a PFIC, or pre-PFIC year, will be taxable as ordinary income;

- such amount allocated to each prior taxable year, other than a pre-PFIC year, will be subject to tax at the highest tax rate in effect applicable to the U.S. holder for that year; and
- an interest charge generally applicable to underpayments of tax will be imposed on the tax attributable to each prior taxable year, other than a pre-PFIC year.

If we are a PFIC for any taxable year during which a U.S. holder holds our ADSs or Class A common shares and any of our non-United States subsidiaries is also a PFIC, such U.S. holder would be treated as owning a proportionate amount (by value) of the shares of the lower-tier PFIC and would be subject to the rules described above on certain distributions by a lower-tier PFIC and a disposition of shares of a lower-tier PFIC even though such U.S. holder would not receive the proceeds of those distributions or dispositions. Each U.S. holder is advised to consult its tax advisor regarding the application of the PFIC rules to any of our subsidiaries.

As an alternative to the foregoing rules, a U.S. holder of “marketable stock” (as defined below) in a PFIC may make a mark-to-market election for such stock to elect out of the tax treatment discussed above. The mark-to-market election is available only for “marketable stock,” which is stock that is traded in other than de minimis quantities on at least 15 days during each calendar quarter (“regularly traded”) on a qualified exchange or other market, as defined in applicable United States Treasury regulations. Our ADSs are listed on the Nasdaq Global Select Market, which is a qualified exchange or market for these purposes. We anticipate that our ADSs should qualify as being regularly traded, but no assurances may be given in this regard. Because a mark-to-market election technically cannot be made for equity interests in any lower-tier PFICs that we own, a U.S. holder may continue to be subject to the PFIC rules with respect to its indirect interest in any investments held by us that are treated as an equity interest in a PFIC for United States federal income tax purposes. If a mark-to-market election is made, the U.S. holder will generally (i) include as ordinary income for each taxable year that we are a PFIC the excess, if any, of the fair market value of ADSs held at the end of the taxable year over the adjusted tax basis of such ADSs and (ii) deduct as an ordinary loss the excess, if any, of the adjusted tax basis of the ADSs over the fair market value of such ADSs held at the end of the taxable year, but only to the extent of the net amount previously included in income as a result of the mark-to-market election. The U.S. holder’s adjusted tax basis in the ADSs would be adjusted to reflect any income or loss resulting from the mark-to-market election.

If a U.S. holder makes a mark-to-market election in respect of a corporation classified as a PFIC and such corporation ceases to be classified as a PFIC, the U.S. holder will not be required to take into account the mark-to-market gain or loss described above during any period that such corporation is not classified as a PFIC.

We do not intend to provide information necessary for U.S. holders to make qualified electing fund elections, which, if available, would result in tax treatment different from (and generally less adverse than) the general tax treatment for PFICs described above.

If a U.S. holder owns our ADSs or Class A common shares during any taxable year that we are a PFIC, such holder is required to file an annual report containing such information as the United States Treasury Department may require and may be required to file an annual IRS Form 8621. Each U.S. holder is advised to consult its tax advisors regarding the potential tax consequences to such holder if we are or become classified as a PFIC, including the possibility of making a mark-to-market election.

### **Mainland China Taxation**

Under the existing tax laws in mainland China, we are qualified as a non-resident enterprise. We are a holding company incorporated in the Cayman Islands. Our holding company indirectly holds 100% of the equity interests in our subsidiaries in mainland China. Our business operations within mainland China are principally conducted through our subsidiaries in mainland China and the variable interest entities. The PRC Enterprise Income Tax Law, which was most recently amended on December 29, 2018, and its implementation rules, which was most recently amended on April 23, 2019, provide that income of foreign enterprises sourced from mainland China, such as dividends paid by a subsidiary in mainland China to its overseas parent that is not a PRC resident enterprise and has no establishment in mainland China, will normally be subject to PRC withholding tax at a rate of 10% (a further reduced WHT rate may be available according to the applicable double tax treaty or arrangement).

If the tax authorities of mainland China determine that JOYY Inc., our Cayman Islands holding company, is a PRC resident enterprise for enterprise income tax purposes, our world-wide income could be subject to PRC tax at a rate of 25%, which could materially reduce our net income. In addition, we will also be subject to PRC enterprise income tax reporting obligations. Furthermore, although dividends paid by one PRC tax resident to another PRC tax resident should be qualified as “tax-exempt income” under the PRC Enterprise Income Tax Law, we cannot assure you that dividends by our subsidiaries in mainland China to our Cayman holding company will not be subject to a 10% withholding tax, as the foreign exchange regulation authorities in mainland China, which enforce the withholding tax on dividends, and the tax authorities in mainland China have not yet issued guidance with respect to the processing of outbound remittances to entities that are treated as resident enterprises for PRC enterprise income tax purposes. In addition, ADS holders may be subject to PRC withholding tax on dividends payable by us and gains realized on the sale or other dispositions of ADSs or common shares, if the tax authorities in mainland China determine that our Cayman Islands holding company is a PRC resident enterprise for enterprise income tax purposes. See “Item 3. Key Information—D.Risk Factors—Risks Related to Doing Business in Jurisdictions We Operate—Under the PRC enterprise income tax law, we may be classified as a PRC ‘resident enterprise,’ which could result in unfavorable tax consequences to us and our shareholders and have a material adverse effect on our results of operations and the value of your investment.”

**F. Dividends and Paying Agents**

Not applicable.

**G. Statement by Experts**

Not applicable.

**H. Documents on Display**

We are subject to the periodic reporting and other informational requirements of the Securities Exchange Act of 1934 or the Exchange Act. Under the Exchange Act, we are required to file reports and other information with the SEC. Specifically, we are required to file annually a Form 20-F within four months after the end of each fiscal year which is December 31. All information we file with the SEC can be obtained over the internet at the SEC’s website at [www.sec.gov](http://www.sec.gov). As a foreign private issuer, we are exempt from the rules under the Exchange Act prescribing the furnishing and content of quarterly reports and proxy statements, and officers, directors and principal shareholders are exempt from the reporting and short-swing profit recovery provisions contained in Section 16 of the Exchange Act.

We will furnish Citibank N.A., the depository of our ADSs, with our annual reports, which will include a review of operations and annual audited consolidated financial statements prepared in conformity with U.S. GAAP, and all notices of shareholders’ meetings and other reports and communications that are made generally available to our shareholders. The depository will make such notices, reports and communications available to holders of ADSs and, upon our request, will mail to all record holders of ADSs the information contained in any notice of a shareholders’ meeting received by the depository from us.

**I. Subsidiary Information**

For a list of our principal subsidiaries, see “Item 4. Information on the Company—C. Organizational Structure.”

**J. Annual Report to Security Holders**

Not applicable.

## **ITEM 11. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK**

### **Foreign Exchange Risk**

We are exposed to foreign exchange risks arising from various currency exposures. While a majority of our revenues and expenses are denominated in U.S. dollars, some of our expenses and revenues are dominated in various other foreign currencies, such as Renminbi, Euro, Singapore dollars, Japanese yen, Indonesian rupiah, Vietnamese dong, Thai baht, Malaysian ringgit, Turkish lira, among other currencies. We do not rely on any single currency as we earn revenue in different local currencies across our markets and keep a significant cash position in U.S. dollars.

Our expenses may become higher and our revenue and operating metrics may become lower than would be the case if exchange rates were stable or if we were operating and reporting in one currency. For example, if the U.S. dollar weakens relative to currencies in our local markets, our revenue and operating expenses will be higher than if currencies had remained constant. Likewise, if the U.S. dollar strengthens relative to currencies in our local markets, our revenue and operating expenses will be lower than if currencies had remained constant. Movements in foreign currency exchange rates may have a material adverse effect on our results of operations, which may cause our financial and operational metrics reported in the U.S. dollar to be not fully representative of the underlying business performance. We believe that our diversification in geographic coverage benefits our shareholders over the long-term. We had used and may enter into derivative financial instruments including the forward exchange contracts to hedge our exposure to potential foreign currency risks. See “Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in Jurisdictions We Operate—Fluctuations in foreign currency exchange rates may adversely affect our operational and financial results, which we report in U.S. dollars.”

As of December 31, 2023, we had RMB-denominated cash and cash equivalents, restricted cash and cash equivalents, short-term deposits and short-term investments of RMB3,840.9 million. A 10% depreciation of Renminbi against the U.S. dollars based on the foreign exchange rate on December 31, 2023 would result in a decrease of US\$54.2 million in cash and cash equivalents, restricted cash and cash equivalents, short-term deposits and short-term investments. A 10% appreciation of Renminbi against the U.S. dollars based on the foreign exchange rate on December 31, 2023 would result in an increase of US\$54.2 million in cash and cash equivalents, restricted cash and cash equivalents, short-term deposits and short-term investments.

### **Interest Rate Risk**

Our exposure to interest rate risk primarily relates to the interest income generated by excess cash, which is mostly held in interest-bearing bank deposits. Interest-earning instruments carry a degree of interest rate risk. We have not been exposed to, nor do we anticipate being exposed to, material risks due to changes in market interest rates. However, our future interest income may fall short of expectations due to changes in market interest rates. Based on our interest instruments as of December 31, 2023, a hypothetical one percentage point decrease in interest rates would have resulted in a decrease of US\$27.7 million in our total amount of net interest income.

## **ITEM 12. DESCRIPTION OF SECURITIES OTHER THAN EQUITY SECURITIES**

### **A. Debt Securities**

Not applicable.

### **B. Warrants and Rights**

Not applicable.

### **C. Other Securities**

Not applicable.

## D. American Depositary Shares

### Fees and Charges Our ADS holders May Have to Pay

As an ADS holder, you will be required to pay the following service fees to the depositary bank:

Service	Fees
● Issuance of ADSs (e.g., an issuance upon a deposit of Shares, upon a change in the ADS(s)-to-Share(s) ratio, or for any other reason), excluding issuances as a result of distributions described in paragraph (4) below	Up to US\$5.00 per 100 ADSs (or fraction thereof) issued
● Cancellation of ADSs (e.g., a cancellation of ADSs for Delivery of deposited Shares, upon a change in the ADS(s)-to-Share(s) ratio, or for any other reason)	Up to US\$5.00 per 100 ADSs (or fraction thereof) canceled
● Distribution of cash dividends or other cash distributions (e.g., upon a sale of rights and other entitlements)	Up to US\$5.00 per 100 ADSs (or fraction thereof) held
● Distribution of ADSs pursuant to (i) stock dividends or other free stock distributions, or (ii) an exercise of rights to purchase additional ADSs	Up to US\$5.00 per 100 ADSs (or fraction thereof) held
● Distribution of securities other than ADSs or rights to purchase additional ADSs (e.g., spin-off shares)	Up to US\$5.00 per 100 ADSs (or fraction thereof) held
● ADS Services	Up to US\$5.00 per 100 ADSs (or fraction thereof) held on the applicable record date(s) established by the Depositary

As an ADS holder, you will also be responsible for the following ADS charges:

- (i) taxes (including applicable interest and penalties) and other governmental charges;
- (ii) the registration fees as may from time to time be in effect for the registration of Class A common shares on the share register and applicable to transfers of Class A common shares to or from the name of the custodian, the depositary bank or any nominees upon the making of deposits and withdrawals, respectively;
- (iii) certain cable, telex and facsimile transmission and delivery expenses;
- (iv) the expenses and charges incurred by the depositary bank in the conversion of foreign currency;
- (v) the fees and expenses incurred by the depositary bank in connection with compliance with exchange control regulations and other regulatory requirements applicable to Class A common shares, ADSs and ADRs; and
- (vi) the fees and expenses incurred by the depositary bank, the custodian, or any nominee in connection with the servicing or delivery of deposited property.

ADS fees and charges for (i) the issuance of ADSs and (ii) the cancellation of ADSs will be payable by the person for whom the ADSs are so issued by the depositary bank (in the case of ADS issuances) and by the person for whom ADSs are being canceled (in the case of ADS cancellations). In the case of ADSs issued by the depositary bank into DTC or presented to the depositary via DTC, the ADS issuance and cancellation fees and charges will be payable by the DTC participant(s) receiving the ADSs from the depositary bank or the DTC participant(s) holding the ADSs being canceled, as the case may be, on behalf of the beneficial owner(s) and will be charged by the DTC participant(s) to the account(s) of the applicable beneficial owner(s) in accordance with the procedures and practices of the DTC participant(s) as in effect at the time. ADS fees and charges in respect of distributions and the ADS service fee are payable by holders as of the applicable ADS record date established by the depositary bank. In the case of distributions of cash, the amount of the applicable ADS fees and charges is deducted from the funds being distributed. In the case of (i) distributions other than cash and (ii) the ADS service fee, the applicable holders as of the ADS record date established by the depositary bank will be invoiced for the amount of the ADS fees and charges and such ADS fees may be deducted from distributions made to holders. For ADSs held through DTC, the ADS fees and charges for distributions other than cash and the ADS service fee may be deducted from distributions made through DTC, and may be charged to the DTC participants in accordance with the procedures and practices prescribed by DTC from time to time and the DTC participants in turn charge the amount of such ADS fees and charges to the beneficial owners for whom they hold ADSs.

In the event of refusal to pay the depositary bank fees, the depositary bank may, under the terms of the deposit agreement, refuse the requested service until payment is received or may set off the amount of the depositary bank fees from any distribution to be made to the ADS holder. Certain of the depositary fees and charges (such as the ADS service fee) may become payable shortly after the closing of the ADS offering. Note that the fees and charges you may be required to pay may vary over time and may be changed by us and by the depositary bank. You will receive prior notice of such changes. The depositary bank may reimburse us for certain expenses incurred by us in respect of the ADR program, by making available a portion of the ADS fees charged in respect of the ADR program or otherwise, upon such terms and conditions as we and the depositary bank agree from time to time.

#### **Fees and Other Payments Made by the Depositary to Us**

Citibank, N.A., as our depositary, has agreed to reimburse us for a portion of certain expenses we incur that are related to establishment and maintenance of the ADS program, including investor relations expenses. There are limits on the amount of expenses for which the depositary will reimburse us, but the amount of reimbursement available to us is not related to the amount of fees the depositary collects from investors. Further, the depositary has agreed to reimburse us certain fees payable to the depositary by holders of ADSs. For the year ended December 31, 2023, we were entitled to reimbursement of an insignificant amount for our expenses incurred in connection with the establishment and maintenance of our ADS program.

## PART II

### ITEM 13. DEFAULTS, DIVIDEND ARREARAGES AND DELINQUENCIES

None.

### ITEM 14. MATERIAL MODIFICATIONS TO THE RIGHTS OF SECURITY HOLDERS AND USE OF PROCEEDS

See “Item 10. Additional Information” for a description of the rights of securities holders, which remain unchanged.

### ITEM 15. CONTROLS AND PROCEDURES

#### Evaluation of Disclosure Controls and Procedures

As required by Rule 13a-15(b) under the Exchange Act, our management, including our chief executive officer, and our vice president of finance, performed an evaluation of the effectiveness of our disclosure controls and procedures, as that term is defined in Rules 13a-15(e) of the Exchange Act, as of the end of the period covered by this annual report. Based on that evaluation, our management has concluded that our disclosure controls and procedures as of December 31, 2023, were effective in ensuring that the information required to be disclosed by us in the reports that we file and furnish under the Exchange Act was recorded, processed, summarized and reported, within the time periods specified in the SEC’s rules and forms, and that the information required to be disclosed by us in the reports that we file or submit under the Exchange Act is accumulated and communicated to our management, including our chief executive officer and vice president of finance, to allow timely decisions regarding required disclosure.

#### Management’s Annual Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934, as amended. Our internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of financial statements for external purposes in accordance with Generally Accepted Accounting Principles (GAAP) in the United States of America and includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of our company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of consolidated financial statements in accordance with GAAP, and that receipts and expenditures of our company are being made only in accordance with authorizations of our management and directors; and (3) provide reasonable assurance regarding prevention or timely detection of the unauthorized acquisition, use or disposition of our company’s assets that could have a material effect on the consolidated financial statements. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risks that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Our management conducted an evaluation of the effectiveness of our company’s internal control over financial reporting as of December 31, 2023 based on the framework in Internal Control—Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this evaluation, our management concluded that our internal control over financial reporting was effective as of December 31, 2023.

#### Attestation Report of the Independent Registered Public Accounting Firm

PricewaterhouseCoopers LLP, our independent registered public accounting firm, audited the effectiveness of our company’s internal control over financial reporting as of December 31, 2023, as stated in its report, which appears on page F-2 of this Form 20-F.

#### Changes in Internal Control Over Financial Reporting

There has been no change in our internal control over financial reporting identified in connection with the evaluation required by paragraph (d) of Rule 13a-15 or Rule 15d-15 that occurred during the year ended December 31, 2023 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

**ITEM 16A. AUDIT COMMITTEE FINANCIAL EXPERT**

Our board of directors has determined that Mr. Peter Andrew Schloss is our audit committee financial expert, who is an independent director under the standards set forth in Nasdaq Stock Market Rule 5605(a)(2) and Rule 10A-3 of the Exchange Act. Mr. Schloss is the chairman of our audit committee.

**ITEM 16B. CODE OF ETHICS**

Our board of directors has adopted a code of business conduct and ethics that applies to our directors, officers, employees and agents, including certain provisions that specifically apply to our chief executive officer, vice president of finance, vice presidents and any other persons who perform similar functions for us, as amended and restated from time to time. In May 2022, our board of directors approved the amendment and restatement of our code of business conduct and ethics. We have filed our amended and restated code of business conduct and ethics, representing the currently effective one, as an exhibit to our annual report on Form 20-F, and have posted a copy of our amended and restated code of business conduct and ethics on our website at <http://ir.joyy.com/corporate-governance>.

**ITEM 16C. PRINCIPAL ACCOUNTANT FEES AND SERVICES**

The following table sets forth the aggregate fees in connection with certain professional services rendered by our independent registered public accounting firms and their affiliates, for the years indicated. We did not pay any other fees to our independent registered public accounting firm during the periods other than those indicated below.

	<u>For the Year Ended December 31,</u>	
	<u>2022<sup>(2)</sup></u>	<u>2023</u>
	<u>(US\$ in thousands)</u>	
Audit fees <sup>(1)</sup>	4,053	3,108

- (1) "Audit fees" means the aggregate fees billed for professional services rendered by our independent registered public accounting firm for the annual audit and the quarterly reviews of our consolidated financial statements, audit of internal controls over financial reporting of our company.
- (2) On September 2, 2022, we engaged PricewaterhouseCoopers LLP as our independent registered public accounting firm, replacing PricewaterhouseCoopers Zhong Tian LLP. The fees for 2022 are fees payable to PricewaterhouseCoopers LLP. See also "Item 16F. Change in Registrant's Certifying Accountant."

The policy of our audit committee is to pre-approve all audit and non-audit services provided by our independent registered public accounting firms and its affiliates, including audit services, audit-related services, tax services and other services, other than those for de minimis services which are approved by the audit committee prior to the completion of the audit. Our audit committee has approved all of our audit and non-audit fees for the year ended December 31, 2023.

**ITEM 16D. EXEMPTIONS FROM THE LISTING STANDARDS FOR AUDIT COMMITTEES**

Not applicable.

**ITEM 16E. PURCHASES OF EQUITY SECURITIES BY THE ISSUER AND AFFILIATED PURCHASERS**

Our board of directors approved a share repurchase plan on November 16, 2021, under which we were authorized to repurchase up to US\$1 billion of our ADSs or common shares over the next 12 months. The share repurchase plan was publicly announced on November 17, 2021. As approved by our board of directors on November 28, 2022, we were authorized to continue to use the unutilized quota under the share repurchase plan, which amounted to US\$800 million, for another 12-month period beginning from November 29, 2022, the date on which we announced the extension. On November 29, 2023, our board of directors authorized the further renewal and continued usage of the unutilized quota of approximately US\$530 million for another 12-month period beginning from November 30, 2023, the date on which we announced the extension.

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The table below is a summary of the ADSs repurchased by us in 2023. All ADSs were repurchased in the open market pursuant to the share repurchase plan.

Period	Total Number of ADSs Purchased	Average Price Paid Per ADS	Total Number of ADSs Purchased as Part of the Publicly Announced Plan	Approximate Dollar Value of ADSs that May Yet Be Purchased Under the Plan
January 2023	—	—	—	800,000
February 2023	—	—	—	800,000
March 2023	527,658	29.85	527,658	784,250
April 2023	1,491,539	29.12	2,019,197	740,821
May 2023	2,218,618	28.80	4,237,815	676,930
June 2023	3,594,969	29.75	7,832,784	569,986
July 2023	665,960	31.83	8,498,744	548,789
August 2023	212,440	31.87	8,711,184	542,018
September 2023	417,662	37.12	9,128,846	526,514
October 2023	—	—	—	526,514
November 2023	—	—	—	526,514
December 2023	—	—	—	526,514
<b>Total</b>	<b>9,128,846</b>	<b>29.96</b>	<b>9,128,846</b>	<b>526,514</b>

**ITEM 16F. CHANGES IN REGISTRANT’S CERTIFYING ACCOUNTANT**

The disclosure called for by paragraph (a) of this Item 16F was previously reported, as that term is defined in Rule 12b-2 under the Exchange Act, in “Item 16F. Change in Registrant’s Certifying Accountant” of our annual report on Form 20-F for the fiscal year ended December 31, 2022 filed with the SEC on April 27, 2023.

**ITEM 16G. CORPORATE GOVERNANCE**

As a Cayman Islands company listed on the Nasdaq Global Select Market, we are subject to the Nasdaq Global Select Market corporate governance requirements. However, Nasdaq Global Select Market rules permit a foreign private issuer like us to follow the corporate governance practices of its home country. Certain corporate governance practices in the Cayman Islands, which is our home country, may differ significantly from the Nasdaq Global Select Market corporate governance requirements.

In lieu of the requirements of Rule 5605(b) of the Nasdaq Rules that a majority of a Nasdaq-listed company’s board of directors be independent directors as defined in Rule 5605(a)(2), we follow our home country practices with respect to the composition of our board of directors. We also relied on the exemption available to foreign private issuers to the requirement that each member of the compensation committee and the corporate governance and nominating committee be an independent director, following our home country practice in the Cayman Islands. Our compensation committee is chaired by a non-independent director, Mr. David Xueling Li, whose extensive experience in talent management and human resource in the internet industry is considered to be valuable for the functioning of our compensation committee. One of the members of our corporate governance and nominating committee, Mr. Qin Liu, is a non-independent director, whose extensive experience is considered to be valuable for functioning of our corporate governance and nominating committee. We also relied on home country practice exemption and did not hold an annual general meeting of shareholders within one year after the end of our fiscal year-end or solicit proxies or provide proxy statements for all meetings of shareholders and provide copies of proxy solicitation to Nasdaq. If we continue to rely on the above and other exemptions available to foreign private issuers in the future, our shareholders may be afforded less protection than they otherwise would under the Nasdaq Global Select Market corporate governance requirements applicable to U.S. domestic issuers. See “Item 3. Key Information—D. Risk Factors—Risks Related to Our ADSs—We are a foreign private issuer within the meaning of the rules under the Exchange Act, and as such we are exempt from certain provisions applicable to United States domestic public companies.”

**ITEM 16H. MINE SAFETY DISCLOSURE**

Not applicable.

**ITEM 16I. DISCLOSURE REGARDING FOREIGN JURISDICTION THAT PREVENT INSPECTIONS**

Not applicable.

**ITEM 16J. INSIDER TRADING POLICIES**

Not applicable.

**ITEM 16K. CYBERSECURITY**

**Risk Management and Strategy**

We have implemented comprehensive cybersecurity risk assessment procedures to ensure effectiveness in cybersecurity management, strategy and governance and reporting cybersecurity risks. We have also integrated cybersecurity risk management into our overall enterprise risk management system.

We have developed a comprehensive cybersecurity threat defense system to address both internal and external cyber threats. This system spans multiple security domains, including network, host and application layers. It integrates a range of security capabilities, such as threat defense, continuous monitoring, in-depth analysis, rapid response, as well as strategic deception and countermeasures. Our approach to managing cybersecurity risks and safeguarding sensitive data is multi-faceted, involving technological safeguards, procedural protocols, a rigorous program of surveillance on our corporate network, continuous testing of aspects of our security posture internally and with third-party business partners and third-party service providers, such as third-party online payment system provider, a solid incident response framework and regular cybersecurity training sessions for our employees. Our IT department is actively engaged in continuous monitoring of the performance of our infrastructure to ensure prompt identification and response to potential issues, including potential cybersecurity threats.

We do not engage any third parties in connection with the processes for assessing, identifying, and managing material risks from cybersecurity threats. As of the date of this annual report, we have not experienced any material cybersecurity incidents or identified any material cybersecurity threats that have affected or are reasonably likely to materially affect us, our business strategy, results of operations or financial condition.

**Governance**

Our board of directors is responsible for overseeing our cybersecurity risk management and is informed on risks from cybersecurity threats. Our board of directors shall review, approve and maintain oversight of the disclosure (i) on Form 6-K for material cybersecurity incidents (if any) and (ii) related to cybersecurity matters in the periodic reports (including annual report on Form 20-F) of our Company.

On the management level, our chief executive officer, vice president of finance, and cybersecurity officer who has over 10 years of experience as cybersecurity officer in technology companies and extensive knowledge and skills in security products development, security risk management, and security compliance, are responsible for assessing, identifying and managing material risks from cybersecurity threats to our company and monitoring the prevention, detection, mitigation and remediation of material cybersecurity incidents. They are collectively referred to as the Cybersecurity Risk Management Officers. Our Cybersecurity Risk Management Officers report to our board of directors (i) on a quarterly basis regarding their assessment, identification and management of material risks from cybersecurity threats which arise in the ordinary course of our business operations and (ii) on disclosure concerning cybersecurity matters in our Form 6-K for material cybersecurity incidents (if any) and our annual report on Form 20-F.

If a cybersecurity incident occurs, our Cybersecurity Risk Management Officers will promptly organize relevant personnel for internal assessment and, depending on the situation, seek the opinions of external experts and legal advisors. If it is determined that the incident could potentially be a material cybersecurity event, our Cybersecurity Risk Management Officers will promptly report the incident and relevant assessment results to our board of directors and our board of directors will decide on the relevant response measures and whether any disclosure is necessary. If such disclosure is determined to be necessary, our Cybersecurity Risk Management Officers shall promptly prepare disclosure material for review and approval by our board of directors before it is disseminated to the public.

**PART III**

**ITEM 17. FINANCIAL STATEMENTS**

We have elected to provide financial statements pursuant to Item 18.

**ITEM 18. FINANCIAL STATEMENTS**

The consolidated financial statements of JOYY Inc. are included at the end of this annual report.

**ITEM 19. EXHIBITS**

<u>Exhibit Number</u>	<u>Description of Document</u>
1.1	<a href="#">Third Amended and Restated Memorandum and Articles of Association of the Registrant (incorporated herein by reference to Exhibit 3.1 to the current report on Form 6-K (File No. 001-35729), furnished with the Securities and Exchange Commission on December 27, 2021)</a>
2.1	<a href="#">Registrant's Specimen American Depositary Receipt (incorporated herein by reference to Exhibit 4.3 to the registration statement on Form S-8 (File No. 333-229099), filed with the Securities and Exchange Commission on December 31, 2018)</a>
2.2	<a href="#">Registrant's Specimen Certificate for Common Shares (incorporated herein by reference to Exhibit 4.2 to the registration statement on Form F-1, as amended (File No. 333-184414), initially filed with the Securities and Exchange Commission on December 31, 2018)</a>
2.3	<a href="#">Amended and Restated Deposit Agreement dated May 21, 2018 among the Registrant, Citibank N.A., as depositary, and holders and beneficial owners of American Depositary Shares evidenced by American Depositary Receipts issued thereunder (incorporated by reference to Exhibit 4.3 to the registration statement on Form S-8 (File No. 333-229099), filed with the Securities and Exchange Commission on December 31, 2018)</a>
2.4	<a href="#">Description of Securities (incorporated herein by reference to Exhibit 2.5 to the annual report on Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 27, 2023)</a>
4.1	<a href="#">2009 Employee Equity Incentive Scheme of the Registrant, as amended and restated, (incorporated herein by reference to Exhibit 10.1 to the registration statement on Form F-1, as amended (File No. 333-184414), initially filed with the Securities and Exchange Commission on October 15, 2012)</a>
4.2	<a href="#">Amended and Restated 2011 Share Incentive Plan of the Registrant (incorporated herein by reference to Exhibit 99.1 to the current report on Form 6-K (File No. 001-35729), furnished with the Securities and Exchange Commission on July 2, 2021)</a>
4.3	<a href="#">Form of Indemnification Agreement with the Registrant's directors and officers (incorporated herein by reference to Exhibit 10.3 to the registration statement on Form F-1, as amended (File No. 333-184414), initially filed with the Securities and Exchange Commission on October 15, 2012)</a>
4.4	<a href="#">Form of Employment Agreement between the Registrant and an executive officer of the Registrant (incorporated herein by reference to Exhibit 10.4 to the registration statement on Form F-1, as amended (File No. 333-184414), initially filed with the Securities and Exchange Commission on October 15, 2012)</a>
4.5	<a href="#">English translation of Equity Pledge Agreement dated January 15, 2021 among Guangzhou BaiGuoYuan, BaiGuoYuan Technology and the shareholder of Guangzhou BaiGuoYuan (incorporated herein by reference to Exhibit 4.15 to the annual report on Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>

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<b>Exhibit Number</b>	<b>Description of Document</b>
4.6	<a href="#">English translation of Exclusive Service Agreement dated January 15, 2021 between Guangzhou BaiGuoYuan and BaiGuoYuan Technology (incorporated herein by reference to Exhibit 4.16 to the annual report on Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.7	<a href="#">English translation of Exclusive Option Agreement dated January 15, 2021 among Guangzhou BaiGuoYuan, BaiGuoYuan Technology and the shareholder of Guangzhou BaiGuoYuan (incorporated herein by reference to Exhibit 4.17 to the annual report on Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.8	<a href="#">English translation of Shareholder Voting Rights Proxy Agreement dated January 15, 2021 among Guangzhou BaiGuoYuan, BaiGuoYuan Technology and the shareholder of Guangzhou BaiGuoYuan (incorporated herein by reference to Exhibit 4.18 to the annual report on Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.9	<a href="#">English translation of Equity Pledge Agreement dated January 15, 2021 among Guangzhou Qianxun, BaiGuoYuan Technology and each of shareholders of Guangzhou Qianxun (incorporated herein by reference to Exhibit 4.19 to the annual report on Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.10	<a href="#">English translation of Exclusive Service Agreement dated January 15, 2021 between Guangzhou Qianxun and BaiGuoYuan Technology (incorporated herein by reference to Exhibit 4.20 to the annual report on Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.11	<a href="#">English translation of Exclusive Option Agreement dated January 15, 2021 among Guangzhou Qianxun, BaiGuoYuan Technology and each of shareholders of Guangzhou Qianxun (incorporated herein by reference to Exhibit 4.21 to the annual report on Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.12	<a href="#">English translation of Shareholder Voting Rights Proxy Agreement dated January 15, 2021 among Guangzhou Qianxun, BaiGuoYuan Technology and each of shareholders of Guangzhou Qianxun (incorporated herein by reference to Exhibit 4.22 to the annual report on Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.13	<a href="#">English translation of Equity Pledge Agreement dated January 15, 2021 among Guangzhou Shangying Internet Technology Co., Ltd. (“Guangzhou Shangying”), BaiGuoYuan Technology and each of shareholders of Guangzhou Shangying (incorporated herein by reference to Exhibit 4.23 to the annual report on Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.14	<a href="#">English translation of Exclusive Service Agreement dated January 15, 2021 between Guangzhou Shangying and BaiGuoYuan Technology (incorporated herein by reference to Exhibit 4.24 to the annual report on Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.15	<a href="#">English translation of Exclusive Option Agreement dated January 15, 2021 among Guangzhou Shangying, BaiGuoYuan Technology and each of shareholders of Guangzhou Shangying (incorporated herein by reference to Exhibit 4.25 to the annual report on Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.16	<a href="#">English translation of Shareholder Voting Rights Proxy Agreement dated January 15, 2021 among Guangzhou Shangying, BaiGuoYuan Technology and each of shareholders of Guangzhou Shangying (incorporated herein by reference to Exhibit 4.26 to the annual report on Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>

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<b>Exhibit Number</b>	<b>Description of Document</b>
4.17	<a href="#">English translation of Partnership Interest Pledge Agreement dated January 15, 2021 among Guangzhou Fangu Internet Technology L.P. (“Guangzhou Fangu”), BaiGuoYuan Technology and each of partners of Guangzhou Fangu (incorporated herein by reference to Exhibit 4.27 to the annual report on Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 28, 2021).</a>
4.18	<a href="#">English translation of Exclusive Service Agreement dated January 15, 2021 between Guangzhou Fangu and BaiGuoYuan Technology (incorporated herein by reference to Exhibit 4.28 to the annual report on Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.19	<a href="#">English translation of Exclusive Option Agreement dated January 15, 2021 among Guangzhou Fangu, BaiGuoYuan Technology and each of partners of Guangzhou Fangu (incorporated herein by reference to Exhibit 4.29 to the annual report on Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 28, 2021).</a>
4.20	<a href="#">English translation of Partner Voting Rights Proxy Agreement dated January 15, 2021 among Guangzhou Fangu, BaiGuoYuan Technology and each of partners of Guangzhou Fangu (incorporated herein by reference to Exhibit 4.30 to the annual report on Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 28, 2021).</a>
4.21	<a href="#">English translation of Partnership Interest Pledge Agreement dated January 15, 2021 among Guangzhou Wanyin Internet Technology L.P. (“Guangzhou Wanyin”), BaiGuoYuan Technology and each of partners of Guangzhou Wanyin (incorporated herein by reference to Exhibit 4.31 to the annual report on Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 28, 2021).</a>
4.22	<a href="#">English translation of Exclusive Service Agreement dated January 15, 2021 between Guangzhou Wanyin and BaiGuoYuan Technology (incorporated herein by reference to Exhibit 4.32 to the annual report on Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.23	<a href="#">English translation of Exclusive Option Agreement dated January 15, 2021 among Guangzhou Wanyin, BaiGuoYuan Technology and each of partners of Guangzhou Wanyin (incorporated herein by reference to Exhibit 4.33 to the annual report on Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 28, 2021).</a>
4.24	<a href="#">English translation of Partner Voting Rights Proxy Agreement dated January 15, 2021 among Guangzhou Wanyin, BaiGuoYuan Technology and each of partners of Guangzhou Wanyin (incorporated herein by reference to Exhibit 4.34 to the annual report on Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 28, 2021).</a>
4.25	<a href="#">English translation of Equity Pledge Agreement dated December 9, 2020 among Guangzhou Ruicheng Internet Technology Co., Ltd. (“Guangzhou Ruicheng”), Guangzhou Huanju Shidai and each of shareholders of Guangzhou Ruicheng (incorporated herein by reference to Exhibit 4.35 to the annual report on Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 28, 2021).</a>
4.26	<a href="#">English translation of Exclusive Service Agreement dated December 9, 2020 between Guangzhou Ruicheng and Guangzhou Huanju Shidai (incorporated herein by reference to Exhibit 4.36 to the annual report on Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.27	<a href="#">English translation of Exclusive Option Agreement dated December 9, 2020 among Guangzhou Ruicheng, Guangzhou Huanju Shidai and each of shareholders of Guangzhou Ruicheng (incorporated herein by reference to Exhibit 4.37 to the annual report on Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 28, 2021).</a>
4.28	<a href="#">English translation of Shareholder Voting Rights Proxy Agreement dated December 9, 2020 among Guangzhou Ruicheng, Guangzhou Huanju Shidai and each of shareholders of Guangzhou Ruicheng (incorporated herein by reference to Exhibit 4.38 to the annual report on Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 28, 2021).</a>

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<b>Exhibit Number</b>	<b>Description of Document</b>
4.29	<a href="#">English translation of Equity Pledge Agreement dated December 9, 2020 among Guangzhou Xuancheng Internet Technology Co., Ltd. (“Guangzhou Xuancheng”), Guangzhou Huanju Shidai and each of shareholders of Guangzhou Xuancheng (incorporated herein by reference to Exhibit 4.39 to the annual report on Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.30	<a href="#">English translation of Exclusive Service Agreement dated December 9, 2020 between Guangzhou Xuancheng and Guangzhou Huanju Shidai (incorporated herein by reference to Exhibit 4.40 to the annual report on Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.31	<a href="#">English translation of Exclusive Option Agreement dated December 9, 2020 among Guangzhou Xuancheng, Guangzhou Huanju Shidai and each of shareholders of Guangzhou Xuancheng (incorporated herein by reference to Exhibit 4.41 to the annual report on Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.32	<a href="#">English translation of Shareholder Voting Rights Proxy Agreement dated December 9, 2020 among Guangzhou Xuancheng, Guangzhou Huanju Shidai and each of shareholders of Guangzhou Xuancheng (incorporated herein by reference to Exhibit 4.42 to the annual report on Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.33	<a href="#">English translation of Partnership Interest Pledge Agreement dated December 9, 2020 among Guangzhou Xuanyi Internet Technology L.P. (“Guangzhou Xuanyi”), Guangzhou Huanju Shidai and each of partners of Guangzhou Xuanyi (incorporated herein by reference to Exhibit 4.43 to the annual report on Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.34	<a href="#">English translation of Exclusive Service Agreement dated December 9, 2020 between Guangzhou Xuanyi and Guangzhou Huanju Shidai (incorporated herein by reference to Exhibit 4.44 to the annual report on Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.35	<a href="#">English translation of Exclusive Option Agreement dated December 9, 2020 among Guangzhou Xuanyi, Guangzhou Huanju Shidai and each of partners of Guangzhou Xuanyi (incorporated herein by reference to Exhibit 4.45 to the annual report on Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.36	<a href="#">English translation of Partner Voting Rights Proxy Agreement dated December 9, 2020 among Guangzhou Xuanyi, Guangzhou Huanju Shidai and each of partners of Guangzhou Xuanyi (incorporated herein by reference to Exhibit 4.46 to the annual report on Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.37	<a href="#">English translation of Partnership Interest Pledge Agreement dated December 9, 2020 among Guangzhou Yueyi Internet Technology L.P. (“Guangzhou Yueyi”), Guangzhou Huanju Shidai and each of partners of Guangzhou Yueyi (incorporated herein by reference to Exhibit 4.47 to the annual report on Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.38	<a href="#">English translation of Exclusive Service Agreement dated December 9, 2020 between Guangzhou Yueyi and Guangzhou Huanju Shidai (incorporated herein by reference to Exhibit 4.48 to the annual report on Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.39	<a href="#">English translation of Exclusive Option Agreement dated December 9, 2020 among Guangzhou Yueyi, Guangzhou Huanju Shidai and each of partners of Guangzhou Yueyi (incorporated herein by reference to Exhibit 4.49 to the annual report on Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.40	<a href="#">English translation of Partner Voting Rights Proxy Agreement dated December 9, 2020 among Guangzhou Yueyi, Guangzhou Huanju Shidai and each of partners of Guangzhou Yueyi (incorporated herein by reference to Exhibit 4.50 to the annual report on Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>

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<u>Exhibit Number</u>	<u>Description of Document</u>
4.41	<a href="#">English summary of Contract for State-owned Construction Land Use Rights Assignment, dated August 20, 2015, by and between Guangzhou Land Resources and Real Estate Administration Bureau and Guangzhou Huaduo (incorporated herein by reference to Exhibit 4.27 to the annual report on Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 28, 2016)</a>
4.42	<a href="#">Indenture, dated June 24, 2019 constituting \$500 million 1.375% Convertible Senior Notes due 2026 (incorporated by reference to Exhibit 4.65 to the annual report on Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 27, 2020)</a>
4.43	<a href="#">2019 Share Incentive Awards Arrangement (incorporated herein by reference to Exhibit 10.1 to the registration statement on Form S-8 (File No. 333-234003), filed with the Securities and Exchange Commission on September 30, 2019)</a>
4.44	<a href="#">Amended and Restated Share Purchase Agreement among the Buyer as defined therein, Baidu (Hong Kong) Limited, JOYY Inc. and certain investors party thereto, dated February 7, 2021 (incorporated herein by reference to Exhibit 4.105 to the annual report on Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.45	<a href="#">English summary of Contract for State-owned Construction Land Use Right Assignment dated February 26, 2021, by and between Foshan Natural Resources Bureau and Foshan Tusheng Network Technology Co., Ltd. (incorporated herein by reference to Exhibit 4.110 to the annual report on Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 29, 2022)</a>
8.1*	<a href="#">List of Significant Subsidiaries and Variable Interest Entities</a>
11.1	<a href="#">Amended and Restated Code of Business Conduct and Ethics of the Registrant (incorporated herein by reference to Exhibit 11.1 to the annual report on Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 27, 2023)</a>
12.1*	<a href="#">Certification by Principal Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002</a>
12.2*	<a href="#">Certification by Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002</a>
13.1**	<a href="#">Certification by Principal Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002</a>
13.2**	<a href="#">Certification by Principal Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002</a>
15.1*	<a href="#">Consent of Maples and Calder (Hong Kong) LLP</a>
15.2*	<a href="#">Consent of Fangda Partners</a>
15.3*	<a href="#">Consent of PricewaterhouseCoopers LLP, an independent registered public accounting firm</a>
15.4*	<a href="#">Consent of PricewaterhouseCoopers Zhong Tian LLP, an independent registered public accounting firm</a>
97.1*	<a href="#">Clawback Policy of the Registrant</a>
101.INS*	Inline XBRL Instance Document—the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document
101.SCH*	Inline XBRL Taxonomy Extension Schema Document
101.CAL*	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF*	Inline XBRL Taxonomy Extension Definition Linkbase Document

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<b>Exhibit Number</b>	<b>Description of Document</b>
101.LAB*	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE*	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104*	Cover Page Interactive Data File—the cover page XBRL tags are embedded within the Exhibit 101 Inline XBRL document set

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\* Filed with this annual report on Form 20-F

\*\* Furnished with this annual report on Form 20-F

**SIGNATURES**

The registrant hereby certifies that it meets all of the requirements for filing on Form 20-F and that it has duly caused and authorized the undersigned to sign this annual report on its behalf.

JOYY INC.

By: /s/ David Xueling Li

Name: David Xueling Li

Title: Chairman and Chief Executive Officer

Date: April 26, 2024

**JOYY INC.**

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## **Report of Independent Registered Public Accounting Firm**

To the Board of Directors and Shareholders of JOYY Inc.

### ***Opinions on the Financial Statements and Internal Control over Financial Reporting***

We have audited the accompanying consolidated balance sheets of JOYY Inc. and its subsidiaries (the “Company”) as of December 31, 2023 and 2022, and the related consolidated statements of comprehensive income, of changes in shareholders’ equity and of cash flows for each of the two years in the period ended December 31, 2023, including the related notes (collectively referred to as the “consolidated financial statements”). We also have audited the Company’s internal control over financial reporting as of December 31, 2023, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2023 and 2022, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2023 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2023, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

### ***Basis for Opinions***

The Company’s management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management’s Annual Report on Internal Control over Financial Reporting appearing under Item 15. Our responsibility is to express opinions on the Company’s consolidated financial statements and on the Company’s internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

### ***Definition and Limitations of Internal Control over Financial Reporting***

A company’s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company’s internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company’s assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

***Critical Audit Matters***

The critical audit matters communicated below are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that (i) relate to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

*Goodwill impairment assessment - Bigo reporting unit*

As described in Note 16 to the consolidated financial statements, the Company's consolidated goodwill balance was US\$2,649.3 million as of December 31, 2023, and the goodwill associated with the BIGO reportable segment, which only includes the Bigo reporting unit, was US\$1,854.2 million. Management conducts a goodwill impairment test at the reporting unit level at least annually in the fourth quarter, or more frequently when events or circumstances occur indicating that the recorded goodwill may be impaired. The impairment test compares the fair value of a reporting unit with its carrying value, with an impairment charge recorded for the amount by which the carrying amount exceeds the reporting unit's fair value. For the Bigo reporting unit, management determined related fair value using an income approach. The income approach determines fair value based on discounted cash flow model derived from the reporting units' long-term forecasts which included a five-year future cash flow projection and an estimated terminal value. As disclosed by management, determining fair value requires the exercise of significant judgment, including judgments about appropriate revenue growth rates, the estimated terminal value using a terminal year long-term future growth rate and the discount rate.

The principal considerations for our determination that performing procedures relating to the goodwill impairment assessment of the Bigo reporting unit is a critical audit matter are there was significant judgment by management when determining the fair value measurement of the reporting unit. This, in turn, led to a higher degree of auditor judgement, subjectivity and audit effort in performing procedures necessary to evaluate the reasonableness of management's cash flow projections and significant assumptions related to the revenue growth rates, the estimated terminal value using a terminal year long-term future growth rate and the discount rate. In addition, the audit effort involved the use of professionals with specialized skill and knowledge to assist in performing these procedures and evaluating the audit evidence obtained from these procedures.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. The procedures related to the goodwill impairment assessment of the Bigo reporting unit included testing the effectiveness of controls relating to management's goodwill impairment assessment, including controls over the determination of the fair value of the Company's reporting unit and controls over development of the significant assumptions including the respective revenue growth rates, the estimated terminal value using a terminal year long-term future growth rate and the discount rate. These procedures also included, among others, testing management's process for developing the fair value estimate; evaluating the appropriateness of the income approach; testing the completeness and accuracy of underlying data used in the model; and evaluating the reasonableness of significant assumptions used by management, including the revenue growth rates, the estimated terminal value using a terminal year long-term future growth rate and the discount rate. Evaluating management's assumptions related to the revenue growth rates involved evaluating whether the assumptions used by management were reasonable considering (i) the current and past performance of the reporting unit, (ii) the consistency with external market and industry data, and (iii) whether these assumptions were consistent with evidence obtained in other areas of the audit. The discount rate was evaluated by considering the cost of capital of comparable businesses and other industry factors. Professionals with specialized skill and knowledge were used to assist in the evaluation of the Company's model and certain significant assumptions, including the discount rate.

*Goodwill impairment assessment - Shopline reporting unit*

As described in Note 16 to the consolidated financial statements, the Company's consolidated goodwill balance was US\$2,649.3 million as of December 31, 2023, and the goodwill associated with the Shopline reporting unit (included within the All other reportable segment) was US\$708.5 million. Management conducts a goodwill impairment test at the reporting unit level at least annually in the fourth quarter, or more frequently when events or circumstances occur indicating that the recorded goodwill may be impaired. The impairment test compares the fair value of a reporting unit with its carrying value, with an impairment charge recorded for the amount by which the carrying amount exceeds the reporting unit's fair value. For the Shopline reporting unit, the fair value is determined using a market approach. In using this approach, management uses multiple of revenue based on the average of published multiples of revenue of comparable companies with similar operations and economic characteristics, applied to the reporting unit's historical financial results. As disclosed by management, determining fair value requires the exercise of significant judgment, including judgments about the determination of comparable companies and the use of related multiples of revenue.

The principal considerations for our determination that performing procedures relating to the goodwill impairment assessment of the Shopline reporting unit is a critical audit matter are there was significant judgment by management when determining the fair value measurement of the Shopline reporting unit. This, in turn led to a higher degree of auditor judgment, subjectivity and audit effort in performing procedures necessary to evaluate significant assumptions, including those related to the determination of comparable companies and the use of related multiples of revenue. In addition, the audit effort involved the use of professionals with specialized skill and knowledge to assist in performing these procedures and evaluating the audit evidence obtained from these procedures.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. The procedures related to the goodwill impairment assessment of the Shopline reporting unit included testing the effectiveness of controls relating to management's goodwill impairment assessment, including controls over the determination of the fair value of the Company's reporting unit and controls over development of the significant assumptions including the determination of comparable companies and the use of related multiples of revenue. These procedures also included, among others, evaluating the appropriateness of the market approach; testing the completeness and accuracy of underlying data used in the model and the reasonableness of significant assumptions used by management, including the determination of comparable companies and the use of related multiples of revenue. Professionals with specialized skill and knowledge were used to assist in the evaluation of the Company's model and certain significant assumptions, including multiples of revenue of comparable companies with similar operations and economic characteristics.

*Revenue recognition - identification of distinct performance obligations and estimate of their standalone selling price*

As described in Note 2(u) to the consolidated financial statements, the Company's sources of revenue include live streaming and others. The consolidated revenues were US\$2,267.9 million for the year ended December 31, 2023, of which US\$1,979.4 million were revenues from live streaming. Management identifies multiple distinct performance obligations in certain contracts of its live streaming business. Customers receive a series of services, virtual items and virtual rights by entering into these contracts with the Company. Management determines the distinct performance obligations and the allocable portion of the transaction price for each identified distinct performance obligation and recognizes revenue upon transfer of control of the promised services in an amount that reflects the consideration the Company expects to receive in exchange for those services. Management exercises significant judgment in determining the distinct performance obligations and related allocable portions of the transaction price which is dependent on the contractual terms for each type of contract with multiple distinct performance obligations.

The principal considerations for our determination that performing procedures relating to the identification of and the determination of allocation of transaction price of performance obligations and contracts with multiple performance obligations is a critical audit matter are that there was significant judgment by management in identifying the distinct performance obligations and estimating the standalone selling price of each distinct performance obligation due to the complexity of the contracts. Certain services are provided to customers over time and have the same pattern of transfer to customers. Management exercises judgement in determining the number of distinct performance obligations by accounting for services that have the same pattern of transfer to customers as a single performance obligation. Certain distinct performance obligations are not separately sold by the Company. Management exercises judgement in determining the standalone selling price of these distinct performance obligations. This in turn led to significant auditor judgment and effort in performing procedures and in evaluating management's significant judgment in determining whether the distinct performance obligations were appropriately identified and whether the standalone selling price of each distinct performance obligation was appropriately estimated.

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Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to the revenue recognition process, including identification of distinct performance obligations and assessing estimates of standalone selling prices used to allocate transaction price to distinct performance obligations in its contracts with customers. These procedures also included, among others, on a test basis: (i) testing the completeness and accuracy of management’s identification of the distinct performance obligations by evaluating customer arrangements, (ii) testing management’s process for estimating standalone selling prices which included testing the completeness and accuracy of input data used and evaluating the reasonableness of significant assumptions used by management, principally including market and pricing conditions and other observable inputs such as historical pricing practices and (iii) testing management’s process for determining the appropriate amount of revenue recognition based on the performance obligations identified in relevant contracts.

/s/ PricewaterhouseCoopers LLP  
Singapore  
April 26, 2024

We have served as the Company’s auditor since 2022.

## **Report of Independent Registered Public Accounting Firm**

To the Board of Directors and Shareholders of JOYY Inc.

### ***Opinion on the Financial Statements***

We have audited the consolidated statements of comprehensive income, of changes in shareholders' equity and of cash flows of JOYY Inc. and its subsidiaries (the "Company") for the year ended December 31, 2021, including the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the results of operations and cash flows of the Company for the year ended December 31, 2021, in conformity with accounting principles generally accepted in the United States of America.

### ***Change in Accounting Principle***

As discussed in Note 2(s) to the consolidated financial statements, the Company adopted a change in the manner in which it accounts for convertible bonds in 2021.

### ***Basis for Opinion***

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements based on our audit. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit of these consolidated financial statements in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud.

Our audit included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audit also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audit provides a reasonable basis for our opinion.

/s/PricewaterhouseCoopers Zhong Tian LLP  
Guangzhou, the People's Republic of China  
April 29, 2022

We served as the Company's auditor from 2011 to 2022.

**CONSOLIDATED BALANCE SHEETS AS OF DECEMBER 31, 2022 AND 2023**

(All amounts in thousands, except share, ADS, per share and per ADS data)

	As of December 31,	
	2022	2023
	US\$	US\$
<b>Assets</b>		
<b>Current assets</b>		
Cash and cash equivalents	1,214,449	1,063,956
Restricted cash and cash equivalents	303,370	319,250
Short-term deposits	2,360,545	1,970,346
Restricted short-term deposits	47,741	57,243
Short-term investments	362,640	274,846
Accounts receivable, net of allowance of US\$20,670 and US\$20,093 as of December 31, 2022 and 2023, respectively	117,927	130,700
Amounts due from related parties, net of allowance of US\$5 and US\$3 as of December 31, 2022 and 2023, respectively	1,794	810
Financing receivables, net of allowance of US\$18,556 and US\$18,213 as of December 31, 2022 and 2023, respectively	—	—
Prepayments and other current assets, net of allowance of US\$13,141 and US\$13,086 as of December 31, 2022 and 2023, respectively	236,183	255,489
<b>Total current assets</b>	<b>4,644,649</b>	<b>4,072,640</b>
<b>Non-current assets</b>		
Long-term deposits	—	130,000
Investments	660,404	544,542
Property and equipment, net	343,201	390,681
Land use rights, net	330,005	316,070
Intangible assets, net	398,300	333,715
Right-of-use assets, net	33,196	30,173
Goodwill	2,649,307	2,649,281
Other non-current assets	12,591	16,763
<b>Total non-current assets</b>	<b>4,427,004</b>	<b>4,411,225</b>
<b>Total assets</b>	<b>9,071,653</b>	<b>8,483,865</b>
<b>Liabilities, mezzanine equity and shareholders' equity</b>		
<b>Current liabilities</b> (including amounts of the consolidated VIEs without recourse to the Company of US\$172,174 and US\$204,655 as of December 31, 2022 and 2023, respectively)		
Accounts payable	56,000	66,755
Deferred revenue	86,014	73,673
Advances from customers	3,532	6,047
Income taxes payable	78,103	86,100
Accrued liabilities and other current liabilities	2,360,002	2,381,189
Amounts due to related parties	3,225	2,533
Lease liabilities due within one year	12,451	12,388
Short-term loans	37,270	52,119
Convertible bonds	435,087	405,603
<b>Total current liabilities</b>	<b>3,071,684</b>	<b>3,086,407</b>

The accompanying notes are an integral part of these consolidated financial statements.

**CONSOLIDATED BALANCE SHEETS AS OF DECEMBER 31, 2022 AND 2023 (CONTINUED)**

(All amounts in thousands, except share, ADS, per share and per ADS data)

	As of December 31,	
	2022	2023
	US\$	US\$
<b>Non-current liabilities</b> (including amounts of the consolidated VIEs without recourse to the Company of US\$20,164 and US\$17,477 as of December 31, 2022 and 2023, respectively)		
Convertible bonds	401,173	—
Lease liabilities	21,601	18,422
Deferred revenue	9,765	12,932
Deferred tax liabilities	64,262	53,955
Other non-current liabilities	436	—
<b>Total non-current liabilities</b>	<u>497,237</u>	<u>85,309</u>
<b>Total liabilities</b>	<u>3,568,921</u>	<u>3,171,716</u>
<b>Commitments and contingencies (Note 30)</b>		
<b>Mezzanine equity</b>	91,366	22,133
<b>Shareholders' equity</b>		
Class A common shares (US\$0.00001 par value; 10,000,000,000 and 10,000,000,000 shares authorized, 1,317,840,464 shares issued and 1,066,177,028 shares outstanding as of December 31, 2022; 1,317,840,464 shares issued and 890,843,639 shares outstanding as of December 31, 2023, respectively)	13	9
Class B common shares (US\$0.00001 par value; 1,000,000,000 and 1,000,000,000 shares authorized, 326,509,555 and 326,509,555 shares issued and outstanding as of December 31, 2022 and December 31, 2023, respectively)	3	3
Treasury Shares (US\$0.00001 par value; 251,663,436 and 426,996,825 shares held as of December 31, 2022 and December 31, 2023, respectively)	(655,141)	(913,939)
Additional paid-in capital	3,277,978	3,282,754
Statutory reserves	32,536	37,709
Retained earnings	2,685,063	2,947,160
Accumulated other comprehensive loss	(162,235)	(197,010)
<b>Total JOYY Inc.'s shareholders' equity</b>	<u>5,178,217</u>	<u>5,156,686</u>
Non-controlling interests	233,149	133,330
<b>Total shareholders' equity</b>	<u>5,411,366</u>	<u>5,290,016</u>
<b>Total liabilities, mezzanine equity and shareholders' equity</b>	<u>9,071,653</u>	<u>8,483,865</u>

The accompanying notes are an integral part of these consolidated financial statements.

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**CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME FOR THE YEARS ENDED DECEMBER 31, 2021, 2022 AND 2023**

(All amounts in thousands, except share, ADS, per share and per ADS data)

	For the year ended December 31,		
	2021 US\$	2022 US\$	2023 US\$
<b>Net revenues</b>			
Live streaming	2,476,790	2,225,518	1,979,371
Others	142,261	185,998	288,499
<b>Total net revenues</b>	<b>2,619,051</b>	<b>2,411,516</b>	<b>2,267,870</b>
Cost of revenues <sup>(1)</sup>	(1,781,150)	(1,559,388)	(1,454,842)
<b>Gross profit</b>	<b>837,901</b>	<b>852,128</b>	<b>813,028</b>
<b>Operating expenses <sup>(1)</sup></b>			
Research and development expenses	(279,781)	(261,807)	(295,503)
Sales and marketing expenses	(468,407)	(400,435)	(369,577)
General and administrative expenses	(221,731)	(141,826)	(122,661)
Goodwill impairment	—	(14,830)	—
<b>Total operating expenses</b>	<b>(969,919)</b>	<b>(818,898)</b>	<b>(787,741)</b>
Gain (loss) on disposal of business	4,959	—	(6,177)
Other income	20,376	17,505	9,705
<b>Operating (loss) income</b>	<b>(106,683)</b>	<b>50,735</b>	<b>28,815</b>
Interest expense	(14,475)	(12,770)	(10,420)
Interest income and investment income	91,233	93,148	185,212
Foreign currency exchange (losses) gains, net	(13,377)	11,666	(2,906)
(Loss) gain on disposal and deemed disposal of investments	(23,762)	4,113	74,851
(Loss) gain on fair value changes of investments	(15,435)	424,304	12,425
Gain on extinguishment of debt and derivative	5,291	63,378	—
Other non-operating expenses	(381)	—	—
<b>(Loss) income before income tax expenses</b>	<b>(77,589)</b>	<b>634,574</b>	<b>287,977</b>
Income tax expenses	(25,745)	(34,575)	(18,856)
<b>(Loss) income before share of (loss) income in equity method investments, net of income taxes</b>	<b>(103,334)</b>	<b>599,999</b>	<b>269,121</b>
Share of (loss) income in equity method investments, net of income taxes	(26,217)	(498,431)	3,297
<b>Net (loss) income from continuing operations</b>	<b>(129,551)</b>	<b>101,568</b>	<b>272,418</b>
<b>Net income from discontinued operations</b>	<b>35,567</b>	<b>—</b>	<b>—</b>
<b>Net (loss) income</b>	<b>(93,984)</b>	<b>101,568</b>	<b>272,418</b>
Net loss attributable to the non-controlling interest shareholders and the mezzanine equity classified non-controlling interest shareholders	13,691	27,323	29,398
<b>Net (loss) income attributable to controlling interest of JOYY Inc.</b>	<b>(80,293)</b>	<b>128,891</b>	<b>301,816</b>
<b>Including:</b>			
<b>Net (loss) income from continuing operations attributable to controlling interest of JOYY Inc.</b>	<b>(115,860)</b>	<b>128,891</b>	<b>301,816</b>
<b>Net income from discontinued operations attributable to controlling interest of JOYY Inc.</b>	<b>35,567</b>	<b>—</b>	<b>—</b>
Accretion of subsidiaries' redeemable convertible preferred shares to redemption value	(5,236)	(5,426)	(5,048)
Cumulative dividend on subsidiary's Series A Preferred Shares	(4,000)	(4,000)	(2,000)
Gain on repurchase of redeemable convertible preferred shares of a subsidiary	—	—	52,583
<b>Net (loss) income attributable to common shareholders of JOYY Inc.</b>	<b>(89,529)</b>	<b>119,465</b>	<b>347,351</b>
<b>Including:</b>			
<b>Net (loss) income from continuing operations attributable to common shareholders of JOYY Inc.</b>	<b>(125,096)</b>	<b>119,465</b>	<b>347,351</b>
<b>Net income from discontinued operations attributable to common shareholders of JOYY Inc.</b>	<b>35,567</b>	<b>—</b>	<b>—</b>
Other comprehensive income (loss):			
Foreign currency translation adjustments, net of nil tax	58,887	(246,959)	(35,327)
<b>Comprehensive (loss) income attributable to the common shareholders of JOYY Inc.</b>	<b>(30,642)</b>	<b>(127,494)</b>	<b>312,024</b>

The accompanying notes are an integral part of these consolidated financial statements.

**CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME FOR THE YEARS ENDED DECEMBER 31, 2021, 2022 AND 2023 (CONTINUED)**

(All amounts in thousands, except share, ADS, per share and per ADS data)

	For the year ended December 31,		
	2021 US\$	2022 US\$	2023 US\$
<b>Net (loss) income per ADS*</b>			
—Basic	(1.14)	1.66	5.31
Continuing operations	(1.60)	1.66	5.31
Discontinued operations	0.46	—	—
—Diluted	(1.14)	1.59	4.87
Continuing operations	(1.60)	1.59	4.87
Discontinued operations	0.46	—	—
Weighted average number of ADS used in calculating net (loss) income per ADS			
—Basic			
Continuing operations	78,100,800	71,969,510	65,434,782
Discontinued operations	78,100,800	71,969,510	65,434,782
—Diluted			
Continuing operations	78,100,800	82,272,422	73,148,827
Discontinued operations	78,100,800	82,272,422	73,148,827
<b>Net (loss) income per common share*</b>			
—Basic	(0.06)	0.08	0.27
Continuing operations	(0.08)	0.08	0.27
Discontinued operations	0.02	—	—
—Diluted	(0.06)	0.08	0.24
Continuing operations	(0.08)	0.08	0.24
Discontinued operations	0.02	—	—
Weighted average number of common shares used in calculating net (loss) income per common share			
—Basic			
Continuing operations	1,562,016,001	1,439,390,191	1,308,695,642
Discontinued operations	1,562,016,001	1,439,390,191	1,308,695,642
—Diluted			
Continuing operations	1,562,016,001	1,645,448,440	1,462,976,544
Discontinued operations	1,562,016,001	1,645,448,440	1,462,976,544

\* Each ADS represents 20 common shares.

(1) Share-based compensation was allocated in cost of revenues and operating expenses as follows:

	For the year ended December 31,		
	2021 US\$	2022 US\$	2023 US\$
Cost of revenues	8,089	8,185	3,575
Research and development expenses	24,053	25,170	19,415
Sales and marketing expenses	1,285	777	797
General and administrative expenses	(45)	9,964	8,192

The accompanying notes are an integral part of these consolidated financial statements.

**CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY FOR THE YEARS ENDED DECEMBER 31, 2021, 2022 AND 2023**

(All amounts in thousands, except share, ADS, per share and per ADS data)

	Class A common shares		Class B common shares		Treasury shares Amount	Additional paid-in capital	Statutory reserves	Retained earnings	Accumulated other comprehensive income (loss)	Total JOYY Inc.'s shareholders' equity	Non-controlling interests	Total shareholders' equity
	Number of shares	Amount US\$	Number of shares	Amount US\$								
<b>Balance as of December 31, 2020</b>	1,272,346,218	13	326,509,555	3	(139,528)	3,456,844	17,825	2,881,782	18,471	6,235,410	5,497	6,240,907
Adoption of ASU 2020-06	—	—	—	—	—	(299,398)	—	86,659	—	(212,739)	—	(212,739)
Issuance of common shares for vested restricted shares and restricted share units	3,631,640	—	—	—	—	—	—	—	—	—	—	—
Transfer from treasury shares to issued common shares for vested restricted share units	1,442,020	—	—	—	5,788	(5,788)	—	—	—	—	—	—
Acquisition of subsidiaries	—	—	—	—	—	53,327	—	—	—	53,327	26,731	80,058
Net forfeiture of restricted shares	(773,813)	—	—	—	—	—	—	—	—	—	—	—
Share-based compensation	—	—	—	—	—	31,691	—	—	—	31,691	—	31,691
Appropriation to statutory reserves	—	—	—	—	—	—	8,979	(8,979)	—	—	—	—
Capital injection in subsidiaries from non-controlling interest shareholders	—	—	—	—	—	(3,357)	—	—	—	(3,357)	9,313	5,956
Other equity changes from equity method investments	—	—	—	—	—	13,267	—	(1)	(8,183)	5,083	—	5,083
Repurchase of common shares	(130,309,760)	—	—	—	(392,984)	—	—	—	—	(392,984)	—	(392,984)
Repurchase of non-controlling interest and redeemable non-controlling interests	—	—	—	—	—	(63)	—	—	—	(63)	(154)	(217)
Deconsolidation of subsidiaries	—	—	—	—	—	—	—	—	—	—	7,148	7,148
Dividends declared	—	—	—	—	—	—	—	(161,398)	—	(161,398)	(47)	(161,445)
Net income attributable to JOYY Inc. and non-controlling interest shareholders	—	—	—	—	—	—	—	(80,293)	—	(80,293)	(13,691)	(93,984)
Accretion of subsidiaries' redeemable convertible preferred shares to redemption value	—	—	—	—	—	—	—	(5,236)	—	(5,236)	(102)	(5,338)
Foreign currency translation adjustments, net of nil tax	—	—	—	—	—	—	—	—	58,887	58,887	(558)	58,329
<b>Balance as of December 31, 2021</b>	<u>1,146,336,305</u>	<u>13</u>	<u>326,509,555</u>	<u>3</u>	<u>(526,724)</u>	<u>3,246,523</u>	<u>26,804</u>	<u>2,712,534</u>	<u>69,175</u>	<u>5,528,328</u>	<u>34,137</u>	<u>5,562,465</u>

The accompanying notes are an integral part of these consolidated financial statements.

**CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY FOR THE YEARS ENDED DECEMBER 31, 2021, 2022 AND 2023 (CONTINUED)**

(All amounts in thousands, except share, ADS, per share and per ADS data)

	Class A common shares		Class B common shares		Treasury shares Amount US\$	Additional paid-in capital US\$	Statutory reserves US\$	Retained earnings US\$	Accumulated other comprehensive income (loss) US\$	Total JOYY Inc.'s shareholders' equity US\$	Non-controlling interests US\$	Total shareholders' equity US\$
	Number of shares	Amount US\$	Number of shares	Amount US\$								
<b>Balance as of December 31, 2021</b>	1,146,336,305	13	326,509,555	3	(526,724)	3,246,523	26,804	2,712,534	69,175	5,528,328	34,137	5,562,465
Issuance of common shares for vested restricted shares and restricted share units	780,263	—	—	—	—	—	—	—	—	—	—	—
Transfer from treasury shares to issued common shares for vested restricted share units	3,567,640	—	—	—	10,260	(10,260)	—	—	—	—	—	—
Share-based compensation	—	—	—	—	—	42,446	—	—	—	42,446	1,650	44,096
Appropriation to statutory reserves	—	—	—	—	—	—	5,732	(5,732)	—	—	—	—
Share of changes in the equity method investments' capital accounts	—	—	—	—	—	146	—	(14)	15,549	15,681	—	15,681
Repurchase of common shares	(84,507,180)	—	—	—	(138,677)	—	—	—	—	(138,677)	—	(138,677)
Dividends declared	—	—	—	—	—	—	—	(145,190)	—	(145,190)	(63)	(145,253)
Net income attributable to JOYY Inc. and non-controlling interest shareholders	—	—	—	—	—	—	—	128,891	—	128,891	(27,323)	101,568
Accretion of subsidiaries' redeemable convertible preferred shares to redemption value	—	—	—	—	—	—	—	(5,426)	—	(5,426)	(108)	(5,534)
Exercise/settlement of RSU's in subsidiaries	—	—	—	—	—	(877)	—	—	—	(877)	932	55
Noncontrolling interest arising from an acquisition	—	—	—	—	—	—	—	—	—	—	222,741	222,741
Foreign currency translation adjustments, net of nil tax	—	—	—	—	—	—	—	—	(246,959)	(246,959)	1,183	(245,776)
<b>Balance as of December 31, 2022</b>	<u>1,066,177,028</u>	<u>13</u>	<u>326,509,555</u>	<u>3</u>	<u>(655,141)</u>	<u>3,277,978</u>	<u>32,536</u>	<u>2,685,063</u>	<u>(162,235)</u>	<u>5,178,217</u>	<u>233,149</u>	<u>5,411,366</u>

The accompanying notes are an integral part of these consolidated financial statements.

**CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY FOR THE YEARS ENDED DECEMBER 31, 2021, 2022 AND 2023 (CONTINUED)**

(All amounts in thousands, except share, ADS, per share and per ADS data)

	Class A common shares		Class B common shares		Treasury shares Amount US\$	Additional paid-in capital US\$	Statutory reserves US\$	Retained earnings US\$	Accumulated other comprehensive income (loss) US\$	Total JOYY Inc.'s shareholders' equity US\$	Non-controlling interests US\$	Total shareholders' equity US\$
	Number of shares	Amount US\$	Number of shares	Amount US\$								
<b>Balance as of December 31, 2022</b>	1,066,177,028	13	326,509,555	3	(655,141)	3,277,978	32,536	2,685,063	(162,235)	5,178,217	233,149	5,411,366
Issuance of common shares for vested restricted shares and restricted share units	3,471	—	—	—	—	—	—	—	—	—	—	—
Transfer from treasury shares to issued common shares for vested restricted share units	7,240,060	—	—	—	14,085	(14,085)	—	—	—	—	—	—
Share-based compensation	—	—	—	—	—	30,263	—	—	—	30,263	1,716	31,979
Appropriation to statutory reserves	—	—	—	—	—	—	5,179	(5,179)	—	—	—	—
Capital injection in subsidiaries from non-controlling interest shareholders	—	—	—	—	—	68,738	—	—	—	68,738	(86,934)	(18,196)
Share of changes in the equity method investments' capital accounts	—	—	—	—	—	(26,175)	—	(9)	1,687	(24,497)	—	(24,497)
Repurchase of common shares	(182,576,920)	(4)	—	—	(272,883)	(50,000)	—	—	—	(322,887)	—	(322,887)
Repurchase of non-controlling interest and redeemable noncontrolling interests	—	—	—	—	—	(389)	—	—	—	(389)	—	(389)
Deconsolidation of subsidiaries	—	—	—	—	—	—	(6)	6	(1,135)	(1,135)	6,415	5,280
Dividends declared	—	—	—	—	—	—	—	(82,072)	—	(82,072)	—	(82,072)
Net income attributable to JOYY Inc. and non-controlling interest shareholders	—	—	—	—	—	—	—	301,816	—	301,816	(29,398)	272,418
Accretion of subsidiaries' redeemable convertible preferred shares to redemption value	—	—	—	—	—	—	—	(5,048)	—	(5,048)	(302)	(5,350)
Gain on repurchase of redeemable convertible preferred shares of a subsidiary	—	—	—	—	—	—	—	52,583	—	52,583	—	52,583
Exercise/settlement of RSU's in subsidiaries	—	—	—	—	—	(11,351)	—	—	—	(11,351)	11,500	149
Settlement of capped call options	—	—	—	—	—	7,775	—	—	—	7,775	—	7,775
Foreign currency translation adjustments, net of nil tax	—	—	—	—	—	—	—	—	(35,327)	(35,327)	(2,816)	(38,143)
<b>Balance as of December 31, 2023</b>	<b>890,843,639</b>	<b>9</b>	<b>326,509,555</b>	<b>3</b>	<b>(913,939)</b>	<b>3,282,754</b>	<b>37,709</b>	<b>2,947,160</b>	<b>(197,010)</b>	<b>5,156,686</b>	<b>133,330</b>	<b>5,290,016</b>

The accompanying notes are an integral part of these consolidated financial statements.

**CONSOLIDATED STATEMENTS OF CASH FLOWS FOR THE YEARS ENDED DECEMBER 31, 2021, 2022 AND 2023**  
(All amounts in thousands)

	For the year ended December 31,		
	2021 US\$	2022 US\$	2023 US\$
<b>Cash flows from operating activities</b>			
Net (loss) income	(93,984)	101,568	272,418
Net income from discontinued operations	(35,567)	—	—
Adjustments to reconcile net income to net cash provided by operating activities			
Depreciation of property and equipment	108,686	83,396	46,576
Amortization of acquired intangible assets and land use rights	67,233	65,204	73,383
Amortization of right-of-use assets	7,009	14,779	12,541
Expected credit loss of receivables	5,206	14,553	1,654
Loss (gain) on disposal of property and equipment, intangible assets and other long-term assets	366	(4,118)	(274)
Impairment of investments	93,632	—	—
Impairment of intangible assets	—	1,356	—
Impairment of goodwill	—	14,830	—
Share-based compensation	33,382	44,096	31,979
Share of loss (income) in equity method investments, net of income taxes	26,217	498,431	(3,297)
Loss (gain) on disposal and deemed disposal of investments	23,762	(4,113)	(74,851)
(Gain) loss on disposal of business	(4,959)	—	6,177
Cash dividend received from equity investees	6,953	848	—
Deferred income taxes, net	(9,805)	(1,935)	(11,808)
Foreign currency exchange losses (gains), net	13,377	(11,666)	2,906
Interest expense	9,158	12,770	3,143
Investment (income) loss	(3,630)	1,360	—
Loss (gain) on fair value changes of investments	15,435	(424,304)	(12,425)
Gain on extinguishment of debt and derivative	(5,291)	(63,378)	—
Changes in operating assets and liabilities, net of business acquisition and disposal of subsidiaries			
Accounts receivable	28,064	(20,201)	(32,422)
Interest receivables recorded in financing receivables	23	9	9
Prepayments and other assets	(8,082)	(33,357)	(30,660)
Amounts due from related parties	(20,702)	7,247	5,622
Lease liabilities	(7,930)	(12,343)	(12,546)
Amounts due to related parties	2,761	(41,268)	(1,783)
Accounts payable	(18,516)	19,052	(5,563)
Deferred revenue	(3,150)	8,594	(9,163)
Advances from customers	2,623	(2,589)	2,557
Income taxes payable	3,388	17,610	7,883
Accrued liabilities and other current liabilities	(89,532)	30,063	23,523
Net cash provided by continuing operating activities	146,127	316,494	295,579
Net cash provided by discontinued operating activities	64,289	—	—
Net cash provided by operating activities	210,416	316,494	295,579
<b>Cash flows from investing activities</b>			
Placements of short-term deposits	(1,707,825)	(4,425,191)	(3,046,581)
Maturities of short-term deposits	1,483,449	3,711,568	3,293,451
Placements of short-term investments	(1,970,387)	(418,578)	(657,639)
Maturities of short-term investments	1,507,304	889,905	752,196
Purchase of property and equipment	(70,820)	(69,022)	(81,567)
Purchase of intangible assets and land use right	(114,057)	(197)	(445)
Cash paid for investments	(89,681)	(175,719)	(66,014)
Cash received from disposal of investments	156,479	15,174	222,097
Acquisition of businesses, net of cash, cash equivalents and restricted cash acquired	7,049	27,926	—
Repayments from (payments on behalf of) related parties, net	(4,537)	(36,522)	1
Loans to related parties	(34,203)	(28,062)	—
Loans to employees and third parties	(9,526)	(1,025)	(650)
Repayments of loans from employees, related parties and third parties	2,225	1,385	1,048
Principal collection from financing receivables	240	174	70
Proceeds from disposal of property and equipment	3,244	7,508	3,830
Others	(5,811)	(9,608)	576
Net cash (used in) provided by continuing investing activities	(846,857)	(510,284)	420,373
Net cash provided by discontinued investing activities	1,636,450	—	—
Net cash provided by (used in) investing activities	789,593	(510,284)	420,373

The accompanying notes are an integral part of these consolidated financial statements.

**CONSOLIDATED STATEMENTS OF CASH FLOWS FOR THE YEARS ENDED DECEMBER 31, 2021, 2022 AND 2023  
(CONTINUED)**

(All amounts in thousands)

	<b>For the year ended December 31,</b>		
	<b>2021</b>	<b>2022</b>	<b>2023</b>
	US\$	US\$	US\$
<b>Cash flows from financing activities</b>			
Proceeds from exercise of vested share options	—	—	180
Capital contributions from the non-controlling interest shareholders	5,508	17,045	—
Dividends paid to shareholders	(160,143)	(145,925)	(84,197)
Dividend paid to non-controlling interests in a subsidiary	(47)	—	—
Purchase of non-controlling interests and redeemable non-controlling interests	(216)	—	(22,000)
Purchase of capped call option in relation to repurchase of common shares	—	—	(50,000)
Proceeds from bank borrowings	39,676	44,504	95,169
Repayment of bank borrowings	(147,618)	(11,718)	(82,544)
Repurchase of common shares	(398,637)	(138,079)	(273,896)
Cash paid on extinguishment of convertible bonds	(62,059)	(87,736)	(432,232)
Settlement of capped call options	—	—	7,775
Net cash used in continuing financing activities	<u>(723,536)</u>	<u>(321,909)</u>	<u>(841,745)</u>
Net cash provided by discontinued financing activities	<u>—</u>	<u>—</u>	<u>—</u>
Net cash used in financing activities	<u>(723,536)</u>	<u>(321,909)</u>	<u>(841,745)</u>
Net increase (decrease) in cash, cash equivalents and restricted cash	276,473	(515,699)	(125,793)
Cash, cash equivalents and restricted cash at the beginning of the year	1,819,571	2,134,492	1,565,560
Effect of exchange rate changes on cash, cash equivalents and restricted cash	<u>38,448</u>	<u>(53,233)</u>	<u>682</u>
<b>Cash, cash equivalents and restricted cash at the end of the year</b>	<u>2,134,492</u>	<u>1,565,560</u>	<u>1,440,449</u>
Cash, cash equivalents and restricted cash of continuing operations at the end of the year	<u>2,134,492</u>	<u>1,565,560</u>	<u>1,440,449</u>

	<b>For the year ended December 31,</b>		
	<b>2021</b>	<b>2022</b>	<b>2023</b>
	US\$	US\$	US\$
<b>Supplemental disclosure of cash flows information of continuing operation:</b>			
—Cash paid for interest, net of amounts capitalized	(15,485)	(8,706)	(7,829)
—Income taxes paid	(29,929)	(19,150)	(22,084)
<b>Supplemental disclosures of non-cash investing and financing activities of continuing operation:</b>			
—Accrued capital expenditure	10,407	29,501	47,109
—Disposal of investments and business	819	144	—

The accompanying notes are an integral part of these consolidated financial statements.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

### 1. Organization and principal activities

#### (a) Organization and principal activities

JOYY Inc. (the “Company” or “JOYY”), together with its subsidiaries, its VIEs (also referred to as VIEs and their subsidiaries as a whole, where appropriate) (collectively, the “Group”), is a leading global social media platform, offering users around the world a uniquely engaging and immersive experience across various video-based products and services, such as live streaming, short-form videos and video communication.

On April 3, 2020, the Company signed an agreement with Linen Investment Limited, a wholly owned subsidiary of Tencent Holdings Limited (“Tencent”) to sell its 16,523,819 Class B ordinary shares of HUYA Inc. (NYSE: HUYA) (“Huya”), a subsidiary of the Group, for a cash consideration of approximately US\$262.6 million, pursuant to Tencent’s exercise of its option to purchase additional shares of Huya. Upon the closing of the share transfer, the Group held 68,374,463 Class B ordinary shares of Huya, representing approximately 31.2% equity interest and 43.0% of the total voting power calculated based on the total issued and outstanding shares of Huya after this transaction. As a result, Huya ceased to be a subsidiary of the Group and the Group accounted for the investment in Huya using the equity method.

On August 10, 2020, the Company entered into a definitive share transfer agreement with Linen Investment Limited to sell its 30,000,000 Class B ordinary shares of Huya for a cash consideration of approximately US\$810.0 million. On April 28, 2023, the Company entered into the Share Transfer Agreement with Linen Investment Limited to sell its remaining 38,374,463 Class B ordinary shares of Huya for a cash consideration of approximately US\$219.9 million. Upon the closing of such share transfer, the Company ceased to hold any shares of Huya.

On November 16, 2020, the Company entered into definitive agreements with affiliates of Baidu, Inc. (Nasdaq: BIDU) (“Baidu”). Pursuant to the agreements, Baidu would acquire JOYY’s domestic video-based entertainment live streaming business (“YY Live”), which includes YY mobile app, YY.com website and PC YY, among others, for an aggregate purchase price of approximately US\$3.6 billion in cash, subject to certain adjustments. Out of the total cash consideration of US\$3.6 billion, consideration of US\$300 million is subject to adjustment based on the achievement of certain conditions of YY Live. Subsequently, the sale was substantially completed on February 8, 2021, with certain matters remaining to be completed, including necessary regulatory approvals with respect to this transaction from government authorities. On January 1, 2024, the Company received a written notice from an affiliate of Baidu, purporting to terminate the share purchase agreement, dated November 16, 2020, as subsequently amended or supplemented, in connection with the sale of YY Live to Baidu. Baidu asserted in the written notice that it has and exercised the right to terminate the referenced share purchase agreement and effectively cancel the transaction. The Company is seeking legal advice and will consider all options at its disposal in response to Baidu’s written notice and expressly reserve all rights. From January 1, 2024 to the date of the issuance of the JOYY’s 2023 consolidated financial statements, the Company has not obtained control over YY Live and has not consolidated YY Live. The details of this disposal are disclosed in Note 3.

#### (b) Initial Public Offering

The Company completed its initial public offering (“IPO”) on November 21, 2012 on the “NASDAQ Global Select Market”.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

**1. Organization and principal activities (continued)**

**(c) Principal subsidiaries and VIEs**

The details of the principal subsidiaries and VIEs through which the Company conducts its business operations as of December 31, 2023 are set out below:

<b>Name</b>	<b>Place of incorporation</b>	<b>Date of incorporation or acquisition</b>	<b>% of direct or indirect economic ownership</b>	<b>Principal activities</b>
<b>Principal subsidiaries</b>				
Duowan Entertainment Corporation (“Duowan BVI”)	British Virgin Islands (“BVI”)	November 6, 2007	100 %	Investment holding
Huanju Shidai Technology (Beijing) Co., Ltd. (“Beijing Huanju Shidai”)	PRC	March 19, 2008	100 %	Investment holding
Guangzhou Huanju Shidai Information Technology Co., Ltd. (“Guangzhou Huanju Shidai”)	PRC	December 2, 2010	100 %	Software development
Bigo Inc.	Cayman Islands	March 4, 2019	100 %	Investment holding
Bigo Technology Pte. Ltd. (“Bigo Singapore”)	Singapore	March 4, 2019	100 %	Investment holding, operation of live streaming platform
Bigo (Hong Kong) Limited (“Bigo HK”)	Hong Kong	March 4, 2019	100 %	Investment holding
Guangzhou BaiGuoYuan Information Technology Co., Ltd. (“BaiGuoYuan Technology”)	PRC	March 4, 2019	100 %	Software development and provision of information technology services
<b>Principal VIEs</b>				
Guangzhou Huaduo Network Technology Co., Ltd. (“Guangzhou Huaduo”)	PRC	April 11, 2005		Holder of internet content provider licenses and internet value added services
Guangzhou BaiGuoYuan Network Technology Co., Ltd. (“Guangzhou BaiGuoYuan”)	PRC	March 4, 2019		Holder of internet content provider licenses and internet value added services

**(d) Variable Interest Entities**

To comply with PRC laws and regulations that prohibit or restrict foreign ownership of companies that provide internet-content, the Group conducts its operations primarily through its principal VIEs, Guangzhou Huaduo and Guangzhou BaiGuoYuan, which hold the internet value-added service license and approvals to provide such internet services in the PRC. The Company, via its subsidiaries Beijing Huanju Shidai and BaiGuoYuan Technology, controlled Guangzhou Huaduo and Guangzhou BaiGuoYuan, respectively, through the exercise of contractual agreements discussed below.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**1. Organization and principal activities (continued)**

**(d) Variable Interest Entities (continued)**

**(i) VIE agreements amongst Beijing Huanju Shidai, Guangzhou Huaduo and its nominee shareholders**

The following is a summary of the contractual arrangements entered among Beijing Huanju Shidai, Guangzhou Huaduo and its nominee shareholders:

- Exclusive Technology Support and Technology Services Agreement

Under the exclusive technology support and technology services agreement between Beijing Huanju Shidai and Guangzhou Huaduo, Beijing Huanju Shidai has the exclusive right to provide to Guangzhou Huaduo technology support and technology services related to all technologies needed for its business. Beijing Huanju Shidai owns the exclusive intellectual property rights created as a result of the performance of this agreement. The service fee payable by Guangzhou Huaduo to Beijing Huanju Shidai is determined by various factors, including the expenses Beijing Huanju Shidai incurs for providing such services and Guangzhou Huaduo's revenues, and the amount of service fee is ultimately (unilaterally) determined by Beijing Huanju Shidai. The term of this agreement will expire in 2028 and may be extended with Beijing Huanju Shidai's written confirmation prior to the expiration date. Beijing Huanju Shidai is entitled to terminate the agreement at any time by providing 30 days' prior written notice to Guangzhou Huaduo.

- Exclusive Business Cooperation Agreement

Under the exclusive business cooperation agreement between Beijing Huanju Shidai and Guangzhou Huaduo, Beijing Huanju Shidai has the exclusive right to provide to Guangzhou Huaduo technology support, business support and consulting services related to the services provided by Guangzhou Huaduo, the scope of which is to be determined by Beijing Huanju Shidai from time to time. Beijing Huanju Shidai owns the exclusive intellectual property rights created as a result of the performance of this agreement. The service fee payable by Guangzhou Huaduo to Beijing Huanju Shidai is a certain percentage of its earnings. The term of this agreement will expire in 2038 and may be extended with Beijing Huanju Shidai's written confirmation prior to the expiration date. Beijing Huanju Shidai is entitled to terminate the agreement at any time by providing 30 days' prior written notice to Guangzhou Huaduo.

- Exclusive Option Agreement

The parties to the exclusive option agreement are Beijing Huanju Shidai, Guangzhou Huaduo and each of the shareholders of Guangzhou Huaduo. Under the exclusive option agreement, each of the shareholders of Guangzhou Huaduo irrevocably granted Beijing Huanju Shidai or its designated representative(s) an exclusive option to purchase, to the extent permitted under PRC law, all or part of his or its equity interests in Guangzhou Huaduo. Beijing Huanju Shidai or its designated representative(s) have sole discretion as to when to exercise such options, either in part or in full. Without Beijing Huanju Shidai's prior written consent, Guangzhou Huaduo's shareholders shall not sell, transfer, mortgage or otherwise dispose their equity interests in Guangzhou Huaduo. The term of this agreement is ten years and may be extended at Beijing Huanju Shidai's sole discretion.

- Powers of Attorney

Pursuant to the irrevocable power of attorney executed by each shareholder of Guangzhou Huaduo, each such shareholder appointed Beijing Huanju Shidai as its attorney-in-fact to exercise such shareholders' rights in Guangzhou Huaduo, including, without limitation, the power to vote on its behalf on all matters of Guangzhou Huaduo requiring shareholder approval under PRC laws and regulations and the articles of association of Guangzhou Huaduo. Each power of attorney will remain in force until the shareholder ceases to hold any equity interest in Guangzhou Huaduo.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**1. Organization and principal activities (continued)**

**(d) Variable Interest Entities (continued)**

**(i) VIE agreements amongst Beijing Huanju Shidai, Guangzhou Huaduo and its nominee shareholders (continued)**

• Share Pledge Agreement

Pursuant to the share pledge agreement between Beijing Huanju Shidai and the shareholders of Guangzhou Huaduo, the shareholders of Guangzhou Huaduo have pledged all of their equity interests in Guangzhou Huaduo to Beijing Huanju Shidai to guarantee the performance by Guangzhou Huaduo and its shareholders' performance of their respective obligations under the exclusive business cooperation agreement, exclusive option agreement, exclusive technology support and technology services agreement and powers of attorney. If Guangzhou Huaduo and/or its shareholders breach their contractual obligations under those agreements, Beijing Huanju Shidai, as pledgee, will be entitled to certain rights, including the right to sell the pledged equity interests.

**(ii) VIE agreements amongst BaiGuoYuan Technology, Guangzhou BaiGuoYuan and its nominee shareholders**

The following is a summary of the contractual arrangements entered among BaiGuoYuan Technology, Guangzhou BaiGuoYuan and its nominee shareholders.

• Exclusive Business Cooperation Agreement

Under the exclusive business cooperation agreement between BaiGuoYuan Technology and Guangzhou BaiGuoYuan, BaiGuoYuan Technology has the exclusive right to provide Guangzhou BaiGuoYuan technology support, business support and consulting services related to the services provided by Guangzhou BaiGuoYuan, the scope and service fees of which is to be determined by BaiGuoYuan Technology from time to time. BaiGuoYuan Technology owns the exclusive intellectual property rights created as a result of the performance of this agreement. BaiGuoYuan Technology receives substantially all of the economic interest returns generated by Guangzhou BaiGuoYuan. The term of this agreement will not expire unless with BaiGuoYuan Technology's written confirmation to terminate the agreement.

• Exclusive Option Agreement

The parties to the exclusive option agreement are BaiGuoYuan Technology, Guangzhou BaiGuoYuan and each of the shareholders of Guangzhou BaiGuoYuan. Under the exclusive option agreement, each of the shareholders of Guangzhou BaiGuoYuan irrevocably granted BaiGuoYuan Technology or its designated representative(s) an exclusive option to purchase, to the extent permitted under the PRC laws, all or part of his or its equity interests in Guangzhou BaiGuoYuan. BaiGuoYuan Technology or its designated representative(s) have sole discretion as to when to exercise such options, either in part or in full. Without BaiGuoYuan Technology's prior written consent, Guangzhou BaiGuoYuan's shareholders shall not sell, transfer, mortgage or otherwise dispose their equity interests in Guangzhou BaiGuoYuan. The term of this agreement is ten years and may be extended at BaiGuoYuan Technology's sole discretion.

• Powers of Attorney

Pursuant to the irrevocable power of attorney executed by each shareholder of Guangzhou BaiGuoYuan, each such shareholder appointed BaiGuoYuan Technology as its attorney-in-fact to exercise such shareholders' rights in Guangzhou BaiGuoYuan, including, without limitation, the power to vote on its behalf on all matters of Guangzhou BaiGuoYuan requiring shareholders' approval under the PRC laws and regulations and the articles of association of Guangzhou BaiGuoYuan. Each power of attorney will remain in force until the shareholder ceases to hold any equity interest in Guangzhou BaiGuoYuan.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**1. Organization and principal activities (continued)**

**(d) Variable Interest Entities (continued)**

**(ii) VIE agreements amongst BaiGuoYuan Technology, Guangzhou BaiGuoYuan and its nominee shareholders (continued)**

- Share Pledge Agreement

Pursuant to the share pledge agreement between BaiGuoYuan Technology and the shareholders of Guangzhou BaiGuoYuan, the shareholders of Guangzhou BaiGuoYuan have pledged all of their equity interests in Guangzhou BaiGuoYuan to BaiGuoYuan Technology to guarantee the performance by Guangzhou BaiGuoYuan and its shareholders' performance of their respective obligations under the exclusive business cooperation agreement, exclusive option agreement and powers of attorney. If Guangzhou BaiGuoYuan and/or its shareholders breach their contractual obligations under those agreements, BaiGuoYuan Technology, as pledgee, will be entitled to voting right and the right to sell the pledged equity interests.

Through the aforementioned contractual agreements, Guangzhou Huaduo and Guangzhou BaiGuoYuan are consolidated under US GAAP (ASC 810) because the Company, through Beijing Huanju Shidai and BaiGuoYuan Technology, respectively, has the ability to:

- exercise effective control over Guangzhou Huaduo and Guangzhou BaiGuoYuan;
- receive substantially all of the economic benefits and residual returns, and absorb substantially all the risks and expected losses from these VIEs as if it were their sole shareholder; and
- have an exclusive option to purchase all of the equity interests in these VIEs.

In addition to the aforementioned contractual agreements, Beijing Huanju Shidai also entered into similar contractual agreements with Beijing Tuda Science and Technology Co., Ltd. ("Beijing Tuda"). Guangzhou Huanju Shidai also entered into similar contractual agreements with Guangzhou Xuancheng Network Technology Co., Ltd. ("Guangzhou Xuancheng"), Guangzhou Yueyi Network Technology Partnership (LP) ("Guangzhou Yueyi"), Guangzhou Xuanyi Network Technology Partnership (LP) ("Guangzhou Xuanyi") and Guangzhou Ruicheng Network Technology Co., Ltd. ("Guangzhou Ruicheng"). Guangzhou Wangxing Information Technology Co., Ltd. ("Guangzhou Wangxing") also entered into similar contractual agreements with Chengdu Yunbu Network Technology Co., Ltd. ("Chengdu Yunbu"), Chengdu Luota Network Technology Co., Ltd. ("Chengdu Luota") and Chengdu Jiyue Network Technology Co., Ltd. ("Chengdu Jiyue"). BaiGuoYuan Technology also entered into similar contractual agreements with Guangzhou Shangying Network Technology Co., Ltd. ("Guangzhou Shangying"), Guangzhou Fangu Network Technology Partnership (LP) ("Guangzhou Fangu"), Guangzhou Wanyin Network Technology Partnership (LP) ("Guangzhou Wanyin") and Guangzhou Qianxun Network Technology Co., Ltd. ("Guangzhou Qianxun"). Through these contractual agreements, Beijing Tuda, Guangzhou Xuancheng, Guangzhou Yueyi, Guangzhou Xuanyi, Guangzhou Ruicheng, Chengdu Yunbu, Chengdu Luota, Chengdu Jiyue, Guangzhou Shangying, Guangzhou Fangu, Guangzhou Wanyin and Guangzhou Qianxun are considered VIEs of the Group. The VIEs disclosed in this paragraph are not material and do not have any significant impact on the Company's results and financial position.

In accordance with the aforementioned agreements, the Company has power to direct activities of the VIEs, and can have assets transferred out of the VIEs. These agreements provide the Company with a controlling financial interest in each of the VIEs (as well as being the primary beneficiary for each) and provide basis for the consolidation of the financial results of each VIE under US GAAP (ASC 810). The Company considers that there is no asset in the VIEs that can be used only to settle obligations of the VIEs, except for registered capital and PRC statutory reserves of the VIEs amounting to US\$856,883 as of December 31, 2023. The VIEs were incorporated as limited liability companies under the PRC Company Law and in accordance with the PRC Company Law, the creditors do not have recourse to the general credit of the Company for all the liabilities of the VIEs as the Company does not have direct legal ownership over the VIEs.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**1. Organization and principal activities (continued)**

**(d) Variable Interest Entities (continued)**

Currently there is no contractual arrangement that could require the Company to provide additional financial support to the VIEs. As the Company is conducting its PRC internet value-added services business through the VIEs, the Company will, if needed, provide such support on a discretionary basis in the future, which could expose the Company to a loss.

There is no VIE where the Company has variable interest but is not the primary beneficiary.

Please refer to Note 4(a) for the consolidated financial information of the Group's VIEs as of December 31, 2021, 2022 and 2023.

**2. Principal accounting policies**

**(a) Basis of presentation**

The consolidated financial statements of the Group have been prepared in accordance with the U.S. GAAP to reflect the financial position, results of operations and cash flows of the Group. Significant accounting policies followed by the Group in the preparation of the consolidated financial statements are summarized below.

**(b) Consolidation**

The Group's consolidated financial statements include the financial statements of the Company, its subsidiaries and VIEs for which the Company or its subsidiaries is the primary beneficiary. All transactions and balances among the Company, its subsidiaries and VIEs have been eliminated upon consolidation.

A subsidiary is an entity in which the Company, directly or indirectly, controls more than one half of the voting powers; or has the power to appoint or remove the majority of the members of the board of directors; or to cast a majority of votes at the meeting of directors; or has the power to govern the financial and operating policies of the investee under a statute or agreement among the shareholders or equity holders.

A VIE is an entity in which the Company, or its subsidiary, through contractual agreements, bears the risks of, and enjoys the rewards normally associated with ownership of the entity, and therefore the Company or its subsidiary is the primary beneficiary of the entity. In determining whether the Company or its subsidiaries are the primary beneficiary, the Company considered whether it has the power to direct activities that are significant to the VIEs economic performance, and also the Company's obligation to absorb losses of the VIEs that could potentially be significant to the VIEs or the right to receive benefits from the VIEs that could potentially be significant to the VIEs. Beijing Huanju Shidai, BaiGuoYuan Technology, Guangzhou Wangxing and ultimately the Company hold all the variable interests of the VIEs and have been determined to be the primary beneficiaries of the VIEs.

The Company deconsolidates its subsidiaries or business in accordance with ASC 810 as of the date the Company ceased to have a controlling financial interest in the subsidiaries.

The Company accounts for the deconsolidation of its subsidiaries or business by recognizing a gain or loss in net income/loss attributable to the Company in accordance with ASC 810. This gain or loss is measured at the date the subsidiaries are deconsolidated as the difference between (a) the aggregate of the fair value of any consideration received, the fair value of any retained non-controlling interest in the subsidiaries being deconsolidated, and the carrying amount of any non-controlling interest in the subsidiaries being deconsolidated, including any accumulated other comprehensive income/loss attributable to the non-controlling interest, and (b) the carrying amount of the assets and liabilities of the subsidiaries being deconsolidated.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**2. Principal accounting policies (continued)**

**(c) Use of estimates**

The preparation of the Company's consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, mezzanine equity and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period in the consolidated financial statements and accompanying notes. Actual results could differ materially from such estimates. The Company believes that the assessment of the revenue recognition for contracts with multiple performance obligations, income taxes, expected credit loss of receivables, purchase price allocation in a business combination, estimated useful lives of intangible assets, impairment assessment of goodwill, long-lived assets and intangible assets, and subsequent adjustments due to significant observable price change for the equity investments without readily determinable fair values and not accounted for by the equity method, represent critical accounting policies that reflect the more significant judgments and estimates used in the preparation of its consolidated financial statements.

Management bases the estimates on historical experience and on various other assumptions that are believed to be reasonable, the results of which form the basis for making judgments about the carrying values of assets and liabilities. Actual results could differ from these estimates.

**(d) Foreign currency translation**

The Group uses US\$ as its reporting currency. The functional currency of the Company and its subsidiaries incorporated in the Cayman Islands, British Virgin Islands, Hong Kong, Singapore, United States, India, Egypt and other regions is US\$ or their respective local currency, while the functional currency of the other subsidiaries incorporated in Mainland China is Renminbi ("RMB"). In the consolidated financial statements, the financial information of the Company and its subsidiaries, which use RMB or their respective local currency as their functional currency, have been translated into US\$. Assets and liabilities are translated at the exchange rates on the balance sheet date, equity amounts are translated at historical exchange rates, and revenues, expenses, gains, and losses are translated using the average exchange rate for the period. Translation adjustments arising from these are reported as foreign currency translation adjustments and are shown as a component of other comprehensive income or loss in the statement of comprehensive income.

Foreign currency transactions denominated in currencies other than functional currency are translated into the functional currency using the exchange rates prevailing at the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies at the balance sheet date are remeasured at the applicable rates of exchange in effect at that date. Foreign exchange gains and losses resulting from the settlement of such transactions and from remeasurement at year-end are recognized in foreign currency exchange gains/losses, net in the consolidated statement of comprehensive income.

**(e) Cash and cash equivalents and restricted cash**

Cash includes currency on hand and deposits held by financial institutions that can be added to or withdrawn without limitation. Cash equivalents represent short-term and highly liquid investments placed with banks, which have both of the following characteristics:

- i) Readily convertible to known amounts of cash throughout the maturity period;
- ii) So near their maturity that they present insignificant risk of changes in value because of changes in interest rates.

The Group considers all highly liquid investments with original maturities of three months or less as cash equivalents.

Cash, cash equivalents and restricted cash presented on the consolidated statements of cash flows included cash, cash equivalents, restricted cash and restricted cash within restricted short-term deposits in the consolidated balance sheets.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**2. Principal accounting policies (continued)**

**(f) Short-term deposits**

Short-term deposits represent time deposits placed with banks with original maturities between three months and one year. Interest earned is recorded as interest income in the consolidated statements of comprehensive income during the periods presented.

**(g) Long-term deposits**

Long-term deposits represent time deposits placed with banks with original maturities more than one year. Interest earned is recorded as interest income in the consolidated statements of comprehensive income during the periods presented.

**(h) Short-term investments**

For investments in financial instruments with a variable interest rate indexed to the performance of underlying assets, the Group elected the fair value method at the date of initial recognition and carried these investments subsequently at fair value. Changes in fair values are reflected in the consolidated statements of comprehensive income.

**(i) Accounts receivable**

The Company assesses collectability by reviewing accounts receivable on a collective basis where similar characteristics exist, primarily based on similar business line, service or product offerings and on an individual basis when the Company identifies specific customers with known disputes or collectability issues. In calculating the expected credit loss rates, the Company considers historical loss rates for each category of receivables and adjusts for forward looking macroeconomic data, including global GDP and external rates of non - performing loans.

**(j) Financing receivables**

Financing receivables represent receivables derived from finance business, including micro-credit personal loans and corporate loans. The Group has ceased to extend credit in finance business since 2019. Financing receivables are recorded at amortized cost, reduced by a valuation allowance estimated as of the balance sheet date. The amortized cost is equal to the unpaid principal amount, accrued interest receivables and net deferred origination costs. The origination costs are the direct costs attributable to originating the financing charged by third-party companies. The cash flows related to the principal of finance business are included in the investing activities category in the consolidated statement of cash flows.

The Group assesses the allowance for credit losses on financing receivables at the reporting date based on historical experience, current conditions, and reasonable and supportable forecasts. The Group adopted ASU 2016-13 from January 1, 2020 and maintains an allowance for credit losses in accordance with Topic 326 and records the allowance for credit losses as an offset to financing receivable. The Company assesses collectability by reviewing financing receivable on a collective basis where similar characteristics exist, primarily based on similar business line, service or product offerings and on an individual basis when the Company identifies specific customers with known disputes or collectability issues.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS****(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)****2. Principal accounting policies (continued)****(k) Investments***Equity Investments Accounted for Using the Equity Method*

The Group accounts for its equity investment over which it has significant influence but does not own a majority equity interest or otherwise control using the equity method. The Group adjusts the carrying amount of the investment and recognizes investment income or loss for share of the earnings or loss of the investee after the date of investment. The Group assesses its equity investment for other-than-temporary impairment (which would require an adjustment to estimated fair value) by considering factors including, but not limited to, current economic and market conditions, operating performance of the entities, including current earnings trends and undiscounted cash flows, and other entity-specific information. The fair value determination, particularly for investment in privately held entities, requires judgment to determine appropriate estimates and assumptions. Changes in these estimates and assumptions could affect the calculation of the fair value of the investment and determination of whether any identified impairment is other-than-temporary.

*Equity Investments with Readily Determinable Fair Values*

Equity investments with readily determinable fair values are measured and recorded at fair value using the market approach based on the quoted prices in active markets at the reporting date. The Group classifies the valuation techniques that use these inputs as Level 1 of fair value measurements. Gains or losses arising from changes in fair value of these investments are recorded in earnings.

*Equity Investments without Readily Determinable Fair Values*

Equity investments without readily determinable fair values and not accounted for under the equity method are recorded at cost, less impairment, adjusted for subsequent observable price changes on a nonrecurring basis, and report changes in the carrying value of the equity investments in current earnings. Changes in the carrying value of the equity investments are required to be made whenever there are observable price changes in orderly transactions for the identical or similar investment of the same issuer. The implementation guidance notes that an entity should make a “reasonable effort” to identify price changes that are known or that can reasonably be known.

*Available-for-sale debt investments*

Available-for-sale debt investment of the Group are redeemable preference shares issued by private companies that is redeemable at the Group’s option, which is measured at fair value. Interest income is recognized in earnings. All other changes in the carrying amount of this debt investment are recognized in other comprehensive income (loss).

**(l) Property and equipment**

Property and equipment are stated at historical cost less accumulated depreciation and impairment loss, if any. Depreciation is calculated using the straight-line method over their estimated useful lives. Residual rate is determined based on the economic value of the property and equipment at the end of the estimated useful lives as a percentage of the original cost.

	<b>Estimated useful lives</b>	<b>Residual rate</b>
Buildings	32-40 years	0 %
Servers, computers and equipment	3-5 years	0%-5 %
Leasehold improvements	Shorter of lease term or 5 years	0 %
Renovation of buildings	10 years	0 %
Motor vehicles	3-10 years	0%-5 %
Furniture, fixture and office equipment	3-5 years	0%-5 %

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS****(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)****2. Principal accounting policies (continued)****(l) Property and equipment (continued)**

Expenditures for maintenance and repairs are expensed as incurred. The gain or loss on the disposal of property and equipment is the difference between the net sales proceeds and the carrying amount of the relevant assets and is recognized in the consolidated statements of comprehensive income.

All direct and indirect costs that are related to the construction of property and equipment and incurred before the assets are ready for their intended use are capitalized as construction in progress. Construction in progress is transferred to specific property and equipment items and depreciation of these assets commences when they are ready for their intended use.

**(m) Business combinations**

Business combinations are recorded using the purchase method of accounting, and the cost of an acquisition is measured as the aggregate of the fair values at the date of exchange of the assets given, liabilities incurred, and equity instruments issued as well as the contingent considerations and all contractual contingencies as of the acquisition date. The costs directly attributable to the acquisition are expensed as incurred. Identifiable assets, liabilities and contingent liabilities acquired or assumed are measured separately at their fair value as of the acquisition date, irrespective of the extent of any non-controlling interests. The excess of (i) the total of consideration of acquisition, fair value of the non-controlling interests and acquisition date fair value of any previously held equity interest in the subsidiary acquired over (ii) the fair value of the identifiable net assets of the subsidiary acquired is recorded as goodwill. If the consideration of acquisition is less than the fair value of the net assets of the business acquired, the difference is recognized directly in the consolidated statements of comprehensive income.

**(n) Intangible assets**

Intangible assets mainly consist of trademark, customer relationships, non-compete agreement, operating rights, software, domain names, technology, licenses and others. Identifiable intangible assets are carried at acquisition cost less accumulated amortization and impairment loss, if any. Finite-lived intangible assets are tested for impairment if impairment indicators arise. Amortization of finite-lived intangible assets is computed using the straight-line method over their estimated useful lives, which are as follows:

	<u>Estimated useful lives</u>
Trademark	6 - 10 years
Customer relationships	3-5 years
Licenses	15 years
Non-compete agreement	1 year
Operating rights	Shorter of the economic life or contract terms
Software	1-10 years
Domain names	10-15 years
Technology	5 - 6 years
Others	Shorter of the economic life or contract terms

**(o) Land use rights**

Land use rights are carried at cost less accumulated amortization. Amortization of the land use rights is made on straight-line basis over 40 years from the date when the Group first obtained the land use rights certificate from the local authorities. In 2021, we entered into a long-term borrowing agreement with the Agricultural Bank of China as borrower and the loan was pledged by our entitlement to the rental income from such building and our land use right to the parcel of land located in Guangzhou. In 2022, we drew down an aggregate principal amount of US\$12.4 million under such loan facility. In April 2023, the loan has been fully repaid.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**2. Principal accounting policies (continued)**

**(p) Impairment of long-lived assets**

For long-lived assets other than investments and goodwill whose impairment policy is discussed elsewhere in the financial statements, the Group evaluates for impairment whenever events or changes (triggering events) indicate that the carrying amount of an asset may no longer be recoverable. The Group assesses the recoverability of the long-lived assets by comparing the carrying value of the long-lived assets to the estimated undiscounted future cash flows expected to receive from use of the assets group and their eventual disposition. Such assets are considered to be impaired if the sum of the expected undiscounted cash flows is less than the carrying amount of the assets. The impairment to be recognized is measured by the amount by which the carrying amount of the assets exceeds the fair value of the assets. The Group tests impairment of long-lived assets at the asset group level when impairment indicator appeared and recognizes impairment in the event that the carrying value exceeds the fair value of each reporting unit.

The impairment charges of long-lived assets recorded in general and administrative expenses for the years ended December 31, 2021, 2022 and 2023 were amounting to nil, US\$1,356, and nil respectively.

**(q) Goodwill**

Goodwill represents the excess of the purchase price over the amounts assigned to the fair value of the assets acquired and the liabilities assumed of an acquired business.

**(r) Annual test for impairment of goodwill**

The Group assesses goodwill for impairment in accordance with ASC Subtopic 350-20, Intangibles—Goodwill and Other: Goodwill (“ASC 350-20”), which requires that goodwill be tested for impairment at the reporting unit level at least annually and more frequently upon the occurrence of certain events, as defined by ASC 350-20. A reporting unit is defined as an operating segment or one level below an operating segment referred to as a component. The Group determines its reporting units by first identifying its operating segments, and then assesses whether any components of these segments constituted a business for which discrete financial information is available and where the Company’s segment manager regularly reviews the operating results of that component. The Group determined that it has three reporting units.

In January 2017, the FASB issued ASU 2017-04, simplifying the Test for Goodwill Impairment, which simplifies the accounting for goodwill impairment by eliminating Step two from the goodwill impairment test. If the carrying amount of a reporting unit exceeds its fair value, an impairment loss shall be recognized in an amount equal to that excess, versus determining an implied fair value in Step two to measure the impairment loss. The Group adopted this guidance on a prospective basis on January 1, 2020 with no material impact on its consolidated financial statements and related disclosures as a result of adopting the new standard.

The Group has the option to assess qualitative factors first to determine whether it is necessary to perform the quantitative impairment test in accordance with ASC 350-20. If the Group believes, as a result of the qualitative assessment, that it is more-likely-than-not that the fair value of the reporting unit is less than its carrying amount, the quantitative impairment test described above is required. Otherwise, no further testing is required. In the qualitative assessment, the Group considers primary factors such as industry and market considerations, overall financial performance of the reporting unit, and other specific information related to the operations. The quantitative goodwill impairment test, used to identify both the existence of impairment and the amount of impairment loss, compares the fair value (determined using a discounted cash flow analysis or a market approach, when appropriate) of a reporting unit with its carrying amount, including goodwill. If the carrying amount of a reporting unit is greater than zero and its fair value exceeds its carrying amount, goodwill of the reporting unit is considered not impaired.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**2. Principal accounting policies (continued)**

**(r) Annual test for impairment of goodwill (continued)**

In the annual goodwill impairment quantitative assessment using the income approach, judgements are made as to the assumptions regarding expected future cash flows and the impact of market conditions on those assumptions. Future events and changing market conditions may impact the assumptions as to revenue, profit margin, growth rate or other factors that may result in changes in the estimates of future cash flows. For the annual goodwill impairment quantitative assessment using the market approach, judgements are made as to the assumptions, including those related to the determination of comparable companies and related market multiples to be applied in estimating the fair value of a reporting unit. The Company concluded that the carrying amount of a certain reporting unit exceeded its respective fair value and recorded an impairment loss of US\$14,830 for the year ended December 31, 2022. There were no impairment losses recorded for the years ended December 31, 2021 and 2023. Although the Company believes the assumptions that it has used in testing for impairment are reasonable, significant changes in any one of the assumptions could produce a significant adverse impact.

**(s) Convertible bonds**

Before January 1, 2021, the Company determines the appropriate accounting treatment of its convertible bonds in accordance with the terms in relation to the conversion feature, call and put options, and beneficial conversion feature. After considering the impact of such features, the Group may account for such instrument as a liability in its entirety, or separate the instrument into debt and equity components following the respective guidance described under ASC 815 Derivatives and Hedging and ASC 470 Debt. The debt discount, if any, together with related issuance cost are subsequently amortized as interest expense, using the effective interest method, from the issuance date to the earliest conversion date. Interest expenses are recognized in the statement of comprehensive income in the period in which they are incurred.

On January 1, 2021, the Company early adopted ASU 2020-06, "Accounting for Convertible Instruments and Contracts in an Entity's Own Equity" using modified-retrospective transition approach. Pursuant to ASU 2020-06, the embedded conversion features no longer are separated from the host contract for convertible instruments with conversion features that are not required to be accounted for as derivatives under Topic 815, Derivatives and Hedging, or that do not result in substantial premiums accounted for as paid-in capital. Consequently, a convertible debt instrument will be accounted for as a single liability measured at its amortized cost as long as no other features require bifurcation and recognition as derivatives. Following the adoption of this guidance, the amount previously allocated to additional paid-in capital was reclassified as a liability and a cumulative effect adjustment of US\$86.7 million was credited to retained earnings as of January 1, 2021.

**(t) Mezzanine equity and non-controlling interests**

*Mezzanine equity*

For the Company's majority-owned subsidiaries and consolidated VIEs, a non-controlling interest is recognized to reflect the portion of their equity which is not attributable, directly or indirectly, to the Company. When the non-controlling interest is contingently redeemable upon the occurrence of a conditional event, which is not solely within the control of the Company, the non-controlling interest is classified as mezzanine equity.

In accordance with ASC Subtopic 480-10, the Group calculated, on a cumulative basis from the acquisition date, (i) the amount of accretion that would increase the balance of non-controlling interests to their estimated redemption value over the period from the date of acquisition to the earliest redemption date of the non-controlling interests and (ii) the amount of net profit attributable to non-controlling shareholders of certain subsidiaries based on their ownership percentage. The carrying value of the non-controlling interests as mezzanine equity was adjusted by a cumulative amount equal to the higher of (i) and (ii).

Each type of increase in carrying amount shall be recorded as charges against retained earnings or, in the absence of retained earnings, by charges against additional paid-in capital.

*Non-controlling interests*

Non-controlling interests are recognized to reflect the portion of the equity of majority-owned subsidiaries and VIEs which is not attributable, directly or indirectly, to the controlling shareholder.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**2. Principal accounting policies (continued)**

**(u) Revenue**

**Revenue recognition and significant judgments**

Revenues from live streaming are mainly generated from Bigo Live, Likee, imo and Hago platforms. Other revenues are mainly generated from online games, membership, online education, advertising and e-commerce business. Disaggregated revenues are disclosed in Note 33 “Segment Reporting”.

Revenues are recognized when control of the promised virtual items or services is transferred to the Group’s customers, in an amount that reflects the consideration the Group expects to be entitled to in exchange for those virtual items or services.

The Group has a recharge system for users to purchase the Group’s virtual currency. Users can recharge via various online payment platforms provided by third parties. Virtual currency is non-refundable and without expiry. As the virtual currency is often consumed soon after it is purchased based on history of turnover, the Group considers the impact of the breakage amount for virtual currency coupons is insignificant. Unconsumed virtual currency is recorded as deferred revenue. Virtual currencies used to purchase virtual items are recognized as revenue according to the prescribed revenue recognition policies of virtual items addressed below unless otherwise stated.

**(i) Live streaming**

Live streaming mainly consists of Bigo Live, Likee, imo and Hago platforms. It generates revenue from sales of virtual items in the platforms. Users can access the platforms and view the live streaming content showed by the performers. The Group shares a portion of the sales proceeds of virtual items (“revenue sharing fee”) with performers and talent agencies in accordance with their revenue sharing arrangements. Those performers who do not have revenue sharing arrangements with the Group are not entitled to any revenue sharing fee.

The Group evaluates and determines that it is the principal and views users to be its customers. The Group reports live streaming revenues on a gross basis. Accordingly, the amounts billed to users are recorded as revenues and revenue sharing fee paid to performers and talent agencies are recorded as cost of revenues. Where the Group is the principal, it controls the virtual items before they are transferred to users. Its control is evidenced by the Group’s sole ability to monetize the virtual items before they are transferred to users, and is further supported by the Group being primarily responsible to users and having a level of discretion in establishing pricing.

The Group designs, creates and offers various virtual items for sales to users with pre-determined selling price. Sales proceeds are recorded as deferred revenue and recognized as revenue based on the consumption of the virtual items. Virtual items are categorized as consumable and time-based items. Consumable items are consumed upon purchase and use while time-based items could be used for a fixed period of time. Users can purchase and present consumable items to performers to show support for their favorite performers, or purchase time-based virtual items for one or multiple months for a monthly fee, which provide users with recognized status, such as priority speaking rights or special symbols over a period of time. Accordingly, live streaming revenue is recognized immediately when the consumable virtual item is used, or in the case of time-based virtual items, revenue is recognized ratably over the fixed period on a straight-line basis. The Group does not have further obligations to the user after the virtual items are consumed immediately or after the stated period of time for time-based items.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**2. Principal accounting policies (continued)**

**(u) Revenue (continued)**

**Revenue recognition and significant judgments (continued)**

**(i) Live streaming (continued)**

The Group may also enter into contracts that can include various combinations of virtual items, which are generally capable of being distinct and accounted for as separate performance obligations, such as the noble member program. Judgments are required as follow: 1) determining whether those virtual items are considered distinct performance obligations that should be accounted for separately versus together, 2) determining the standalone selling price for each distinct performance obligation, and 3) allocating of the arrangement consideration to the separate accounting of each distinct performance obligation based on their relative standalone selling prices. Certain virtual items are provided to customers over time and have the same pattern of transfer to customers. The Group exercises judgement in determining the number of distinct performance obligations by accounting for services that have the same pattern of transfer to customers as a single performance obligation. In instances where standalone selling price is not directly observable as the Group does not sell the virtual item separately, the Group determines the standalone selling price based on pricing strategies, market factors and strategic objectives. The Group recognizes revenue for each of the distinct performance obligations identified in accordance with the applicable revenue recognition method relevant for that obligation.

As the Group's live streaming virtual items are generally sold without right of return and the Group does not provide any other credit and incentive to its users, therefore accounting of variable consideration when estimating the amount of revenue to recognize is not applicable to the Group's live streaming business.

**(ii) Others**

Other revenues mainly generated from advertising, e-commerce business, online games, membership and online education.

**(1) Advertising revenues**

The Group primarily generates advertising revenues from sales of various forms of advertising and provision of promotion campaigns on the live streaming platforms by way of advertisement display or integrated promotion activities in shows and programs on the live streaming platforms. Advertisements on the Group's platforms are generally charged on the basis of duration, and advertising contracts are signed to establish the fixed price and the advertising services to be provided. Where collectability is reasonably assured, advertising revenues from advertising contracts are recognized ratably over the contract period of display.

The Group enters into advertising contracts directly with advertisers or third-party advertising agencies that represent advertisers. Payment terms and conditions vary by contract type, although terms generally include a requirement of payment within 1 to 3 months. Both third-party advertising agencies and direct advertisers are generally billed at the end of the display period and payments are due usually within 3 months. In instances where the timing of revenue recognition differs from the timing of billing, the Group has determined the advertising contracts generally do not include a significant financing component. The primary purpose of the credits terms is to provide customers with simplified and predictable ways of purchasing the Group's advertising services, not to receive financing from its customers or to provide customers with financing.

Certain customers may receive sales incentives in the forms of discounts and rebates to advertisers or advertising agencies based on purchase volume, which are accounted for as variable consideration. The Group estimates these amounts based on the expected amount to be provided to customers considering the contracted rebate rates and estimated sales volume based on historical experience, and reduce revenues recognized. The Group believes that there will not be significant changes to the estimates of variable consideration.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**2. Principal accounting policies (continued)**

**(u) Revenue (continued)**

**Revenue recognition and significant judgments (continued)**

**(ii) Others (continued)**

**(2) E-commerce business revenues**

The Company operates several e-commerce platforms providing service solutions for merchants, including a global smart commerce platform that enables merchants to easily build their brands online and sell their products to users around the world. The Group recognizes revenue when it satisfies the identified performance obligation by rendering the promised service to the customer and when specific criteria have been met. Services are rendered when or as the customers benefit from the services rendered.

The Group also operates an e-commerce platform and displays goods for end customers to select and order. The Group is responsible to arrange delivery of the goods to the end customers after customers place an order in the platforms. The Group recognizes e-commerce business revenue equal to the sales price (net of sales discount) to the end customers when control of the inventory is transferred. Revenues derived from e-commerce business are recorded on a gross basis, because (i) the Group is primarily responsible for fulfilling the promise to provide the specified good, (ii) the Group is subject to inventory risks before the specified goods have been transferred to a customer or after transfer of control to the customers, and (iii) the Group has discretion in establishing the price of the specified goods.

**(3) Online games revenues**

The Group generates revenues from offering virtual items in online games developed by third parties or the Group itself to game players. Users play games through the Group's platform free of charge and are charged for purchases of virtual items, including consumable and perpetual items, which can be utilized in the online games to enhance their game-playing experience. Consumable items represent virtual items that can be consumed by a specific user within a specified period of time. Perpetual items represent virtual items that are accessible to the users' account over the life of the online games.

Pursuant to contracts signed between the Group and the respective game developers, game developers own the games' copyrights and other intellectual property, and take primary responsibilities of game development and game operation, including designing, developing and updating of the games related to game content, pricing of virtual items, providing ongoing updates of new contents and bug fixing. The Group's responsibilities under the agreements with the game developers to offer certain standard promotions that include providing access to the platform, announcing the new games to users on the platform, and occasional advertising on the Group's platforms. Therefore, revenues derived from third party developed games are recorded on a net basis, net of the amount paid to game developers.

The Group has adopted a policy to recognize revenues relating to game tokens for third party developed games over the estimated user relationship period with the Group on a game-by-game basis, which is approximately one to six months for the periods presented. The estimated user relationship period is based on data collected from those users who have acquired game tokens. Revenues from in-game payments of each month are recognized over the user relationship period estimated for that game.

**(4) Membership**

The Group operates a membership subscription program where subscription members can have enhanced user privileges. The membership fee is collected up-front from subscribers. The receipt of the revenue is initially recorded as deferred revenue and revenue is recognized ratably over the period of the subscription when services are rendered. Unrecognized portion beyond 12 months from balance sheet date is classified as deferred revenue - non current.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**2. Principal accounting policies (continued)**

**(u) Revenue (continued)**

**Revenue recognition and significant judgments (continued)**

**(ii) Others (continued)**

**(5) Online education revenues**

Educational programs and services consist of vocational training, language training courses and K-12 afterschool education courses. The course fee is generally paid in advance and is initially recorded as deferred revenue. Revenue for regular courses is recognized proportionately as the classes are attended, and is reported net of scholarships and course fee refunds. Students are entitled to one trial class of the purchased course and course fee is fully refundable if a student decides not to take the remaining course after the trial class. No refund will be provided to a student who withdraws from a course after the trial period, and revenue is recognized for the amount collected. Course fee refunds were insignificant over the period presented. The Group disposed of its major online education business in 2021.

**Contract balances**

The Group collects accounts receivable from various online payment platforms, distribution platforms and advertising customers. The allowance of expected credit loss of receivables reflects the Group's best estimate of probable losses inherent in the accounts receivable balance. The Group determines the allowance based on known troubled accounts, historical experience, and other currently available evidence. The activity in the allowance for doubtful accounts for the periods presented is disclosed and detailed in Note 9.

Contract liabilities primarily consists of deferred revenue for unconsumed virtual items and unamortized revenue from virtual items in the Group's platforms, where there is still an obligation to be provided by the Group, which will be recognized as revenue when all of the revenue recognition criteria are met.

As of December 31, 2022 and 2023, deferred revenue related to live streaming business were US\$72,733 and US\$62,333, respectively. During the years ended December 31, 2022 and 2023, the Group recognized revenue related to its live streaming business of US\$58,425 and US\$63,303, respectively, which was included in the corresponding contract liability balance at the beginning of the periods.

As of December 31, 2022 and 2023, deferred revenue related to other revenue were US\$23,046 and US\$24,272, respectively. During the years ended December 31, 2022 and 2023, the Group recognized revenue related to other businesses of US\$2,485 and US\$22,711, respectively, that was included in the corresponding contract liability balance at the beginning of the periods.

As of December 31, 2023, the aggregate amount of the transaction price allocated to the remaining performance obligation is US\$86,605, the Group expects to recognize US\$73,673 performance obligation as revenue in 2024, the remaining performance obligation is expected to be recognized as revenue in 2025 and after years. However, the amount and timing of revenue recognition is largely driven by customer usage, which can extend beyond the original contractual term.

**(v) Advances from customers and deferred revenue**

Advances from customers and deferred revenue primarily consists of the unamortized game tokens, prepaid subscriptions under the membership program, services fee received from customers that relate to services to be provided in the future and unamortized revenue from virtual items in various channels in the Group's platforms, where there is still an implied obligation to be provided by the Group, which will be recognized as revenue when all of the revenue recognition criteria are met.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**2. Principal accounting policies (continued)**

**(w) Cost of revenues**

Amounts recorded as cost of revenue relate to direct expenses incurred in order to generate revenue. Such costs are recorded as incurred. Cost of revenues primarily consists of (i) revenue sharing fees and content costs, including payments to various channel owners and performers, and content providers, (ii) bandwidth costs, (iii) payment handling costs, (iv) salary and welfare, (v) technical service fee, (vi) depreciation and amortization expense for servers, other equipment and intangibles directly related to operating the platform, (vii) share-based compensation and (viii) other costs. The Group reported other taxes and surcharges in cost of revenues.

**(x) Research and development expenses**

Research and development expenses primarily consist of (i) salary and welfare for research and development personnel, (ii) share-based compensation for research and development personnel, (iii) depreciation of office premise and servers utilized by research and development personnel, and (iv) rental expenses. Costs incurred during the research stage are expensed as incurred. Costs incurred in the development stage, prior to the establishment of technological feasibility, which is when a working model is available, are expensed when incurred.

The Group recognizes internal use software development costs in accordance with guidance on intangible assets and internal use software. This requires capitalization of qualifying costs incurred during the software's application development stage and to expense costs as they are incurred during the preliminary project and post implementation/operation stages. The Group has not capitalized any costs related to internal use software during the years ended December 31, 2021, 2022 and 2023, respectively.

**(y) Sales and marketing expenses**

Sales and marketing expenses primarily consist of (i) advertising and market promotion expenses, (ii) amortization of certain intangible assets from business acquisitions, and (iii) salary and welfare for sales and marketing personnel. The advertising and market promotion expenses amounted to approximately US\$383,603, US\$321,424 and US\$270,439 during the years ended December 31, 2021, 2022 and 2023, respectively.

**(z) General and administrative expenses**

General and administrative expenses primarily consist of (i) share-based compensation for management and administrative personnel, (ii) salary and welfare for general and administrative personnel, (iii) impairment charges (if any), and (iv) professional service fees.

**(aa) Employee social security and welfare benefits**

Employees of the Group in the PRC are entitled to staff welfare benefits including pension, work-related injury benefits, maternity insurance, medical insurance, unemployment benefit and housing fund plans through a PRC government-mandated multi-employer defined contribution plan. The Group is required to accrue for these benefits based on certain percentages of the employees' salaries, up to a maximum amount specified by the local government. The Group is required to make contributions to the plans out of the amounts accrued. The PRC government is responsible for the medical benefits and the pension liability to be paid to these employees and the Group's obligations are limited to the amounts contributed and no legal obligation beyond the contributions made. Employee social security and welfare benefits included as expenses in the accompanying statements of comprehensive income amounted to US\$67,733, US\$65,098 and US\$69,717 for the years ended December 31, 2021, 2022 and 2023, respectively.

**(bb) Share-based compensation**

The Group grants stock-based award, such as, but not limited to, share options, restricted shares, restricted share units of the Company, share options, restricted share units and ordinary shares of the Company's subsidiaries to eligible employees, officers, directors, and non-employee consultants.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**2. Principal accounting policies (continued)**

**(bb) Share-based compensation (continued)**

Awards granted are initially accounted for as equity-classified awards. The related share-based compensation expenses are measured at the grant date fair value of the award and are recognized using the graded vesting method, net of estimated forfeiture rates, over the requisite service period, which is generally the vesting period. Forfeitures are estimated at the time of grant based on historical forfeiture rates and will be revised in the subsequent periods if actual forfeitures differ from those estimates.

For an award with a performance and/or service condition that affects vesting, the performance and/or service condition is not considered in determining the award's fair value on the grant date. Performance and service conditions should be considered when the Group is estimating the quantity of awards that will vest. Compensation cost will reflect the number of awards that are expected to vest and will be adjusted to reflect those awards that do ultimately vest. The Group recognizes compensation cost for awards with performance conditions if and when the Group concludes that it is probable that the performance condition will be achieved, net of an estimate of pre-vesting forfeitures over the requisite service period. The Group reassesses the probability of vesting at each reporting period for awards with performance conditions and adjusts compensation cost based on its probability assessment, unless on certain situations, the Group may not be able to determine that it is probable that a performance condition will be satisfied until the event occurs.

The Group accounts for the effects of modifications, if any, to its equity award in accordance to Topic 718: Compensation—Stock Compensation.

The details of the Group's share-based awards are disclosed in Note 26. Fair value determination of these share-based awards is summarized as below:

(1) Restricted share units

In determining the fair value of restricted share units granted, the fair value of the underlying shares of JOYY on the grant dates is applied. The grant date fair value of restricted share units is based on stock price of JOYY in the Nasdaq Global Select Market.

(2) Share options

In determining the fair value of share options granted, a binomial option-pricing model is applied. The determination of the fair value is affected by the stock price of JOYY in the Nasdaq Global Select Market, as well as assumptions regarding a number of complex and subjective variables, including risk-free interest rates, exercise multiples, expected forfeiture rates, the expected share price volatility rates, and expected dividends.

(3) Restricted shares

Upon the acquisition of Bigo, Class A common shares are issued for the replacement awards to Bigo's employees to replace their original share-based awards, namely restricted shares. In determining the fair value of restricted share granted to Bigo's employees, the fair value of the underlying shares of JOYY on the grant dates is applied. The grant date fair value of restricted shares is based on stock price of JOYY in the Nasdaq Global Select Market.

**(cc) Other income**

Other income primarily consists of government grants which represent cash subsidies received from the PRC government by the Group entities. For grants with no conditions attached, such amounts are recognized in the consolidated income statements upon receipt. For grants with attached conditions, such amounts are recorded as deferred revenue when received upfront and recognized as operating income after all of the conditions specified in the grants have been met

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**2. Principal accounting policies (continued)**

**(dd) Leases**

The Group leases facilities under non-cancellable operating leases expiring on different dates. On January 1, 2019, the Company adopted ASU No. 2016-02 (Topic 842) “Leases” using the optional transition method. Results and disclosure requirements for reporting periods beginning after January 1, 2019 are presented under Topic 842, while prior period amounts have not been adjusted and continue to be reported in accordance with our historical accounting under Topic 840. Under Topic 842, lessees are required to recognize assets and liabilities on the balance sheet for most leases. A contract is or contains a lease if the contract conveys the right to control the use of identified property, plant, or equipment (an identified asset) for a period of time in exchange for consideration. The Company determines whether a contract conveys the right to control the use of an identified asset for a period of time by assessing whether the Company has both the right to obtain substantially all of the economic benefits from use of the identified asset and the right to direct the use of the identified asset.

The Company accounts for short-term leases with terms less than 12 months in accordance with ASC 842-20-25-2 to recognize the lease payments in profit or loss on a straight-line basis over the lease term and variable lease payments in the period in which the obligation for those payments is incurred. The adoption of the standard did not have a significant impact on the Group’s consolidated financial statements.

Operating leases are included in operating lease right-of-use assets, current lease liabilities and non-current lease liabilities on the consolidated balance sheets.

**(i) Right-of-use assets**

Right-of-use assets, which mainly comprise of office lease, are initially measured at the present value of the lease payments. Amortization of the right-of-use assets is made over the lease term on a generally straight-line basis.

**(ii) Lease liabilities**

Lease liabilities are lessees’ obligations to make the lease payments arising from a lease, measured on a discounted basis.

As a lessee, the weighted average remaining lease terms of the right-of-use assets was 2.86 years and the discount rate for the lease is the rate implicit in the lease unless that rate cannot be readily determined. In that case, the lessee is required to use its incremental borrowing rate. A weighted average incremental borrowing rate of 5.44% was adopted at commencement date in determining the present value of lease payments.

For the year ended December 31, 2022, operating lease cost and short-term lease cost were US\$14,519 and US\$9,148, respectively. There were no other lease cost other than operating lease cost and short-term lease cost for the year ended December 31, 2022. For the year ended December 31, 2022, cash paid for operating leases included in operating cash flows was US\$13,740. For the year ended December 31, 2022, lease liabilities arising from obtaining right-of-use assets was US\$19,039.

For the year ended December 31, 2023, operating lease cost and short-term lease cost were US\$14,681 and US\$8,660, respectively. There were no other lease cost other than operating lease cost and short-term lease cost for the year ended December 31, 2023. For the year ended December 31, 2023, cash paid for operating leases included in operating cash flows was US\$14,513. For the year ended December 31, 2023, lease liabilities arising from obtaining right-of-use assets was US\$11,063.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS****(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)****2. Principal accounting policies (continued)****(dd) Leases (continued)**

## (ii) Lease liabilities (continued)

A maturity analysis of the Company's operating lease liabilities and reconciliation of the undiscounted cash flows to the operating lease liabilities recognized on the consolidated balance sheet was as below:

	<u>Office rental</u> US\$
2024	11,440
2025	11,219
2026	7,770
2027 and after	2,371
Total undiscounted cash flows	<u>32,800</u>
Less: imputed interest	<u>(1,990)</u>
Present value of lease liabilities	<u>30,810</u>

**(ee) Income taxes**

Current income taxes are provided on the basis of net income for financial reporting purposes, adjusted for income and expense items which are not assessable or deductible for income tax purposes, in accordance with the regulations of the relevant tax jurisdictions. Deferred income taxes are accounted for using an asset and liability method. Under this method, deferred income taxes are recognized for the tax consequences of temporary differences by applying enacted statutory rates applicable to future years to differences between the financial statement carrying amounts and the tax bases of existing assets and liabilities. The tax base of an asset or liability is the amount attributed to that asset or liability for tax purpose. The effect on deferred taxes of a change in tax rates is recognized in statement of comprehensive income in the period of change. A valuation allowance is provided to reduce the amount of deferred tax assets if it is considered more likely than not that some portion of, or all of the deferred tax assets will not be realized.

*Uncertain tax positions*

The guidance on accounting for uncertainties in income taxes prescribes a more likely than not threshold for financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. Guidance was also provided on derecognition of income tax assets and liabilities, classification of current and deferred income tax assets and liabilities, accounting for interest and penalties associated with tax positions, accounting for income taxes in interim periods, and income tax disclosures. Significant judgment is required in evaluating the Group's uncertain tax positions and determining its provision for income taxes. The Group recognizes interests and penalties, if any, under accrued expenses and other current liabilities on its balance sheet and under other expenses in its statements of comprehensive income. The Group did not recognize any significant interest and penalties associated with uncertain tax positions for the years ended December 31, 2021, 2022 and 2023. As of December 31, 2022 and 2023, the Group did not have any significant unrecognized uncertain tax positions.

**(ff) Statutory reserves**

The Group's subsidiaries and VIEs established in the PRC are required to make appropriations to certain non-distributable reserve funds.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

### 2. Principal accounting policies (continued)

#### (ff) Statutory reserves (continued)

In accordance with the laws applicable to China's Foreign Investment Enterprises, the Group's subsidiaries registered as wholly owned foreign enterprises have to make appropriations from its after-tax profit (as determined under the Accounting Standards for Business Enterprises as promulgated by the Ministry of Finance of the People's Republic of China ("PRC GAAP")) to reserve funds including general reserve fund, and staff bonus and welfare fund. The appropriation to the general reserve fund must be at least 10% of the after-tax profits calculated in accordance with PRC GAAP. Appropriation is not required if the reserve fund has reached 50% of the registered capital of the company. Appropriation to the staff bonus and welfare fund is at the company's discretion.

In addition, in accordance with the Company Laws of the PRC, the VIEs of the Company registered as PRC domestic companies must make appropriations from its after-tax profit as determined under the PRC GAAP to non-distributable reserve funds including a statutory surplus fund and a discretionary surplus fund. The appropriation to the statutory surplus fund must be at least 10% of the after-tax profits as determined under the PRC GAAP. Appropriation is not required if the surplus fund has reached 50% of the registered capital of the company. Appropriation to the discretionary surplus fund is made at the discretion of the company.

The use of the general reserve fund, statutory surplus fund and discretionary surplus fund are restricted to the offsetting of losses or increasing capital of the respective company. The staff bonus and welfare fund is a liability in nature and is restricted to fund payments of special bonus to staff and for the collective welfare of employees. All these reserves are not allowed to be transferred to the Company in terms of cash dividends, loans or advances, nor can they be distributed except under liquidation.

During the years ended December 31, 2021, 2022 and 2023, appropriations to general reserve fund and statutory surplus fund amounted to US\$8,979, US\$5,732, and US\$5,179, respectively.

#### (gg) Related parties

Parties are considered to be related if one party has the ability, directly or indirectly, to control the other party or exercise significant influence over the other party in making financial and operating decisions. Parties are also considered to be related if they are subject to common control or significant influence, such as a family member or relative, shareholder, or a related corporation.

#### (hh) Dividends

Dividends are recognized when declared.

#### (ii) Income per share

Basic income per share is computed on the basis of the weighted-average number of common shares outstanding during the period under measurement. Diluted income per share is based on the weighted-average number of common shares outstanding and potential common shares. Potential common shares result from the assumed exercise of outstanding share options, restricted shares and restricted share units or other potentially dilutive equity instruments, when they are dilutive under the treasury stock method or the if-converted method.

#### (jj) Comprehensive income

Comprehensive income is defined as the change in equity of the Company during a period arising from transactions and other events and circumstances excluding transactions resulting from investments by shareholders and distributions to shareholders. Comprehensive income is reported in the consolidated statements of comprehensive income.

As of December 31, 2021, 2022 and 2023, accumulated other comprehensive income/loss of the Group is the foreign currency translation adjustments.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**2. Principal accounting policies (continued)**

**(kk) Segment reporting**

Operating segments are defined as components of an enterprise engaging in businesses activities for which separate financial information is available that is regularly evaluated by the Group's chief operating decision makers ("CODM") in deciding how to allocate resources and assess performance. The Group's chief operating decision maker has been identified as the Chief Executive Officer, who reviews segment results when making decisions about allocating resources and assessing performance of the Group. The Company operates two reportable segments consisting of: (1) BIGO; and (2) All other.

**(ll) Recently issued accounting pronouncements**

**Recently adopted accounting pronouncements**

In August 2020 the FASB issued ASU 2020-06, Accounting for Convertible Instruments and Contracts in an Entity's Own Equity, which focuses on amending the legacy guidance on convertible instruments and the derivatives scope exception for contracts in an entity's own equity. ASU 2020-06 simplifies an issuer's accounting for convertible instruments by reducing the number of accounting models that require separate accounting for embedded conversion features. ASU 2020-06 also simplifies the settlement assessment that entities are required to perform to determine whether a contract qualifies for equity classification. Further, ASU 2020-06 enhances information transparency by making targeted improvements to the disclosures for convertible instruments and earnings-per-share (EPS) guidance, i.e., aligning the diluted EPS calculation for convertible instruments by requiring that an entity use the if-converted method and that the effect of potential share settlement be included in the diluted EPS calculation when an instrument may be settled in cash or shares, adding information about events or conditions that occur during the reporting period that cause conversion contingencies to be met or conversion terms to be significantly changed. This update will be effective for the Company's fiscal years beginning after December 15, 2021, and interim periods within those fiscal years. Early adoption is permitted, but no earlier than fiscal years beginning after December 15, 2020, and interim periods within those fiscal years. Entities can elect to adopt the new guidance through either a modified retrospective method of transition or a fully retrospective method of transition. The Company adopted ASU 2020-06 on January 1, 2021 and a cumulative effect adjustment of US\$86.7 million was credited to retained earnings as of January 1, 2021.

In December 2019, the FASB issued ASU 2019-12, "Simplifying the Accounting for Income Taxes" to remove specific exceptions to the general principles in Topic 740 and to simplify accounting for income taxes. The standard is effective for public companies for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2020. For all other entities, the standard is effective for fiscal years beginning after December 15, 2021, and interim periods within fiscal years beginning after December 15, 2022. Early adoption is permitted. The standard is effective for the fiscal year beginning January 1, 2022. The Group adopted the ASU on January 1, 2022, which did not have a material impact on the Group's financial results or financial position.

In March 2020, the FASB issued ASU 2020-04, "Reference Rate Reform: Facilitation of the Effects of Reference Rate Reform on Financial Reporting" in Topic 848. The standard is effective for all entities as of March 12, 2020 through December 31, 2022. The standard provides optional expedients and exceptions for applying generally accepted accounting principles to contracts, hedging relationships, and other transactions affected by reference rate reform if certain criteria are met. The Group adopted the ASU on January 1, 2022, which did not have a material impact on the Group's financial results or financial position.

In November 2021, the FASB issued ASU No. 2021-10, Government Assistance (Topic 832). This ASU requires business entities to disclose information about government assistance they receive if the transactions were accounted for by analogy to either a grant or a contribution accounting model. The disclosure requirements include the nature of the transaction and the related accounting policy used, the line items on the balance sheets and statements of operations that are affected and the amounts applicable to each financial statement line item and the significant terms and conditions of the transactions. The ASU is effective for annual periods beginning after December 15, 2021. The disclosure requirements can be applied either retrospectively or prospectively to all transactions in the scope of the amendments that are reflected in the financial statements at the date of initial application and new transactions that are entered into after the date of initial application. The Group adopted the ASU on January 1, 2022, which did not have a material impact on the Group's financial results or financial position.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**2. Principal accounting policies (continued)**

**(II) Recently issued accounting pronouncements (continued)**

**Recently issued accounting pronouncements not yet adopted**

In November 2023, the FASB issued ASU 2023-07, Segment Reporting: Improvements to Reportable Segment Disclosures (“ASU 2023-07”), which focuses on improving reportable segment disclosure requirements, primarily through enhanced disclosures about significant segment expenses. A public entity shall disclose for each reportable segment the significant expense categories and amounts that are regularly provided to the CODM and included in reported segment profit or loss. ASU 2023-07 also requires public entities to provide in interim periods all disclosures about a reportable segment’s profit or loss and assets that are currently required annually. Entities are permitted to disclose more than one measure of a segment’s profit or loss if such measures are used by the CODM to allocate resources and assess performance, as long as at least one of those measures is determined in a way that is most consistent with the measurement principles used to measure the corresponding amounts in the consolidated financial statements. ASU 2023-07 is applied retrospectively to all periods presented in financial statements, unless it is impracticable. This update will be effective for the Group’s fiscal years beginning after December 15, 2023, and interim periods within fiscal years beginning after December 15, 2024. Early adoption is permitted. The Group is currently in the process of evaluating the disclosure impact of adopting ASU 2023-07.

**3. Discontinued operations**

**Disposal of YY Live business**

On November 16, 2020, the Company entered into definitive agreements with Baidu to dispose of the YY Live business. As a result, assets and liabilities of this business were classified as assets and liabilities held for sale and the results of YY Live business were presented as discontinued operations. The transaction was substantially completed on February 8, 2021, with certain matters remaining to be completed, including necessary regulatory approvals from government authorities. The Company no longer was able to operate and exert control over the YY Live business, including but not limited to the assets, liabilities, business and employee contracts necessary for the operation of the YY Live business. Accordingly, the Company ceased consolidation of the YY Live business since February 8, 2021 and also ceased to present the results of the YY Live business within discontinued operations since that same date.

In April 2022, the Company and Baidu agreed to extend the long stop date, which is the closing deadline of the proposed acquisition, indefinitely until any such extension is properly terminated by either party.

As a result of the pending regulatory approvals discussed above, the Company has not recognized any gain from the transaction. Instead, the Company has classified and presented all the assets and liabilities related to the YY Live business amounting to US\$38,194 on a net basis within prepayments and other current assets (Note 11). The total consideration of the transaction is approximately US\$3.6 billion in cash and subject to certain adjustments. The Company received part of the consideration amounting to US\$1.9 billion by December 31, 2023, which was recorded as advance payments received within accrued liabilities and other current liabilities (Note 18). If the transaction is ultimately closed, the Company will recognize the gain related to the disposal of YY Live business transaction.

On January 1, 2024, the Company received a written notice from an affiliate of Baidu, purporting to terminate the share purchase agreement, dated November 16, 2020, as subsequently amended or supplemented, in connection with the sale of YY Live to Baidu. Baidu asserted in the written notice that it has and exercised the right to terminate the referenced share purchase agreement.

The Company is currently in discussion with Baidu on the next steps following Baidu’s assertion that it has exercised its right to terminate the share purchase agreement. The Company is also seeking legal advice and will consider all options at its disposal in response to Baidu’s written notice and expressly reserves all rights. From January 1, 2024 through the date of this annual report, the Company has not obtained control of the YY Live business and, accordingly, continues to not reflect the YY Live business within the Company’s consolidated results and position.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS****(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)****3. Discontinued operations (continued)****Disposal of YY Live business (continued)**

The following tables set forth the assets, liabilities, statement of operations and cash flows of discontinued operations which were included in the Group's consolidated financial statements. The net amount of the assets and liabilities as of December 31, 2022 and 2023 shown below are recorded within prepayments and other current assets in the consolidated balance sheet.

	As of December 31,	
	2022	2023
	US\$	US\$
<b>Assets</b>		
<b>Current assets</b>		
Cash and cash equivalents	201,393	201,393
Accounts receivable, net	18,239	18,239
Prepayments and other current assets	4,986	4,986
<b>Total current assets</b>	<b>224,618</b>	<b>224,618</b>
<b>Non-current assets</b>		
Deferred tax assets	4,294	4,294
Property and equipment, net	10,356	10,356
Intangible assets, net	7,456	7,456
Other non-current assets	3,814	3,814
<b>Total non-current assets</b>	<b>25,920</b>	<b>25,920</b>
<b>Total assets</b>	<b>250,538</b>	<b>250,538</b>
<b>Liabilities</b>		
<b>Current liabilities</b>		
Accounts payable	1,117	1,117
Deferred revenue	49,495	49,495
Advances from customers	12,663	12,663
Income taxes payable	9,787	9,787
Accrued liabilities and other current liabilities	139,282	139,282
<b>Total current liabilities</b>	<b>212,344</b>	<b>212,344</b>
<b>Total liabilities</b>	<b>212,344</b>	<b>212,344</b>

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS****(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)****3. Discontinued operations (continued)****Disposal of YY Live business (continued)**

The following tables set forth the statement of operations and cash flows of discontinued operations which were included in the Group's consolidated financial statements (in thousands).

	<b>For the year ended December 31, 2021</b>
	US\$
<b>Net revenues</b>	
Live streaming	151,445
Others	2,980
<b>Total net revenues</b>	<b>154,425</b>
Cost of revenues <sup>(1)</sup>	(88,900)
<b>Gross profit</b>	<b>65,525</b>
<b>Operating expenses<sup>(1)</sup></b>	
Research and development expenses	(6,323)
Sales and marketing expenses	(8,954)
General and administrative expenses	(7,108)
<b>Total operating expenses</b>	<b>(22,385)</b>
Other income	611
<b>Operating income</b>	<b>43,751</b>
Interest income and investment income	355
<b>Income before income tax expenses</b>	<b>44,106</b>
Income tax expenses	(8,539)
<b>Net income from discontinued operations</b>	<b>35,567</b>
	<b>For the year ended December 31, 2021</b>
	US\$
Net cash provided by discontinued operating activities	64,289
Net cash provided by discontinued investing activities	1,636,450

\* There is no financing activity from discontinued operations of YY Live business.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

**3. Discontinued operations (continued)**

**Disposal of YY Live business (continued)**

(1) Share-based compensation was allocated in cost of revenues and operating expenses as follows:

	<b>For the year ended</b>
	<b>December 31,</b>
	<b>2021</b>
	<b>US\$</b>
Cost of revenues	(426)
Research and development expenses	(703)
Sales and marketing expenses	(39)
General and administrative expenses	(175)

**4. Certain risks and concentration**

**(a) PRC regulations**

Foreign ownership of internet-based businesses is subject to significant restrictions under the current PRC laws and regulations. The PRC government regulates internet access, the distribution of online information and the conduct of online commerce through strict business licensing requirements and other government regulations. These laws and regulations also limit foreign ownership in PRC companies that provide internet information distribution services. Specifically, foreign ownership in an internet information provider or other value-added telecommunication service providers may not exceed 50%. Foreigners or foreign invested enterprises are currently not able to apply for the required licenses for operating online games in the PRC. The Company is incorporated in the Cayman Islands and accordingly, the Company is considered as a foreign invested enterprise under PRC law.

As mentioned in Note 1(d), in order to comply with the PRC laws restricting foreign ownership in the online business in China, the Group operates the online business in China through contractual arrangements with its principal VIEs, namely Guangzhou Huaduo and Guangzhou BaiGuoYuan. In January 2021, Mr. David Xueling Li and other nominal shareholder transferred in total 100% of the nominee shares of Guangzhou BaiGuoYuan to Guangzhou Qianxun Network Technology Co., Ltd. (“Guangzhou Qianxun”), a VIE of the Company. In February 2021, Beijing Tuda and Mr. David Xueling Li transferred their respective nominee shares in Guangzhou Huaduo to Guangzhou Tuyue Network Technology Co., Ltd. (“Guangzhou Tuyue”), a VIE of the Company. As of December 31, 2023, Guangzhou Tuyue holds the majority of nominee shares of Guangzhou Huaduo., and Guangzhou Qianxun holds 100% of the nominee shares of Guangzhou BaiGuoYuan.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**4. Certain risks and concentration (continued)**

**(a) PRC regulations (continued)**

Guangzhou Huaduo and Guangzhou BaiGuoYuan hold the licenses and permits necessary to conduct its internet value-added services in the PRC. If the Company had direct ownership of the VIE, it would be able to exercise its rights as a shareholder to effect changes in the board of directors, which in turn could affect changes at the management level, subject to any applicable fiduciary obligations. However, under the current contractual arrangements, it relies on the VIE and its shareholders' performance of their contractual obligations to exercise effective control. In addition, the Group's contractual agreements have terms range from 10 to 30 years, which are subject to Beijing Huanju Shidai and BaiGuoYuan Technology's unilateral termination right. Under the respective service agreements, Beijing Huanju Shidai and BaiGuoYuan Technology will provide services including technology support, technology services, business support and consulting services to Guangzhou Huaduo and Guangzhou BaiGuoYuan, respectively, in exchange for service fees. The amount of service fees payable is determined by various factors, including (a) a percentage of Guangzhou Huaduo and Guangzhou BaiGuoYuan's revenues or earnings, and (b) the expenses that Beijing Huanju Shidai and BaiGuoYuan Technology incur for providing such services. Beijing Huanju Shidai and BaiGuoYuan Technology may charge up to 100% of the income in Guangzhou Huaduo and Guangzhou BaiGuoYuan and a multiple of the expenses incurred for providing such services, as determined by Beijing Huanju Shidai and BaiGuoYuan Technology, respectively, from time to time. The service fees payable by Guangzhou Huaduo and Guangzhou BaiGuoYuan to Beijing Huanju Shidai and BaiGuoYuan Technology are determined to be up to 100% of the profits of Guangzhou Huaduo and Guangzhou BaiGuoYuan, with the timing of such payment to be determined at the sole discretion of Beijing Huanju Shidai and BaiGuoYuan Technology. If fees were incurred, it would be significant to the Company and the operating companies' economic performance because it will be incurred and paid at up to 100% of the earnings of the VIE. Fees incurred would be remitted, subject to further PRC restrictions. None of the VIEs or their shareholders are entitled to terminate the contracts prior to the expiration date, unless under remote circumstances such as a material breach of agreement or bankruptcy as it pertains to the service and business operation agreements and their amendment.

For the years ended December 31, 2021, 2022 and 2023, the Company's wholly owned subsidiaries, mainly including Beijing Huanju Shidai, BaiGuoYuan Technology, determined the service fees which were charged to the Group's VIEs, respectively.

Further, the Group believes that the contractual arrangements among the Company's subsidiaries (mainly including Beijing Huanju Shidai and BaiGuoYuan Technology), the VIEs, and the VIE's shareholders are in compliance with PRC laws and are legally enforceable and binding. However, there are substantial uncertainties regarding the interpretation and application of PRC laws and regulations including those that govern the contractual arrangements, which could limit the Group's ability to enforce these contractual arrangements and if the nominee shareholders of the VIEs were to reduce their interests in the Group, their interest may diverge from that of the Group and that may potentially increase the risk that they would seek to act contrary to the contractual arrangements.

In March 2019, the National People's Congress enacted PRC Foreign Investment Law which would be effective starting from January 1, 2020. The Foreign Investment Law does not explicitly classify contractual arrangements as a form of foreign investment, but it contains a catch-all provision under the definition of "foreign investment," which includes investments made by foreign investors through means stipulated in laws or administrative regulations or other methods prescribed by the State Council. Existing laws or administrative regulations remain unclear whether the contractual arrangements with variable interest entities will be deemed to be in violation of the market access requirements for foreign investment under the PRC laws and regulations. However, the possibility that such entities will be deemed as foreign invested enterprise and subject to relevant restrictions in the future shall not be excluded. If VIEs fall within the definition of foreign investment entities, the Group's ability to use the contractual arrangements with its VIEs and the Group's ability to conduct business through the VIEs could be severely limited. The Group's ability to control the VIEs also depends on the power of attorney that the wholly owned subsidiary of the Group has to vote on all matters requiring shareholder approval in the VIEs. As noted above, the Group believes these power of attorney are legally enforceable but may not be as effective as direct equity ownership. In addition, if the Group's corporate structure and the contractual arrangements with the VIEs through which the Group conducts its business in the PRC were found to be in violation of any existing or future PRC laws and regulations, the Group's relevant PRC regulatory authorities could:

- revoke or refuse to grant or renew the Group's business and operating licenses;
- restrict or prohibit related party transactions between the wholly owned subsidiary of the Group and the VIE;

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**4. Certain risks and concentration (continued)**

**(a) PRC regulations (continued)**

- impose fines, confiscate income or other requirements which the Group may find difficult or impossible to comply with;
- require the Group to alter, discontinue or restrict its operations;
- restrict or prohibit the Group's ability to finance its operations, and;
- take other regulatory or enforcement actions against the Group that could be harmful to the Group's business.

The imposition of any of these restrictions or actions could result in a material adverse effect on the Group's ability to conduct its business. In such case, the Group may not be able to operate or control the VIEs, which may result in deconsolidation of the VIEs in the Group's consolidated financial statements. In the opinion of management, the likelihood for the Group to lose such ability is remote based on current facts and circumstances. The Group's operations depend on the VIEs to honor their contractual arrangements with the Group. These contractual arrangements are governed by PRC law and disputes arising out of these agreements are expected to be decided by arbitration in the PRC. The management believes that each of the contractual arrangements constitutes valid and legally binding obligations of each party to such contractual arrangements under PRC laws. However, the interpretation and implementation of the laws and regulations in the PRC and their application to an effect on the legality, binding effect and enforceability of contracts are subject to the discretion of competent PRC authorities, and therefore there is no assurance that relevant PRC authorities will take the same position as the Group herein in respect of the legality, binding effect and enforceability of each of the contractual arrangements. Meanwhile, since the PRC legal system continues to rapidly evolve, the interpretations of many laws, regulations and rules are not always uniform and enforcement of these laws, regulations and rules involve uncertainties, which may limit legal protections available to the Group to enforce the contractual arrangements should the VIEs or the nominee shareholders of the VIEs fail to perform their obligations under those arrangements.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

**4. Certain risks and concentration (continued)**

**(a) PRC regulations (continued)**

The following consolidated financial information of the Group's VIEs and VIEs' subsidiaries was included in the accompanying consolidated financial statements. For purposes of this presentation, activity within and between the VIEs and VIEs' subsidiaries have been eliminated, but transactions with other entities within the Group have been included without elimination.

	December 31,	
	2022	2023
	US\$	US\$
<b>Assets</b>		
<b>Current assets</b>		
Cash and cash equivalents	247,497	60,482
Restricted cash and cash equivalents	6,239	3,497
Short-term deposits	362,310	355,399
Short-term investments	36,108	8,471
Accounts receivable, net	5,830	1,649
Amounts due from Group companies	476,689	822,281
Amounts due from related parties	1,114	728
Prepayments and other current assets	77,838	91,773
<b>Total current assets</b>	<b>1,213,625</b>	<b>1,344,280</b>
<b>Non-current assets</b>		
Investments	355,261	400,654
Property and equipment, net	221,614	292,032
Land use rights, net	330,005	316,070
Intangible assets, net	49,016	40,436
Right of use asset, net	3,887	6,706
Other non-current assets	7,377	11,375
<b>Total non-current assets</b>	<b>967,160</b>	<b>1,067,273</b>
<b>Total assets</b>	<b>2,180,785</b>	<b>2,411,553</b>
<b>Liabilities</b>		
<b>Current liabilities</b>		
Accounts payable	29,586	46,833
Deferred revenue	14,328	8,873
Advances from customers	230	52
Income taxes payable	25,354	21,487
Accrued liabilities and other current liabilities	85,302	69,303
Amounts due to Group companies	67,698	285,047
Amounts due to related parties	128	3,541
Lease liabilities due within one year	2,232	2,447
Short-term loans	15,014	52,119
<b>Total current liabilities</b>	<b>239,872</b>	<b>489,702</b>
<b>Non-current liabilities</b>		
Lease liabilities	1,723	4,370
Deferred revenue	5,752	2,667
Deferred tax liabilities	12,253	10,440
Other non-current liabilities	436	-
<b>Total non-current liabilities</b>	<b>20,164</b>	<b>17,477</b>
<b>Total liabilities</b>	<b>260,036</b>	<b>507,179</b>

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

**4. Certain risks and concentration (continued)**

**(a) PRC regulations (continued)**

	<b>For the year ended December 31,</b>		
	<b>2021</b>	<b>2022</b>	<b>2023</b>
	US\$	US\$	US\$
Net revenues from Group companies	109,618	54,587	54,280
Net revenues from third parties	447,471	478,656	301,405
Total cost and operating expenses	(701,686)	(547,931)	(354,306)
Other items of the consolidated statements of comprehensive income	22,305	52,054	21,589
Net (loss) income from continuing operations	(122,292)	37,366	22,968

	<b>For the year ended December 31,</b>		
	<b>2021</b>	<b>2022</b>	<b>2023</b>
	US\$	US\$	US\$
Net cash provided by (used in) operating activities with Group companies	77,319	(47,155)	(31,888)
Net cash provided by operating activities with third parties	153,715	95,059	58,965
<b>Net cash provided by operating activities</b>	<b>231,034</b>	<b>47,904</b>	<b>27,077</b>
Net cash used in investing activities with Group companies	(35,559)	(194,107)	(129,111)
Net cash provided by (used in) investing activities with third parties	170,112	(42,399)	(82,360)
<b>Net cash provided by (used in) investing activities</b>	<b>134,553</b>	<b>(236,506)</b>	<b>(211,471)</b>
Net cash provided by financing activities with Group companies	5,378	32,753	517
Net cash (used in) provided by financing activities with third parties	(97,198)	754	(2,831)
<b>Net cash (used in) provided by financing activities</b>	<b>(91,820)</b>	<b>33,507</b>	<b>(2,314)</b>

**Transactions between the VIEs and other entities in the consolidated group**

For the years ended December 31, 2021, 2022 and 2023, the VIEs earned inter-company revenues from sales of software in the amounts of nil, US\$1,415 and US\$21,970, respectively. In addition, the VIEs recognized inter-company cost of revenues and operating expenses in the amounts of US\$80,402, US\$54,127 and US\$47,257 for the years ended December 31, 2021, 2022 and 2023, respectively for the purchase of software. The VIEs also recognized inter-company cost of revenues and operating expenses in the amounts of US\$35,899, US\$55,760 and US\$25,798 for the years ended December 31, 2021, 2022 and 2023, respectively for technical support services. All of these transactions have been eliminated in consolidation.

**Cash flows between the VIEs and other entities in the consolidated group**

For the years ended December 31, 2021, 2022 and 2023, cash paid by the VIEs to Group companies for the settlement of software transactions were US\$62,499, US\$52,878 and US\$41,070, respectively. For the years ended December 31, 2021, 2022 and 2023, cash paid by the VIEs to Group companies for the settlement of technical support fees were US\$52,119, US\$56,823 and US\$45,063, respectively. For the years ended December 31, 2021, 2022 and 2023, cash received by VIEs from Group companies were US\$129,440, US\$9,668 and US\$14,505, respectively, for the revenues earned from Group companies. All of these cash flows have been eliminated in consolidation.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**4. Certain risks and concentration (continued)**

**(b) Foreign exchange risk**

The Group's overseas operations and related investing and financing activities are denominated in US\$. The revenues and expenses of the Group's entities in the PRC are generally denominated in RMB and their assets and liabilities are denominated in RMB. The RMB is not freely convertible into foreign currencies. Remittances of foreign currencies into the PRC or remittances of RMB out of the PRC as well as exchange between RMB and foreign currencies require approval by foreign exchange administrative authorities and certain supporting documentation. The State Administration for Foreign Exchange, under the authority of the People's Bank of China, controls the conversion of RMB into other currencies.

**(c) Credit risk**

Assets that potentially expose the Group to credit risk primarily consist of cash and cash equivalents, restricted cash and cash equivalents, short-term deposits, restricted short-term deposits, short-term investments, accounts receivable, financing receivables, amounts due from related parties and prepayments and other current assets.

As of December 31, 2022 and 2023, substantially all of the Group's cash and cash equivalents, restricted cash and cash equivalents, short-term deposits, restricted short-term deposits and short-term investments were placed with the PRC and international financial institutions. Management chooses these institutions because of their reputations and track records for stability, and their known large cash reserves, and management periodically reviews these institutions' reputations, track records, and reported reserves. Management expects that any additional institutions that the Group uses for its cash and bank deposits will be chosen with similar criteria for soundness. Nevertheless under the PRC law, it is required that a commercial bank in the PRC that holds third party cash deposits should maintain a certain percentage of total customer deposits taken in a statutory reserve fund for protecting the depositors' rights over their interests in deposited money. PRC banks are subject to a series of risk control regulatory standards; PRC bank regulatory authorities are empowered to take over the operation and management of any PRC bank that faces a material credit crisis. The Group believes that it is not exposed to unusual risks as these financial institutions are either PRC banks or international banks with high credit quality. The Group had not experienced any losses on its deposits of cash and cash equivalents and term deposits during the years ended December 31, 2021, 2022 and 2023 and believes that its credit risk to be minimal.

The risk with respect to accounts receivable is mitigated by credit evaluations the Group performs on the payment platforms, game platforms, customers and the ongoing monitoring process of outstanding balances.

The Group is exposed to default risk on its financing receivables, which is fully provided for as disclosed in Note 10. The Group conducts credit evaluations of customers in finance business, either on an individual or collective basis. The Group also considers the value of collateral assets when assessing the collectability of certain financing receivables. Credit risk is controlled by the application of credit approvals, limits and monitoring procedures.

Amounts due from related parties, prepayments and other current assets are typically unsecured. In evaluating the collectability of the balance, the Group considers many factors, including the related parties and third parties' repayment history and their credit-worthiness. An allowance for doubtful accounts is made when collection of the full amount is no longer probable.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**5. Business combination**

**(a) Acquisition of Shopline Corporation Limited (“Shopline”)**

Shopline is a company that operates an e-commerce online platform, together with other ancillary services including logistics, payments and marketing, to enable and facilitate merchants to establish their e-commerce operations. Prior to this acquisition, the Company had an equity interest in Shopline and was accounted for using the equity method. On August 22, 2022, the Company announced that it has entered into a share subscription agreement with Shopline and the transaction was completed on September 6, 2022 and is accounted for as a business combination. Under the agreement, the Company subscribed for series B preferred shares of Shopline for an aggregate cash consideration of US\$182.9 million. The Company previously held interests in this acquiree before the acquisition and the fair value of the previously held equity interest is considered part of the consideration of this acquisition. After the completion of this acquisition, the Company has an effective shareholding of 70.4% in Shopline, net of the potential dilution impact of employee share options as referenced in Note 26(b).

The following table summarizes the components of the purchase consideration transferred based on the closing price of the Company’s common share as of the acquisition date:

	<u>As of acquisition date</u> US\$
Cash	182,892
Fair value of previously held equity interest in Shopline	440,692
Elimination of preexisting amounts due from Shopline	<u>76,226</u>
Total consideration	<u><u>699,810</u></u>

The amount of the preexisting amounts due from Shopline of US\$76,226 was included as part of the consideration, which was effectively eliminated upon the acquisition.

The results of operations since the acquisition dates of the acquiree was not significant to the Group’s consolidated results of operations.

In accordance with ASC 805, the Company’s previously held equity interest in Shopline was re-measured to fair value on the acquisition date, and a re-measurement gain of US\$440,692 was recognized as gain on fair value changes of investments.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS****(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)****5. Business combination (continued)****(a) Acquisition of Shopline Corporation Limited (“Shopline”) (continued)**

The acquisition was accounted for as a business combination. The Group made estimates and judgements in determining the fair value of the assets acquired and liabilities assumed with the assistance from an independent valuation firm. The consideration was allocated on the acquisition date as follows:

	<u>As of acquisition date</u> US\$
Net tangible assets acquired:	
-Cash and cash equivalents, restricted cash and cash equivalents and restricted short-term deposits	210,030
-Accounts receivables	12,840
-Right-of-use assets, net	12,192
-Prepayments and other current assets	27,286
-Property and equipment, net	2,474
Identifiable intangible assets acquired:	
-Trademark	144,000
-Software	298
-Domain names	254
Accrued liabilities and other liabilities	(113,928)
Lease liabilities	(12,230)
Deferred revenue	(20,336)
Deferred tax liabilities	(28,800)
Goodwill	708,471
Non-controlling interests	(222,741)
Mezzanine Equity	(20,000)
Total	<u>699,810</u>

The Company estimated the fair value of the acquired trademark using the relief from royalty method. The value is estimated as the present value of the after-tax cost savings at an appropriate discount rate. The Company’s determination of the fair value of the acquired trademark involved the use of estimates and assumptions related to revenue growth rates, royalty rates and discount rates. The estimated useful lives of the trademark is 10 years.

The fair value of the non-controlling interest was calculated after determination of an overall enterprise value for the Company. The Company, through a third-party valuation expert, determined the enterprise value using the Option Pricing Model (“OPM”) Backsolve approach under the market approach.

The goodwill was mainly attributable to intangible assets that cannot be recognized separately as identifiable assets under U.S. GAAP, and mainly comprised (a) the assembled work force and (b) the expected future growth, enhancing world-class user experiences and expansion in global markets as a result of the synergy resulting from the acquisition. The goodwill recognized is not expected to be deductible for income tax purpose.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS****(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)****5. Business combination (continued)****(a) Acquisition of Shopline (continued)***Pro forma information of the acquisition*

The following unaudited pro forma information summarizes the results of operations for the year ended December 31, 2021 and 2022 of the Company as if the acquisition had occurred on January 1, 2021. The unaudited pro forma information includes: (i) amortization associated with estimates for the acquired intangible assets and corresponding deferred tax liability; (ii) removal of the share of loss in JOYY's previously held interests in Shopline accounted for using equity method; (iii) removal of the remeasurement gain of JOYY's previously held interests in Shopline; (iv) elimination of transaction between Shopline and the Group; (v) allowance for doubtful accounts related to preexisting amounts due from Shopline, if any, and (vi) the associated tax impact on these unaudited pro forma adjustments. The following pro forma financial information is presented for informational purposes only and is not necessarily indicative of the results that would have occurred had the acquisition been completed on January 1, 2021, nor is it indicative of future operating results.

	<u>For the year ended December 31,</u>	
	<u>2021</u>	<u>2022</u>
	US\$	US\$
Pro forma net revenues	2,697,395	2,493,333
Pro forma net loss	(122,938)	(415,250)

**(b) Other acquisition**

During the second quarter 2021, the Company completed the acquisition of additional equity interests of an acquiree which is a global online platform operating on online for comics and novels whose major operations and users are outside of China. The consideration for this acquisition was settled by cash of US\$9.6 million and transfer of approximately 19% equity interests in a previously wholly owned subsidiary of the Company which operates a multiuser social networking platform outside of China, to the original shareholders the acquiree. The Company held 25% of equity interests in this acquiree before the acquisition and the fair value of the previously held equity interest is considered part of the consideration of the acquisition. Upon completion of the transaction, the Company's interest in the acquiree increased from 25% to 81% and started to consolidate the acquiree as a subsidiary with non-controlling interests.

The following table summarizes the components of the purchase consideration transferred based on the closing price of the Company's common share as of the acquisition date:

	<u>As of acquisition date</u>
	US\$
Cash	9,611
Fair value of subsidiary's common share issued	53,810
Fair value of previously held equity interest in the acquiree	27,716
Total consideration	<u>91,137</u>

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS****(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)****5. Business combination (continued)****(b) Other acquisition (continued)**

The acquisition was accounted for as a business combination. The Group made estimates and judgements in determining the fair value of the assets acquired and liabilities assumed with the assistance from an independent valuation firm. The consideration was allocated on the acquisition date as follows:

	<u>As of acquisition date</u>	<u>Amortization period</u>
	US\$	
Net tangible assets acquired:		
-Cash and cash equivalents	7,296	
-Accounts receivables	1,376	
-Other current assets	1,987	
-Property and equipment, net	142	
Identifiable intangible assets acquired:		
-Technology	11,917	6 years
-Trademark	11,839	6 years
-Customer relationships	903	3 years
Accounts payable	(2,268)	
Accrued liabilities and other liabilities	(1,579)	
Deferred tax liabilities	(4,069)	
Goodwill	84,925	
Non-controlling interests	(21,332)	
<b>Total</b>	<u>91,137</u>	

The Company estimated the fair value of acquired technology using the excess earnings method. The value is estimated as the present value of the revenues calculated at an appropriate discount rate. In terms of the fair value of the acquired trademark, the relief from royalty method was used. The value is estimated as the present value of the after-tax cost savings at an appropriate discount rate. The Company's determination of the fair values of acquired technology and trademark acquired involved the use of estimates and assumptions related to revenue growth rates, royalty rates, discount rates and attrition rates.

The goodwill was mainly attributable to intangible assets that cannot be recognized separately as identifiable assets under U.S. GAAP, and mainly comprised the assembled work force and the synergy resulting from the acquisition. The goodwill recognized is not expected to be deductible for income tax purpose.

The fair value of the non-controlling interest was calculated after determination of an overall enterprise value for the Company. The Company, through a third-party valuation expert, determined the enterprise value using income approach.

Pro forma information related to this acquisition has not been included on the basis of relative immateriality to consolidated financial results.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

**6. Cash and cash equivalents and restricted cash and cash equivalents**

Cash and cash equivalents represent cash on hand, demand deposits placed with banks or other financial institutions and all highly liquid investments with original maturities of three months or less. Cash and cash equivalents balance as of December 31, 2022 and 2023 primarily consist of the following currencies:

	December 31, 2022		December 31, 2023	
	Amount	US\$ equivalent	Amount	US\$ equivalent
US\$	863,452	863,452	846,754	846,754
RMB	2,064,300	296,399	1,100,216	155,339
Others	N/A	54,598	N/A	61,863
<b>Total</b>		<u>1,214,449</u>		<u>1,063,956</u>

As of December 31, 2022 and 2023, the Group's restricted cash and cash equivalents were US\$303,370 and US\$319,250, respectively. The restricted cash and cash equivalents primarily consists of amounts deposited and held in escrow account owned by the Group, which was a portion of the consideration received from Baidu, in accordance with the terms set forth in the agreement with Baidu to dispose YY Live business.

**7. Short-term deposits**

Short-term deposits represent time deposits placed with banks with original maturities between three months and one year. The term deposits balance as of December 31, 2022 and 2023 primarily consist of the following currencies:

	December 31, 2022		December 31, 2023	
	Amount	US\$ equivalent	Amount	US\$ equivalent
US\$	1,983,877	1,983,877	1,596,592	1,596,592
RMB	2,623,347	376,668	2,647,185	373,754
<b>Total</b>		<u>2,360,545</u>		<u>1,970,346</u>

**8. Restricted short-term deposits**

As of December 31, 2022, the Group's restricted short-term deposits were US\$47,741, which was mainly pledged as collateral for the banking facilities of US\$47 million.

As of December 31, 2023, the Group's restricted short-term deposits were US\$57,243, which was mainly pledged as collateral for the banking facilities of US\$85 million.

**9. Accounts receivable, net**

	December 31,	
	2022 US\$	2023 US\$
Accounts receivable, gross	138,597	150,793
Less: allowance for expected credit loss of receivables	(20,670)	(20,093)
<b>Accounts receivable, net</b>	<u>117,927</u>	<u>130,700</u>

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

**9. Accounts receivable, net (continued)**

The following table summarizes the details of the Group's allowance for expected credit losses:

	<b>For the year ended December 31,</b>		
	<b>2021</b>	<b>2022</b>	<b>2023</b>
	US\$	US\$	US\$
Balance at the beginning of the year	(7,387)	(12,426)	(20,670)
Additions charged to general and administrative expenses, net	(5,039)	(8,484)	(82)
Write-off during the year	—	240	659
<b>Balance at the end of the year</b>	<b><u>(12,426)</u></b>	<b><u>(20,670)</u></b>	<b><u>(20,093)</u></b>

**10. Financing receivables, net**

Financing receivables consist of the following:

	<b>December 31,</b>	
	<b>2022</b>	<b>2023</b>
	US\$	US\$
<b>Financing receivables, gross</b>		
Micro-credit personal loans	18,556	18,213
Less: allowance for expected credit loss on financing receivables	(18,556)	(18,213)
<b>Financing receivables, net</b>	<b><u>—</u></b>	<b><u>—</u></b>

Reversal of allowance for expected credit loss of US\$70, US\$45 and US\$33 was recognized in general and administrative expenses for the year ended December 31, 2021, 2022 and 2023, respectively.

*(1) Micro-credit personal loans*

Micro-credit personal loans provided by the Group are non-accrual financing receivables related to personal loans amounted to US\$18,556 and US\$18,213 as of December 31, 2022 and 2023, respectively, which were past due for over 1 year and not guaranteed. The Group has ceased to extend credit in the finance business since 2019.

Movement of allowance for expected credit loss on financing receivables (micro-credit personal loans only) is as follows:

	<b>For the year ended December 31,</b>	
	<b>2022</b>	<b>2023</b>
	US\$	US\$
Balance at the beginning of the year	(20,317)	(18,556)
Addition for the year	1,761	343
<b>Balance at the end of the year</b>	<b><u>(18,556)</u></b>	<b><u>(18,213)</u></b>

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS****(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)****10. Financing receivables, net (continued)***(2) Corporate loans*

A majority of the Group's corporate loan business was in the form of sale-and-leaseback arrangements, under which the Group purchases equipment from third party companies and lease back the equipment to the sellers. In 2019, one lessee was unable to repay the principal amount of approximately US\$2,416 due in January and was default. The Group has brought certain lawsuits against this lessee to the court, claiming the lessee to repay all the outstanding amount. Upon the date of the issuance of the consolidated financial statements for the year ended December 31, 2019, the court has passed the first instance judgment on all of these lawsuits, which supported the Group's claim and ordered the lessee to repay all the outstanding amounts due to the Group. Furthermore, the additional assets of the lessee or its related entity was pledged and preserved as collateral. Based on the Group's assessment on the lessee's finance condition and the recoverable amount from the collateral, the financial receivable cannot be fully recovered. As a result, an allowance for expected credit loss of US\$10,430 was recognized in general and administrative expenses for the year ended December 31, 2019 against the carrying value of the financing receivables. Based on the Group's assessment on the fair value of the pledged assets as of December 31, 2022 and 2023, no further impairment charge was recognized against the carrying value of the financing receivables for the year ended December 31, 2022 and 2023. The Group reclassified the amount due from this lessee from financing receivables to prepayments and other current assets in 2021 considering the fact that the original term of this receivable has ended by December 31, 2021 and the nature of this receivable has changed from financing receivables to other receivables as the expected means of settlement of the receivable has changed. Net amount of the receivable as of December 31, 2021 reclassified to prepayment and other current assets was US\$20,177, which is the difference between the gross amount of US\$30,607 and allowance of US\$10,430 as of December 31, 2021. The net receivable amounts of US\$18,355 and US\$17,975 as of the years ended December 31, 2022 and 2023 are disclosed in Note 11, respectively. The Group has ceased the corporate loan business during 2019.

**11. Prepayments and other current assets**

	<b>December 31,</b>	
	<b>2022</b>	<b>2023</b>
	US\$	US\$
Interest receivable	40,280	67,312
Value added taxes to be deducted	31,415	47,064
Receivables from payment platforms	20,210	27,882
Employee advances	2,386	2,146
Prepayments and deposits to vendors and content providers	4,105	8,388
Deposits	5,651	5,122
Amount due from a lessee of sale-and-leaseback arrangement - net (Note 10)	18,355	17,975
Net assets subject to disposal related to YY Live (Note 3)	38,194	38,194
Others	75,587	41,406
<b>Total</b>	<b>236,183</b>	<b>255,489</b>

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

**12. Investments**

	December 31,	
	2022 US\$	2023 US\$
Equity investments accounted for using the equity method (i)	458,463	322,701
Equity investments with readily determinable fair values (ii)	1,180	1,504
Equity investments without readily determinable fair values (iii)	179,462	156,419
Available-for-sale debt investments (iv)	21,299	63,918
<b>Total</b>	<b>660,404</b>	<b>544,542</b>

- (i) Investments have been accounted for under the equity method where the Group has significant influence over these investees and the investments are considered as in-substance common shares.

In 2022 and 2023, the Group acquired minority stakes in a number of privately-held entities with total consideration of US\$95,462 and US\$38,427, respectively. The decrease in investments in 2022 was mainly attributable to the other-than-temporary impairment loss of US\$417.2 million from Huya recognized in share of loss in equity method investments. The decrease in investments in 2023 as compared to 2022 was mainly attributable to the disposal of Huya. On April 28, 2023, the Company entered into the Share Transfer Agreement with Linen Investment Limited to sell its remaining shares of Huya for a cash consideration of approximately US\$219,886. Upon the closing of such share transfer, the Company ceased to hold any shares of Huya. The Company also deemed disposed of certain interest of Huya's equity interest as a result of the vesting of Huya's share-based awards in 2022. In 2022 and 2023, net loss of US\$5,477 and net income of US\$77,524 were recognized from the deemed disposal and disposal of Huya respectively.

The following tables set forth the summarized financial information of the Group's equity method investments:

	December 31,	
	2022 US\$	2023 US\$
Current assets	1,879,845	380,267
Non-current assets	1,060,160	1,074,993
Current liabilities	373,980	58,862
Non-current liabilities	33,173	16,199

	For the year ended December 31,		
	2021 US\$	2022 US\$	2023 US\$
Revenues	2,082,821	1,588,732	147,015
Gross profit	466,970	259,169	102,095
Net (loss) income	(81,953)	(103,729)	8,893
Net (loss) income attributable to the investees	(81,953)	(103,729)	8,893

- (ii) The Group does not have the ability to exercise significant influence over these investments. Therefore, it has been precluded from applying the equity method of accounting.

In 2022, the Group disposed an investment with readily determinable fair values for a cash consideration of US\$3,927. In 2023, the Group did not dispose of any investment with readily determinable fair values.

In 2021, 2022 and 2023, fair value loss of US\$32,773, fair value loss of US\$20,453 and fair value gain of US\$324 related to investments with readily determinable fair values were recognized in the consolidated statements of comprehensive income (Note 29), respectively.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**12. Investments (continued)**

- (iii) Equity securities without readily determinable fair values and over which the Company has neither significant influence nor control through investments in common stock or in-substance common stock.

In 2022 and 2023, the Group acquired minority preferred shares or ordinary shares of a number of privately-held entities with total consideration of US\$23,151 and US\$9,757, respectively. The ownership interests were less than 20% of the investees' total equities or the ownership interests redeemable upon condition. These equity investments are not considered as debt securities or equity securities that have readily determinable fair values. Accordingly the Company elected to account for these investments at cost less impairments, adjusted by observable price changes.

In 2022, the Group disposed certain investments without readily determinable fair values, with a consideration of US\$4,253 in total. In 2023, the Group did not dispose any investment without readily determinable fair values.

In 2021, fair value gain of US\$14,045 due to the observable price change, were recognized in gain on fair value changes of investments (Note 29). Out of the fair value gain of US\$14,045 for the year ended December 31, 2021, fair value gain of US\$1,339 was unrealized and fair value gain of US\$12,706 was realized. In 2022, fair value gain of US\$17,089 due to the observable price change, were recognized in gain on fair value changes of investments (Note 29). Out of the fair value gain of US\$17,089 for the year ended December 31, 2022, fair value gain of US\$12,968 was unrealized and fair value gain of US\$4,121 was realized. In 2023, fair value gain of US\$11,179 due to the observable price change, were recognized in gain on fair value changes of investments (Note 29). Out of the fair value gain of US\$11,179 for the year ended December 31, 2023, fair value gain of US\$11,179 was unrealized and fair value gain of nil was realized.

The Group assesses the existence of indicators for other-than-temporary impairment of the investments by considering factors including, but not limited to, current economic and market conditions, the operating performance of the entities including current earnings trends and other entity-specific information. In 2021, 2022 and 2023, based on the Group's assessment, an impairment charge of US\$93,632, nil and nil was recognized in general and administrative expenses, respectively, against the carrying value of the investments due to significant deterioration in earnings or unexpected changes in business prospects of the investees as compared to the original investment plans.

- (iv) Available-for-sale debt investments are convertible debt instruments issued by private companies and investments in preferred shares that are redeemable at the Group's option, which are measured at fair value as disclosed in Note 29(a).

**13. Property and equipment, net**

Property and equipment consist of the following:

	December 31,	
	2022	2023
	US\$	US\$
<b>Gross carrying amount</b>		
Servers, computers and equipment	272,809	280,619
Buildings	144,678	270,423
Construction in progress	163,199	111,573
Decoration of buildings	14,825	14,578
Leasehold improvements	7,318	5,683
Motor vehicles	7,915	17,603
Furniture, fixture and office equipment	7,362	4,810
Total of gross carrying amount	618,106	705,289
<b>Less: accumulated depreciation</b>	(274,905)	(314,608)
<b>Property and equipment, net</b>	<b>343,201</b>	<b>390,681</b>

Depreciation expense for the years ended December 31, 2021, 2022 and 2023 were US\$108,686, US\$83,396 and US\$46,576, respectively.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

**14. Land use rights, net**

Land use rights consist of the following:

	December 31,	
	2022	2023
	US\$	US\$
<b>Gross carrying amount</b>	380,797	374,447
<b>Less: accumulated amortization</b>	(50,792)	(58,377)
<b>Land use rights, net</b>	<u>330,005</u>	<u>316,070</u>

Amortization expense for the years ended December 31, 2021, 2022 and 2023 were US\$8,607, US\$9,053 and US\$8,473, respectively.

The estimated amortization expenses for each of the following five years are as follows:

	Amortization expense of land use rights
	US\$
2024	8,432
2025	8,432
2026	8,432
2027	8,432
2028	8,432

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS****(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)****15. Intangible assets, net**

The following table summarizes the Group's intangible assets:

	<b>December 31,</b>	
	<b>2022</b>	<b>2023</b>
	US\$	US\$
<b>Gross carrying amount</b>		
Trademark	515,704	515,671
Customer relationships	154,830	154,819
Non-compete agreement	12,100	12,100
Software	9,071	9,431
Operating rights	6,641	6,530
License	9,108	8,956
Technology	14,513	14,491
Domain names	1,782	1,778
Others	1,405	1,404
Total of gross carrying amount	<u>725,154</u>	<u>725,180</u>
<b>Less: accumulated amortization</b>		
Trademark	(145,554)	(197,722)
Customer relationships	(143,500)	(152,894)
Non-compete agreement	(12,100)	(12,100)
Software	(8,426)	(8,824)
Operating rights	(6,539)	(6,430)
License	(1,872)	(2,438)
Technology	(4,834)	(6,801)
Domain names	(791)	(914)
Others	(397)	(537)
Total accumulated amortization	<u>(324,013)</u>	<u>(388,660)</u>
<b>Less: accumulated impairment</b>	<u>(2,841)</u>	<u>(2,805)</u>
<b>Intangible assets, net</b>	<u>398,300</u>	<u>333,715</u>

Amortization expense for the years ended December 31, 2021, 2022 and 2023 were US\$58,626, US\$56,151 and US\$64,910 respectively.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

**15. Intangible assets, net (continued)**

The estimated amortization expenses for each of the following five years are as follows:

	<u>Amortization expense of intangible assets</u> US\$
2024	56,898
2025	55,136
2026	55,091
2027	52,757
2028	51,085

The weighted average amortization periods of intangible assets as of December 31, 2022 and 2023 are as below:

	<u>December 31,</u>	
	<u>2022</u>	<u>2023</u>
Trademark	10 years	10 years
Customer relationships	3 years	5 years
License	15 years	15 years
Operating rights	2 years	2 years
Software	3 years	4 years
Domain names	15 years	15 years
Technology	6 years	6 years
Others	10 years	10 years

**16. Goodwill**

The changes in the carrying amount of goodwill for the years ended December 31, 2022 and 2023 are as follows:

	<u>All other</u> US\$	<u>BIGO</u> US\$	<u>Total</u> US\$
Balance as of December 31, 2021	104,042	1,854,221	1,958,263
Increase in goodwill related to acquisition (ii)	708,471	—	708,471
Impairment (i)	(14,830)	—	(14,830)
Foreign currency translation adjustments	(2,597)	—	(2,597)
Balance as of December 31, 2022	<u>795,086</u>	<u>1,854,221</u>	<u>2,649,307</u>
Foreign currency translation adjustments	(26)	—	(26)
Balance as of December 31, 2023	<u><u>795,060</u></u>	<u><u>1,854,221</u></u>	<u><u>2,649,281</u></u>

- (i) The Group performs its annual goodwill impairment test of each reporting unit in the fourth quarter, or more frequently, if certain events or circumstances warrant. Events or changes in circumstances which might indicate potential impairment in goodwill include the entity-specific factors, including, but not limited to, stock price volatility, market capitalization relative to net book value, and projected revenue, market growth and operating results. The estimated fair value of each reporting unit is determined using either an income approach or a market approach, when appropriate.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS****(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)****16. Goodwill (continued)**

The Group performed a goodwill impairment analysis in the fourth quarter of 2021, 2022 and 2023. When determining the fair value of the Bigo reporting unit, the Group used the income approach. The income approach determines fair value based on discounted cash flow model derived from the reporting units' long-term forecasts which included a five-year future cash flow projection and an estimated terminal value for the impairment analysis. The discounted cash flow model included a number of significant unobservable inputs. Key assumptions used to determine the estimated fair value include: (a) the future cash flows forecasts including revenue growth, (b) an estimated terminal value using a terminal year long-term future growth rate determined based on the growth prospects of the reporting unit; and (c) a discount rate that reflects the weighted-average cost of capital adjusted for the relevant risk associated with each reporting unit's operations and the uncertainty inherent in the Group's internally developed forecasts. Based on the Group's assessment, the fair value of Bigo reporting unit exceeded its related carrying value by approximately 10%, 4% and 3% at December 31, 2021, 2022 and 2023, respectively. When determining the fair value of the Shopline reporting unit, the Group used the market approach, which considered certain market multiples of revenue of comparable companies engaged in a similar operation and economic characteristics. A key assumption used to determine the estimated fair value included the selection of appropriate market multiples. Based on the Group's assessment, the fair value of the Shopline reporting unit exceeded its related carrying value by approximately 1% at December 31, 2023. Management assessed the reasonableness of its reporting unit the fair value determinations after giving due consideration to the Group's net book value and market capitalization.

In the annual goodwill impairment assessment, the Company concluded that the carrying amounts of a reporting unit exceeded its respective fair values and recorded impairment losses of nil, US\$14,830 and nil during the years ended December 31, 2021, 2022 and 2023, respectively.

(ii) The increase in goodwill in 2022 was related to the acquisition in Note 5.

**17. Deferred revenue**

	<b>December 31,</b>	
	<b>2022</b>	<b>2023</b>
	US\$	US\$
<b>Deferred revenue, current</b>		
Live streaming	63,303	56,817
Others	22,711	16,856
Total current deferred revenue	<u>86,014</u>	<u>73,673</u>
<b>Deferred revenue, non-current</b>		
Live streaming	9,430	5,516
Others	335	7,416
Total non-current deferred revenue	<u>9,765</u>	<u>12,932</u>

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

**18. Accrued liabilities and other current liabilities**

	December 31,	
	2022 US\$	2023 US\$
Revenue sharing fees and content costs	106,770	105,961
Salaries and welfare	85,361	82,768
Marketing and promotion expenses	58,600	61,197
Value added taxes and other taxes payable	160,257	199,170
Bandwidth costs	20,171	18,300
Consideration received related to disposal of YY Live (Note 3)	1,861,299	1,859,699
Others	67,544	54,094
<b>Total</b>	<b>2,360,002</b>	<b>2,381,189</b>

**19. Short-term loans**

	December 31,	
	2022 US\$	2023 US\$
Short-term loans	37,270	52,119

The Group entered into several agreements with banks, pursuant to which the Group borrowed loans with total principal amount of US\$52 million within a banking facility of US\$85 million in 2023. These loans were all with a maturity of less than one year and the annual interest rates ranged from 1.91% to 3.00%. Short-term deposits of US\$57 million were pledged as collateral for the banking facilities, which were classified as restricted short-term deposits. These loans do not include any financial or restrictive covenants.

**20. Convertible bonds**

	December 31,	
	2022 US\$	2023 US\$
<b>Current</b>		
2025 Convertible Senior Notes	435,087	—
2026 Convertible Senior Notes	—	405,603
	<u>435,087</u>	<u>405,603</u>
<b>Non-current</b>		
2026 Convertible Senior Notes	401,173	—
	<u>401,173</u>	<u>—</u>

On June 19, 2019, the Company issued Convertible Senior Notes due 2025 with principal amount of US\$500 million (the “Notes due 2025”) and Convertible Senior Notes due 2026 with principal amount of US\$500 million (the “Notes due 2026”) (collective the “Notes”). The Notes due 2025 and Notes due 2026 bear interest at a coupon rate of 0.75% and 1.375% per year, respectively, and both of them are payable semi-annually in arrears on June 15 and December 15 of each year, beginning on December 15, 2019. The Notes due 2025 will mature on June 15, 2025 and the Notes due 2026 will mature on June 15, 2026. The Notes due 2025 and the Notes due 2026 may be converted, under certain circumstances, based on an initial conversion rate of 10.4271 ADS per US\$1,000 principal amount of the Notes (equivalent to an initial conversion price of approximately US\$95.9 per ADS).

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**20. Convertible bonds (continued)**

The Notes due 2025 and Notes due 2026 are not redeemable prior to their maturity date, except that the holders of the Notes (the “Holders”) have a noncontingent option to require the Company to repurchase for cash all or any portion of their Notes on June 15, 2023 and June 15, 2024, respectively. The repurchase price will equal 100% of the principal amount of the Notes to be repurchased plus accrued and unpaid interest, if any, to, but excluding, the repurchase date.

Upon conversion, the Company may deliver ADS, cash, or a combination of ADS and cash at the option of the Company itself. Therefore, the Notes due 2025 and Notes due 2026 contains cash conversion features, which was an equity component and need to be bifurcated from the debt component of the Notes. Determination of the carrying amount of the debt component was based on the fair value of a similar debt instrument excluding the embedded conversion feature, by using discounted cash flow method. The equity component related to conversion features were recognized by ascribing the difference between the proceeds and the fair value of the debt component in Additional paid-in capital.

The net proceeds to the Company from the issuance of the Notes due 2025 were US\$491 million. Debt issuance costs of the Notes due 2025 were US\$9 million. Out of the debt issuance costs, US\$7 million was amortized to interest expense from the issuance date (June 19, 2019) to the first put date of the Notes (June 15, 2023) and US\$2 million was allocated as deduction to the equity component. The net proceeds to the Company from the issuance of the Notes due 2026 were US\$491 million. Debt issuance costs of the Notes due 2026 were US\$9 million. Out of the debt issuance costs, US\$6 million was amortized to interest expense from the issuance date (June 19, 2019) to the first put date of the Notes (June 15, 2024) and US\$3 million was allocated as deduction to the equity component.

The value of Notes due 2025 and Notes due 2026 is initially measured by the cash received after deducting the issuance cost and the bifurcation of the conversion features. The Notes due 2025 and Notes due 2026 are subsequently stated at amortized cost. The difference between the principal amount of the Notes due 2025 and Notes due 2026 and the amount of the proceeds allocated to the debt component plus the issuance costs are regarded as a debt discount, which is subsequently amortized through interest expense over the Notes due 2025 and Notes due 2026’s expected life using the interest method, respectively.

On January 1, 2021, the Company early adopted ASU 2020-06, “Accounting for Convertible Instruments and Contracts in an Entity’s Own Equity” using modified-retrospective transition approach. Pursuant to ASU 2020-06, the embedded conversion features no longer are separated from the host contract for convertible instruments with conversion features that are not required to be accounted for as derivatives under Topic 815, Derivatives and Hedging, or that do not result in substantial premiums accounted for as paid-in capital. Consequently, a convertible debt instrument will be accounted for as a single liability measured at its amortized cost as long as no other features require bifurcation and recognition as derivatives. Following the adoption of this guidance, the amount previously allocated to additional paid-in capital was reclassified as a liability and a cumulative effect adjustment of US\$86.7 million was credited to retained earnings as of January 1, 2021.

During 2022, the Company recognized a net gain on extinguishment of debt of US\$7.1 million net of the write-off of associated unamortized deferred loan costs through repayment of US\$29.7 million for Notes due 2025 at a cost of US\$27.8 million and US\$60.9 million for Notes due 2026 at a cost of US\$55.3 million respectively.

During 2023, the repayment amount related to the Notes due 2025 was US\$432million and it has been fully repaid.

As of December 31,2022 and 2023, US\$401.2 million and nil have been accounted for as the value of the convertible bonds in non-current liabilities. Interest expense related to the Notes due 2025 and Notes due 2026 recognized during the years ended December 31, 2022 and 2023 was US\$2,448 and US\$1,583 respectively.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

**20. Convertible bonds (continued)**

Concurrently with the issuance of the Notes, the Company purchased a capped call option (“Purchased Call Option”) in the amount of US\$77,000, in order to mitigate the potential future economic dilution associated with the conversion of the Notes and to increase the initial conversion price to US\$127.9 per ADS. Counterparty agreed to sell to the Company up to approximately 10.4 million ADS, which is the number of ADS initially issuable upon conversion of the Notes in full, at a price of US\$95.9 per ADS. The Purchased Call Option will be settled in ADSs and will terminate upon the maturity date of the Notes. Settlement of the Purchased Call Option in ADSs, based on the number of ADSs issued upon conversion of the Notes, on the expiration date would result in the Company receiving shares equivalent to the number of shares issuable by the Company upon conversion of the Notes. In accordance with ASC 815-10-15-83, the Purchased Call Option meets the definition of a derivative instrument. However, the scope exception in accordance with ASC 815-10-15-74 applies to the Purchased Call Option as it is indexed to its own stock, and the Purchased Call Option meets the requirements of ASC 815 and would be classified in stockholders’ equity, therefore, the cost paid for Purchased Call Option was accounted for within stockholders’ equity, and subsequent changes in fair value will not be recorded. During 2023, the Company entered into agreements to terminate the capped call transactions and the cash received of US\$7,775 was recorded in additional paid-in capital accordingly.

**21. Cost of revenues**

	For the year ended December 31,		
	2021	2022	2023
	US\$	US\$	US\$
Revenue sharing fees and content costs	1,158,435	1,020,174	945,149
Payment handling costs	212,655	165,421	137,989
Bandwidth costs	96,536	77,496	79,718
Salary and welfare	116,679	87,629	84,427
Depreciation and amortization	87,339	70,666	36,753
Technical service fee	55,874	63,328	60,537
Share-based compensation	8,089	8,185	3,575
Other costs	45,543	66,489	106,694
<b>Total</b>	<b>1,781,150</b>	<b>1,559,388</b>	<b>1,454,842</b>

**22. Other income**

	For the year ended December 31,		
	2021	2022	2023
	US\$	US\$	US\$
Government grants	16,947	11,534	7,379
Others	3,429	5,971	2,326
<b>Total</b>	<b>20,376</b>	<b>17,505</b>	<b>9,705</b>

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**23. Income tax**

(i) Cayman Islands

Under the current tax laws of Cayman Islands, the Company and its subsidiaries are not subject to tax on income or capital gains. Besides, upon payment of dividends by the Company to its shareholders, no Cayman Islands withholding tax will be imposed.

(ii) BVI

Duowan BVI is exempted from income tax on its foreign-derived income in the BVI.

(iii) Hong Kong profits tax

Under the current Hong Kong Inland Revenue Ordinance, the subsidiaries of the Group in Hong Kong are subject to 16.5% Hong Kong profit tax on its taxable income generated from operations in Hong Kong. Additionally, payments of dividends by the subsidiary incorporated in Hong Kong are not subject to any Hong Kong withholding tax.

(iv) Singapore

The income tax provision of the Group in respect of its international operations in Singapore was calculated at the tax rate of 17% on the assessable profits, based on the existing legislation, interpretations and practices in respect thereof.

According to the Development and Expansion Incentive (the “Incentive”) pursuant to the provisions of Part IIIB of the Economic Expansion Incentives (Relief from Income Tax) Act, Chapter 86, corporations engaging in new high-value-added projects, expanding or upgrading their operations, or undertaking incremental activities after their pioneer period may apply for their profits to be taxed at a reduced rate of not less than 5% for an initial period of up to ten years. The total tax relief period for each qualifying project or activity is subject to a maximum of 40 years (inclusive of the post-pioneer relief period previously granted, if applicable).

Bigo Singapore applied for the Incentive and received approval in October 2018 and started to enjoy the beneficial tax rate of 5% as the Incentive for the years 2018 through 2022. Bigo Singapore applied for the renewal of Incentive qualification and received approval in December 2022 and is entitled to enjoy the beneficial tax rate from 2023 to 2027. Other Singapore entities were subject to 17% income tax for the periods reported.

(v) Mainland China

The Company’s subsidiaries and VIEs in Mainland China are governed by the Enterprise Income Tax Law (“EIT Law”), which became effective on January 1, 2008. Pursuant to the EIT Law and its implementation rules, enterprises in China are generally subject to tax at a statutory rate of 25%. Certified High and New Technology Enterprises (“HNTE”) are entitled to a favorable tax rate of 15%, but need to re-apply every three years. During this three-year period, an HNTE must conduct a qualification self-review each year to ensure it meets the HNTE criteria and is eligible for the 15% preferential tax rate for that year. If an HNTE fails to meet the criteria for qualification in any year, the enterprise cannot enjoy the preferential tax rate in that year, and must instead use the regular 25% EIT rate.

Certain PRC subsidiaries and VIEs, including Guangzhou Huanju Shidai, Guangzhou BaiGuoYuan and BaiGuoYuan Technology, etc. are qualified HNTEs and enjoy a reduced tax rate of 15% for the years presented. An entity could re-apply for the HNTE certificate when the prior certificate expires. Historically, most of the Company’s subsidiaries and VIEs successfully re-applied for the certificates when the prior ones expired.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS****(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)****23. Income tax (continued)****(v) Mainland China (continued)**

According to a policy promulgated by the State Tax Bureau of the PRC and effective from 2008 onwards, enterprises engaged in research and development activities are entitled to claim an additional tax deduction amounting to 50% of the qualified research and development expenses incurred in determining its tax assessable profits for that year. The additional tax deducting amount of the qualified research and development expenses have been increased from 50% to 75%, effective from 2018 onwards, according to a new tax incentives policy promulgated by the State Tax Bureau of the PRC in September 2018 (“Super Deduction”). The additional tax deducting amount of the qualified research and development expenses have been increased from 75% to 100%, effective from 2023 onwards.

Qualified subsidiaries and VIEs of the Group claimed the Super Deduction in ascertaining the tax assessable profits for the periods reported.

The EIT Law also imposes a withholding income tax of 10% on dividends distributed by an Foreign Invested Enterprise (“FIE”) to its immediate holding company outside of China, if such immediate holding company is considered as a non-resident enterprise without any establishment or place within China or if the received dividends have no connection with the establishment or place of such immediate holding company within China, unless such immediate holding company’s jurisdiction of incorporation has a tax treaty with China that provides for a different withholding arrangement. The Cayman Islands, where the Company incorporated, does not have such tax treaty with China. According to the arrangement between the Mainland China and Hong Kong Special Administrative Region on the Avoidance of Double Taxation and Prevention of Fiscal Evasion in August 2006, dividends paid by an FIE in China to its immediate holding company in Hong Kong will be subject to withholding tax at a rate of no more than 5% (if the foreign investor owns directly at least 25% of the shares of the FIE). In accordance with accounting guidance, all undistributed earnings are presumed to be transferred to the parent company and are subject to the withholding taxes. All FIEs are subject to the withholding tax from January 1, 2008. The presumption may be overcome if the Group has sufficient evidence to demonstrate that the undistributed dividends will be re-invested and the remittance of the dividends will be postponed indefinitely.

Aggregate undistributed earnings and reserves of the Group entities located in the Mainland China that are available for distribution to the Company as of December 31, 2022 and 2023 are approximately US\$2,385,325 and US\$2,139,085, respectively.

In 2022, the Group determined to cause one of its PRC subsidiaries, Guangzhou Huanju Shidai, to declare and distribute a cash dividend of part of its stand-alone 2020 earnings, amounted to US\$110,000, to its direct oversea parent company, Duowan BVI. As a result, Guangzhou Huanju Shidai paid a withholding tax in the amount of US\$11,000 in 2022.

The Group has a plan to indefinitely reinvest its aggregate undistributed earnings and reserves and any future earnings in the PRC for use in the operation. Accordingly, no deferred tax liability on 10% withholding tax of aggregate undistributed earnings and reserves of the Company’s subsidiaries located in the PRC has been accrued that would be payable upon the distribution of those amounts to the Company as of December 31, 2022 and 2023.

*Composition of income tax expense*

The current and deferred portions of income tax expense included in the consolidated statements of comprehensive income are as follows:

	<b>For the year ended December 31,</b>		
	<b>2021</b>	<b>2022</b>	<b>2023</b>
	US\$	US\$	US\$
Current income tax expenses	(35,550)	(36,510)	(30,664)
Deferred income tax benefit	9,805	1,935	11,808
<b>Income tax expenses</b>	<b>(25,745)</b>	<b>(34,575)</b>	<b>(18,856)</b>

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**23. Income tax (continued)**

(v) Mainland China (continued)

*Composition of income tax expense (continued)*

The company records annual income tax with regard to a number of tax jurisdictions, including primarily Singapore and Mainland China.

*Reconciliation of the differences between statutory tax rate and the effective tax rate*

The reconciliation of total tax expense computed by applying the respective statutory income tax rate to pre-tax income is as follows:

	<u>2021</u>	<u>2022</u>	<u>2023</u>
Singapore statutory income tax rate (*)	17.0 %	17.0 %	17.0 %
Effect of tax holiday and preferential tax benefit	20.9 %	(5.3)%	(7.0)%
Effect of different tax rates available to different jurisdictions	47.6 %	(9.5)%	(19.5)%
Permanent differences (i)	(66.3)%	6.8 %	14.9 %
Change in valuation allowance	(95.2)%	0.8 %	10.1 %
Effect of Super Deduction available to the Group	42.8 %	(4.4)%	(9.0)%
Effective income tax rate	<u>(33.2)%</u>	<u>5.4 %</u>	<u>6.5 %</u>

\*: As a majority of the Group's businesses is subject to Singapore corporate tax rate, the reconciliation of tax expenses begins at Singapore statutory income tax rate.

(i) Permanent differences mainly arise from expenses not deductible for tax purposes including primarily share-based compensation costs and expenses incurred by subsidiaries and VIEs.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

**23. Income tax (continued)**

*Deferred tax assets and liabilities*

Deferred taxes are measured using the enacted tax rates for the periods in which they are expected to be reversed. The tax effects of temporary differences that give rise to the deferred tax asset balances as of December 31, 2022 and 2023 are as follows:

	<b>December 31,</b>	
	<b>2022</b>	<b>2023</b>
	US\$	US\$
<b>Deferred tax assets:</b>		
Tax loss carried forward	197,651	193,219
Allowance for expected credit loss of receivable, accrued expense and others not currently deductible for tax purposes	37,991	35,457
Deferred revenue	2,708	1,609
Impairment of investment	4,937	2,813
Others	4,350	(22)
Valuation allowance (i)	(242,051)	(224,130)
Deferred tax assets, net	<u>5,586</u>	<u>8,946</u>
<b>Deferred tax liabilities:</b>		
Related to the fair value changes of investments	10,446	30,724
Related to acquired intangible assets	54,774	31,053
Others	4,628	1,124
	<u>69,848</u>	<u>62,901</u>
<b>Deferred tax liabilities</b>		
Classification in the consolidated balance sheets:		
Deferred tax assets, net	—	—
Deferred tax liabilities	64,262	53,955

- (i) Valuation allowance is provided against deferred tax assets when the Group determines that it is more likely than not that the deferred tax assets will not be utilized in the future. In making such determination, the Group considered factors including future taxable income exclusive of reversing temporary differences and tax loss carry forwards. Valuation allowance was mainly provided for net operating loss carry forwards because it was more likely than not that such deferred tax assets would not be realized based on the Group's estimate of its future taxable income. If events occur in the future that allow the Group to realize more of its deferred income tax than the presently recorded amounts, an adjustment to the valuation allowances will result in a decrease in tax expense when those events occur.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS****(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)****23. Income tax (continued)***Deferred tax assets and liabilities (continued)***Movement of valuation allowance**

	For the year ended December 31,		
	2021 US\$	2022 US\$	2023 US\$
Balance at beginning of the year	(150,252)	(213,688)	(242,051)
Additions	(119,999)	(58,968)	(31,733)
Reversals	56,563	30,605	49,654
Balance at end of the year	<u>(213,688)</u>	<u>(242,051)</u>	<u>(224,130)</u>

*Tax loss carry forwards*

As of December 31, 2023, total tax loss carry forwards of the Company's subsidiaries and VIEs in the PRC amounted to US\$716,957, which were mainly generated by non-HNTEs. The tax losses in PRC can be carried forward for five years to offset future taxable profit, and the period was extended to 10 years for entities qualified as HNTEs. The tax losses of entities in the PRC will expire from 2024 to 2028, if not utilized except for those arose from HNTEs which will expired during the period from 2024 to 2033. The accumulated tax losses of subsidiaries incorporated in Hong Kong, Singapore and other countries, subject to the agreement of the relevant tax authorities, of US\$26,754, US\$353,835 and US\$114,006, respectively, are allowed to be carried forward to offset against future taxable profits. Such carry forward of tax losses in Hong Kong and Singapore have no time limit.

In accordance with Singapore Tax Administration Law, the Singapore tax authorities generally have up to four years to claw back underpaid tax if the year of assessment is 2008 onwards. Accordingly, tax filings of the Group's Singapore subsidiaries for tax years 2020 through 2023 remain subject to the review by the relevant Singapore tax authorities. There were no ongoing tax examinations as of December 31, 2023 by Singapore tax authorities.

In accordance with PRC Tax Administration Law on the Levying and Collection of Taxes, the PRC tax authorities generally have up to five years to claw back underpaid tax plus penalties and interest for PRC entities' tax filings. Accordingly, tax filings of the Group's PRC subsidiaries and VIEs for tax years 2019 through 2023 remain subject to the review by the relevant PRC tax authorities. There were no ongoing tax examinations as of December 31, 2023 by PRC tax authorities.

**24. Mezzanine equity**

In 2018, a subsidiary of the Group issued 500,000,000 shares of redeemable convertible preferred shares for cash consideration of US\$50,000 to certain third-party investors. The Group classifies the redeemable convertible preferred shares as mezzanine equity and records accretion of redemption value in accordance with ASC 480-10. The Group used the interest method for the changes of redemption value over the period from the date of issuance to the earliest redemption date of the non-controlling interests. In September 2023, the company repurchase the redeemable convertible preferred shares. The Company's mezzanine equity balance was reduced by the carrying value of the preferred shares, and the difference between the agreed settlement amount between all parties of US\$22 million and the carrying value of US\$74.6 million was recorded in the statement of comprehensive income. Accretion of redeemable convertible preferred shares to redemption value of US\$5,000, US\$5,000 was recognized for the years ended December 31, 2021 and 2022, respectively. Gain on repurchase of redeemable convertible preferred shares of a subsidiary of US\$52,583 was recognized for the year ended December 31, 2023.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**25. Common shares and treasury shares**

During the year ended December 31, 2021, 3,631,640 Class A common shares were issued for the exercised share options, vested restricted shares and restricted share. In addition, 1,442,020 Class A common shares were transferred out from the treasury shares pool and issued for vested restricted share units during the year ended December 31, 2021. The Company also repurchased an aggregate of 6,515,488 ADSs, representing 130,309,760 Class A common shares at an average price of US\$60.3154 per ADS or US\$3.0158 per Class A common share, for aggregate consideration of US\$393.0 million. Since the shares repurchased have not been cancelled, the excess of repurchase price over par value was recorded as treasury shares upon the repurchase date.

As of December 31, 2021, 10,000,000,000 Class A common shares and 1,000,000,000 Class B common shares had been authorized, 1,317,840,464 Class A common shares and 326,509,555 Class B common shares had been issued, 1,146,336,305 Class A common shares and 326,509,555 Class B common shares were outstanding, respectively.

On September 9, 2021, the Company's board of directors approved a new share repurchase plan (the "September 2021 Share Repurchase Plan"), pursuant to which the Company may repurchase up to US\$200 million of the Company's outstanding ADSs or common shares over the next 12 months. On November 16, 2021, the Company's board of directors further approved an additional share repurchase plan (the "November 2021 Share Repurchase Plan"), pursuant to which the Company may repurchase up to US\$1 billion of the Company's outstanding ADSs or common shares over the next 12 months. As of December 31, 2021, the Company had repurchased approximately US\$235.7 million of its shares.

During the year ended December 31, 2022, 780,263 Class A common shares were issued for the exercised share options, vested restricted shares and restricted share. In addition, 3,567,640 Class A common shares were transferred out from the treasury shares pool and issued for vested restricted share units during the year ended December 31, 2022. The Company also repurchased an aggregate of 4,225,359 ADSs, representing 84,507,180 Class A common shares at an average price of US\$32.6786 per ADS or US\$1.6339 per Class A common share, for aggregate consideration of US\$138.1 million. Since the shares repurchased have not been cancelled, the excess of repurchase price over par value was recorded as treasury shares upon the repurchase date.

As of December 31, 2022, 10,000,000,000 Class A common shares and 1,000,000,000 Class B common shares had been authorized, 1,317,840,464 Class A common shares and 326,509,555 Class B common shares had been issued, 1,066,177,028 Class A common shares and 326,509,555 Class B common shares were outstanding, respectively.

During the year ended December 31, 2023, 3,471 Class A common shares were issued for the exercised share options, vested restricted shares and restricted share. In addition, 7,240,060 Class A common shares were transferred out from the treasury shares pool and issued for vested restricted share units during the year ended December 31, 2023. The Company also repurchased an aggregate of 9,128,846 ADSs, representing 182,576,920 Class A common shares at an average price of US\$29.9584 per ADS or US\$1.4979 per Class A common share, for aggregate consideration of US\$273.5 million. Since the shares repurchased have not been cancelled, the excess of repurchase price over par value was recorded as treasury shares upon the repurchase date.

As of December 31, 2023, 10,000,000,000 Class A common shares and 1,000,000,000 Class B common shares had been authorized, 1,317,840,464 Class A common shares and 326,509,555 Class B common shares had been issued, 890,843,639 Class A common shares and 326,509,555 Class B common shares were outstanding, respectively.

In November 2022, the Company's board of directors authorized the continued usage of the unutilized quota under the November 2021 Share Repurchase Plan, which amounted to US\$800 million then, for another 12-month period beginning from the end of November 2022. In November 2023, the Company's board of directors authorized the renewal and continued usage of the unutilized quota under the pre-existing share repurchase program of US\$530 million, which would originally expire in late November 2023, for another 12-month period commencing from the date hereof. In the full year of 2023 the Company had repurchased approximately US\$273.5 million of its shares.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

**26. Share-based compensation**

**(a) JOYY’s share-based awards**

**(i) Restricted Share Units**

On September 16, 2011, the board of directors of the Company approved the 2011 Share Incentive Scheme which include share options, restricted share units and restricted shares. In October 2012, the board of directors of the Company resolved that the maximum aggregate number of Class A common shares which may be issued pursuant to all awards under the 2011 Share Incentive Scheme shall be 43,000,000 plus an annual increase of 20,000,000 on the first day of each fiscal year, or such lesser amount of Class A common shares as determined by the board of directors of the Company.

In September 2021, the board of directors of the Company amended and restated the 2011 Share Incentive Scheme (“Amended and Restated 2011 Share Incentive Scheme”), pursuant to which the Company replaced the 2011 Share Incentive Scheme in its entirety and the awards granted and outstanding thereunder remain effective and binding under the Amended and Restated 2011 Share Incentive Scheme. The board of directors of the Company resolved that the maximum aggregate number of Class A common shares which may be issued pursuant to all awards under the Amended and Restated 2011 Share Incentive Scheme shall be 131,950,949 plus an annual increase of 20,000,000 on the first day of each fiscal year, beginning in 2022, or such lesser amount of Class A common shares.

During the years ended December 31, 2021, 2022 and 2023, the Company granted restricted share units to employees of 9,387,270, 9,918,014 and 7,744,374, respectively, pursuant to the 2011 Share Incentive Scheme.

The following table summarizes the restricted share units activity for the years ended December 31, 2021, 2022 and 2023:

	<u>Number of restricted shares units</u>	<u>Weighted average grant-date fair value (US\$)</u>
Outstanding, December 31, 2020	72,652,890	3.6059
Granted	9,387,270	3.6323
Forfeited	(42,872,565)	3.5461
Vested	<u>(15,139,700)</u>	3.6104
Outstanding, December 31, 2021	<u>24,027,895</u>	3.7202
Granted	9,918,014	1.5065
Forfeited	(8,023,640)	3.4889
Vested	<u>(8,386,702)</u>	3.7594
Outstanding, December 31, 2022	<u>17,535,567</u>	2.5551
Granted	7,744,374	1.7842
Forfeited	(2,688,963)	2.1666
Vested	<u>(8,058,007)</u>	2.8052
Outstanding, December 31, 2023	<u>14,532,971</u>	2.0776
Expected to vest as of December 31, 2023	<u>12,272,176</u>	2.0987

For the years ended December 31, 2021, 2022 and 2023, the Company recorded share-based compensation of US\$21,427, US\$21,463 and US\$13,766 in relation to continuing operations using the graded-vesting attribution method.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

**26. Share-based compensation (continued)**

**(a) JOYY's share-based awards (continued)**

**(i) Restricted Share Units (continued)**

As of December 31, 2023, total unrecognized compensation expense relating to the restricted share units was US\$15,227. The expense is expected to be recognized over a weighted average period of 1.41 years using the graded-vesting attribution method.

**(ii) Restricted Shares**

In connection with the acquisition of Bigo in March 2019, the Group issued restricted shares of 38,042,760 without a change in vesting terms to replace Bigo's share incentive scheme.

There are mainly three types of vesting schedule under Bigo's share incentive scheme, which are: i) 50% of the share-based awards will be vested after 24 months of the grant date and the remaining 50% will be vested in two equal installments over the following 24 months, ii) share-based awards will be vested in four equal installments over the following 48 months, and iii) share-based awards will be vested in three equal installments over the following 36 months. The post-acquisition share-based compensation expenses are recognized over the remaining vesting period after the acquisition date. Except for service condition, there were no other vesting conditions for all the awards under the share incentive scheme.

During the years ended December 31, 2021, 2022 and 2023, the Company granted restricted share to employees of 7,888,160, 2,723,629 and 1,146,257, respectively.

The following table summarizes the restricted shares activity for the years ended December 31, 2021, 2022 and 2023:

	<u>Number of restricted shares</u>	<u>Weighted average grant-date fair value (US\$)</u>
Outstanding, December 31, 2020	26,420,365	3.5577
Granted	7,888,160	3.0435
Forfeited	(8,661,973)	3.7025
Vested	<u>(10,497,147)</u>	3.4862
Outstanding, December 31, 2021	<u>15,149,405</u>	3.2566
Granted	2,723,629	1.8427
Forfeited	(1,943,365)	3.0494
Vested	<u>(4,994,233)</u>	3.5657
Outstanding, December 31, 2022	<u>10,935,436</u>	2.8002
Granted	1,146,257	1.8259
Forfeited	(1,142,786)	2.2756
Vested	<u>(5,426,078)</u>	3.0559
Outstanding, December 31, 2023	<u>5,512,829</u>	2.4547
Expected to vest as of December 31, 2023	<u>4,957,040</u>	2.4550

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

**26. Share-based compensation (continued)**

**(a) JOYY's share-based awards (continued)**

**(ii) Restricted Shares (continued)**

For the years ended December 31, 2021, 2022 and 2023, the Company recorded share-based compensation for restricted shares in relation to continuing operations of US\$9,733, US\$12,602 and US\$7,929 using the graded-vesting attribution method.

As of December 31, 2023, total unrecognized compensation expense relating to the restricted shares was US\$6,091. The expense is expected to be recognized over a weighted average period of 1.38 years using the graded-vesting attribution method.

**(iii) Share options**

2011 Share Incentive Scheme

*Grant of options*

During the years ended December 31, 2021, 2022 and 2023, no share option had been granted to employees or non-employees.

*Vesting of options*

There are three types of vesting schedule, which are: i) options will be vested in three equal installments over the following 36 months, ii) 50% of the options will be vested after 24 months of the grant date and the remaining 50% will be vested in two equal installments over the following 24 months, and iii) 50% of the options will be vested after 24 months of the grant date and the remaining 50% will be vested in one installments over the following 12 months. Except for service condition, there were no other vesting conditions for all the awards under the share incentive scheme.

Movements in the number of share options granted and their related weighted average exercise prices are as follows:

	Number of options	Weighted average exercise price (US\$)	Weighted average remaining contractual life (years)	Aggregate intrinsic value (US\$)
Outstanding, January 1, 2021	10,307,400	3.8069	4.45	3,669
Forfeited	(893,000)	3.8830	—	—
Outstanding, December 31, 2021	9,414,400	3.7997	2.80	—
Outstanding, December 31, 2022	9,414,400	3.7997	1.80	—
Forfeited	(840,180)	3.5350	—	—
Outstanding, December 31, 2023	8,574,220	3.8256	1.61	—
Expected to vest as of December 31, 2023	8,574,220	3.8256	1.61	—
Exercisable as of December 31, 2023	8,574,220	3.8256	1.61	—

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**26. Share-based compensation (continued)**

**(a) JOYY's share-based awards (continued)**

**(iii) Share options (continued)**

*Vesting of options (continued)*

Forfeitures are estimated at the time of grant. If necessary, forfeitures are revised in subsequent periods if actual forfeitures differ from those estimates.

The aggregate intrinsic value in the table above represents the difference between the Company's common shares as of December 31, 2021, 2022 and 2023 and the exercise price. The total intrinsic value was nil due to the higher exercise price compared to the Company's common shares as of December 31, 2021, 2022 and 2023 and the exercise price.

For the years ended December 31, 2021, 2022 and 2023, the Company recorded share-based compensation in relation to continuing operations of US\$2,222, US\$1,022 and US\$120 using the graded vesting attribution method.

**(b) Other share-based awards**

Other than those disclosed above, for the years ended December 31, 2021, 2022 and 2023, the Company recorded share-based compensation expense of nil, US\$9,009 and US\$10,164 for other subsidiaries, including those related to Shopline share options as referenced in Note 5(a).

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

**27. Basic and diluted net income per share**

Basic and diluted net income per share for the years ended December 31, 2021, 2022 and 2023 are calculated as follows:

	For the year ended December 31,		
	2021 US\$	2022 US\$	2023 US\$
<b>Numerator:</b>			
<b>Net (loss) income from continuing operations attributable to common shareholders of JOYY Inc.</b>	(125,096)	119,465	347,351
Dilutive effect of convertible bonds	—	11,740	8,653
<b>Numerator for diluted (loss) income per share from continuing operations</b>	<u>(125,096)</u>	<u>131,205</u>	<u>356,004</u>
<b>Net income from discontinued operations attributable to common shareholders of JOYY Inc.</b>	35,567	—	—
<b>Numerator for diluted income per share from discontinued operations</b>	<u>35,567</u>	<u>—</u>	<u>—</u>
<b>Denominator:</b>			
<b>Denominator for basic calculation—weighted average number of Class A and Class B common shares outstanding</b>	1,562,016,001	1,439,390,191	1,308,695,642
Dilutive effect of convertible bonds	—	193,704,343	141,564,583
Dilutive effect of restricted stock	—	7,524,041	8,025,901
Dilutive effect of restricted share units	—	4,829,865	4,690,418
<b>Denominator for diluted calculation</b>	<u>1,562,016,001</u>	<u>1,645,448,440</u>	<u>1,462,976,544</u>
<b>Basic net (loss) income per Class A and Class B common share</b>	(0.06)	0.08	0.27
Continuing operations	(0.08)	0.08	0.27
Discontinued operations	0.02	—	—
<b>Diluted net (loss) income per Class A and Class B common share</b>	(0.06)	0.08	0.24
Continuing operations	(0.08)	0.08	0.24
Discontinued operations	0.02	—	—
<b>Basic net (loss) income per ADS*</b>	(1.14)	1.66	5.31
Continuing operations	(1.60)	1.66	5.31
Discontinued operations	0.46	—	—
<b>Diluted net (loss) income per ADS*</b>	(1.14)	1.59	4.87
Continuing operations	(1.60)	1.59	4.87
Discontinued operations	0.46	—	—

\* Each ADS represents 20 common shares.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

**27. Basic and diluted net income per share (continued)**

For the years ended December 31, 2021, 2022 and 2023, the following shares outstanding were excluded from the calculation of diluted net income (loss) per share, as their inclusion would have been anti-dilutive for the periods prescribed but which could potentially dilute EPS in the future.

	For the year ended December 31,		
	2021	2022	2023
Shares issuable upon exercise of share options	9,414,400	9,414,400	8,574,220
Shares issuable upon exercise of restricted share units	24,027,895	—	—
Shares issuable upon exercise of restricted share	15,149,405	—	—
Shares issuable upon conversion of convertible bonds	201,677,195	—	—

**28. Related party transactions**

The table below sets forth the major related parties and their relationships with the Group:

Major related parties	Relationship with the Group
Guangzhou Sunhongs Corp., Ltd. (“Guangzhou Sunhongs”)	Significant influence exercised by a principal shareholder of the Company
Shopline*	Investment with significant influence
Xiaomi Corporation (“Xiaomi Group”)	Controlled by a principal shareholder of the Company

\* Since September 6, 2022, Shopline became a subsidiary of the Group and ceased to be a related party of the Group.

During the years ended December 31, 2021, 2022 and 2023, significant related party transactions are as follows:

	For the year ended December 31,		
	2021 US\$	2022 US\$	2023 US\$
Bandwidth service provided by Guangzhou Sunhongs	3,287	1,513	1,382
Promotion expense charged from related parties	3,149	5,322	8,008
Loan to related parties	34,035	28,062	—
Payments on behalf of related parties, net of repayments	55,301	36,522	(1)
Others	3,000	2,862	1,309

As of December 31, 2022 and 2023, the amounts due from/to related parties are as follows:

	December 31,	
	2022 US\$	2023 US\$
<b>Amounts due from related parties, current</b>	<u>1,794</u>	<u>810</u>
<b>Amounts due to related parties, current</b>		
Due to Xiaomi Group	1,750	2,377
Others	<u>1,475</u>	<u>156</u>
<b>Total</b>	<u>3,225</u>	<u>2,533</u>

\* Other receivables and payables from/to related parties are unsecured and payable on demand.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS****(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)****29. Fair value measurements**

Fair value reflects the price that would be received from selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. When determining the fair value measurements for assets and liabilities required or permitted to be recorded at fair value, the Group considers the principal or most advantageous market in which it would transact and considers assumptions that market participants would use when pricing the assets or liabilities.

The Group applies a fair value hierarchy that requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. A financial instrument's categorization within the fair value hierarchy is based upon the lowest level of input that is significant to the fair value measurement. This guidance specifies a hierarchy of valuation techniques, which is based on whether the inputs into the valuation technique are observable or unobservable. The hierarchy is as follows:

Level 1—Valuation techniques in which all significant inputs are unadjusted quoted prices from active markets for assets or liabilities that are identical to the assets or liabilities being measured.

Level 2—Valuation techniques in which significant inputs include quoted prices from active markets for assets or liabilities that are similar to the assets or liabilities being measured and/or quoted prices for assets or liabilities that are identical or similar to the assets or liabilities being measured from markets that are not active. Also, model-derived valuations in which all significant inputs and significant value drivers are observable in active markets are Level 2 valuation techniques.

Level 3—Valuation techniques in which one or more significant inputs or significant value drivers are unobservable. Unobservable inputs are valuation technique inputs that reflect the Group's own assumptions about the assumptions that market participants would use in pricing an asset or liability.

The fair value guidance describes three main approaches to measure the fair value of assets and liabilities: (1) market approach; (2) income approach and (3) cost approach. The market approach uses prices and other relevant information generated from market transactions involving identical or comparable assets or liabilities. The income approach uses valuation techniques to convert future amounts to a single present value amount. The measurement is based on the value indicated by current market expectations about those future amounts. The cost approach is based on the amount that would currently be required to replace an asset.

When available, the Group uses quoted market prices to determine the fair value of an asset or liability. If quoted market prices are not available, the Group will measure fair value using valuation techniques that use, when possible, current market-based or independently sourced market parameters, such as interest rates and currency rates.

**(a) Fair value measurement on a recurring basis**

The following table summarizes the Company's assets that are measured at fair value on a recurring basis and are categorized using the fair value hierarchy as of December 31, 2022 and 2023:

	As of December 31, 2022			Total
	Level 1	Level 2	Level 3	
<b>Assets</b>				
Short-term investments (i)	185,130	177,510	—	362,640
Equity investment with readily determinable fair values (ii)	1,180	—	—	1,180
Available-for-sale debt investment (iii)	—	—	21,299	21,299
	<u>186,310</u>	<u>177,510</u>	<u>21,299</u>	<u>385,119</u>

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

**29. Fair value measurements (continued)**

**(a) Fair value measurement on a recurring basis (continued)**

	As of December 31, 2023			Total
	Level 1	Level 2	Level 3	
<b>Assets</b>				
Short-term investments (i)	—	274,846	—	274,846
Equity investment with readily determinable fair values (ii)	1,504	—	—	1,504
Available-for-sale debt investment (iii)	—	—	63,918	63,918
	<u>1,504</u>	<u>274,846</u>	<u>63,918</u>	<u>340,268</u>

- (i) Short-term investments represented the investments issued by commercial banks or other financial institutions with a variable interest rate indexed to the performance of underlying assets within one year. For the instruments that are publicly traded, the Company classifies the valuation techniques that use these inputs as Level 1 of fair value measurements. For the instruments whose fair value is estimated based on quoted prices of similar products provided by banks at the end of each period, the Company classifies the valuation techniques that use these inputs as Level 2 of fair value measurements.
- (ii) Equity investments with readily determinable fair values are valued using the market approach based on the quoted prices in active markets at the reporting date. The Group classifies the valuation techniques that use these inputs as Level 1 of fair value measurements.
- (iii) Available-for-sale debt investment are investments made by the Company in private companies which include certain substantive preferential rights, including redemption at the holder's option upon occurrence of certain contingent events that are out of the investee's control and liquidation preference over the rights of common shareholders. Accordingly, these investments are not considered as common stock or in-substance common stock and therefore are classified as available-for-sale debt investments. Available-for-sale debt investments do not have readily determinable market values and, are categorized as Level 3 in the fair value hierarchy. The Company uses a combination of valuation methodologies, including market and income approaches based on the Company's best estimate, which is determined by using information including but not limited to the pricing of recent rounds of financing of the investees, future cash flow forecasts, liquidity factors and multiples of a selection of comparable companies.

The following table presents the changes in Level 3 assets for the years ended December 31, 2021, 2022 and 2023:

	Available-for-sale debt investment US\$
Balance as of December 31, 2021	—
Acquisition	21,299
Balance as of December 31, 2022	21,299
Reclassification (iv)	42,619
Balance as of December 31, 2023	<u>63,918</u>

- (iv) The Company reclassified a preferred stock instrument from equity investment to available-for-sale debt investment due to changes made to the investment terms which provide the Company with the right to redeem the preferred shares at its option.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

### 29. Fair value measurements (continued)

#### (b) Fair value measurement on a non-recurring basis

The Company measures equity investments without readily determinable fair value on a nonrecurring basis when impairment charges and fair value change due to observable price change are recognized. These nonrecurring fair value measurements use significant unobservable inputs (Level 3). The Company uses a combination of valuation methodologies, including market and income approaches based on the Company's best estimate to determine the fair value of these investments. An observable price change is usually resulting from new rounds of financing of the investees. The Company determines whether the securities offered in new rounds of financing are similar to the equity securities held by the Company by comparing the rights and obligations of the securities. When the securities offered in new rounds of financing are determined to be similar to the securities held by the Company, the Company adjusts the observable price of the similar security to determine the amount that should be recorded as an adjustment in the carrying value of the security to reflect the current fair value of the security held by the Company by using the back-solve method based on the equity allocation model with adoption of some key parameters such as risk-free rate and equity volatility. Inputs used in these methodologies primarily include discount rate, the selection of comparable companies operating in similar businesses and etc. For the years ended December 31, 2021, 2022 and 2023, gain on fair value changes of investment of US\$14,045, US\$17,089 and US\$11,179 due to the observable price change of the investment without readily determinable fair value.

The Group assesses the existence of indicators for other-than-temporary impairment of the equity investment by considering factors including, but not limited to, current economic and market conditions, the operating performance of the entities including current earnings trends and other entity-specific information. In 2021, 2022 and 2023, based on the Group's assessment, an impairment charge of US \$93,632, nil and nil was recognized in general and administrative expenses, respectively, against the carrying value of the investments due to significant deterioration in earnings or unexpected changes in business prospects of the investees as compared to the original investment plans.

Apart from the short-term investments, equity investment measured at fair value through earnings and derivatives, the Company's other financial instruments principally consist of cash and cash equivalent, restricted cash and cash equivalent, short-term deposits, restricted short-term deposits, accounts receivable, financing receivables, other receivables, amounts due to/from related parties, accounts payable, certain accrued expenses and convertible bonds. These financial instruments are recorded at cost which approximates fair value.

### 30. Commitments and contingencies

#### (a) Operating lease commitments

The operating lease commitments as of December 31, 2023 amounting to US\$1,810 mainly consist of the short-term lease commitments and leases that have not yet commenced but that create significant rights and obligations for the Company, which are not included in operating lease right-of-use assets and lease liabilities.

#### (b) Capital commitments

As of December 31, 2022 and 2023, the Group had outstanding capital commitments totaling to US\$143,471 and US\$244,917, which consisted of capital expenditures related to properties and additional investments in equity investments, respectively.

#### (c) Litigation

The Company and certain of its current and former officers and directors were named as defendants in a federal putative securities class action filed in November 2021 alleging that they made material misstatements and omissions in documents filed with the SEC regarding certain of the allegations contained in a short seller report. On March 9, 2022, the court granted the defendants' motion to dismiss and dismissed the operative complaint in its entirety with prejudice. On April 8, 2022, the co-lead plaintiffs filed a notice of appeal. The court heard oral arguments on April 21, 2023. The appellate court affirmed the district court's decision on May 9, 2023 and issued the formal mandate on May 31, 2023. This class action is resolved.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

### 30. Commitments and contingencies (continued)

#### (c) Litigation (continued)

In addition to the above, from time to time, the Group is involved in claims and legal proceedings that arise in the ordinary course of business. Based on currently available information, management does not believe that the ultimate outcome of these unresolved matters, individually and in the aggregate, is likely to have a material adverse effect on the Group's financial position, results of operations or cash flows.

### 31. Dividends

On August 11, 2020, the board of directors approved a quarterly dividend policy for three years commencing in the second quarter of 2020. Under the policy, total cash dividend amount expected to be paid would be approximately US\$300 million and quarterly dividends would be set at approximately US \$25 million in each fiscal quarter. On November 20, 2020, the board of directors approved an additional quarterly dividend policy for three years, under which the total cash dividend amount expected to be paid would be approximately US\$200 million and quarterly dividend would be set at approximately US\$16.67 million in each fiscal quarter. Dividends are recognized when declared. The two quarterly dividend policies both expired already and there is no dividend payable as of December 31, 2023.

### 32. Restricted net assets

Relevant PRC laws and regulations permit payments of dividends by the entities incorporated in the PRC only out of their retained earnings, if any, as determined in accordance with PRC accounting standards and regulations. In addition, the Company's subsidiaries and VIEs in the PRC are required to annually appropriate 10% of their net after-tax income to the statutory general reserve fund prior to payment of any dividends, unless such reserve funds have reached 50% of their respective registered capital. As a result of these and other restrictions under PRC laws and regulations, the Group's subsidiaries and VIEs incorporated in the PRC are restricted in their ability to transfer a portion of their net assets to the Company either in the form of dividends, loans or advances, which restricted portion as calculated under U.S. GAAP amounted to approximately US\$989,061 and US\$856,883 for the Group's VIEs as of December 31, 2022 and 2023, respectively, and US\$260,250 and US\$189,743 for the Group's subsidiaries as of December 31, 2022 and 2023, respectively. Even though the Company currently does not require any such dividends, loans or advances from the PRC entities for working capital and other funding purposes, the Company may in the future require additional cash resources from them due to changes in business conditions, to fund future acquisitions and development, or merely to declare and pay dividends or distributions to our shareholders.

Cash transfers from the Company's PRC subsidiaries to their parent companies outside of China are subject to PRC government control of currency conversion. Shortages in the availability of foreign currency may temporarily restrict the ability of the PRC subsidiaries and consolidated affiliated entities to remit sufficient foreign currency to pay dividends or other payments to the Company, or otherwise satisfy their foreign currency denominated obligations.

Except for the above, there is no other restriction on use of proceeds generated by the Group's subsidiaries and VIEs to satisfy any obligations of the Company.

The Company performed a test on the restricted net assets of subsidiaries and VIEs in accordance with Securities and Exchange Commission Regulation S-X Rule 4-08 (e) (3), "General Notes to Financial Statements" and concluded that the restricted net assets did not exceed 25% of the consolidated net assets of the Company as of December 31, 2023 and the condensed financial information of the Company are not required to be presented.

### 33. Segment Reporting

There are two operating and reportable segments in the Group (defined in Note 1 (a)), including "BIGO" and "All other" for the years ended December 31, 2021, 2022 and 2023. BIGO segment is the Group's core business segment which primarily includes some of our social entertainment platforms including Bigo Live, Likee, imo and others. All Other segment is the Group's other business segment which primarily includes our social entertainment platform Hago, our smart commerce platform Shopline, certain audio live streaming platforms, and others.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

**33. Segment Reporting (continued)**

(a) The following table presents summary information by segment:

For the year ended December 31, 2023:

	<u>BIGO</u> US\$	<u>All other</u> US\$	<u>Elimination<sup>(1)</sup></u> US\$	<u>Total</u> US\$
<b>Net revenues</b>				
Live streaming	1,819,484	159,887	—	1,979,371
Others	104,836	185,002	(1,339)	288,499
<b>Total net revenues</b>	<u>1,924,320</u>	<u>344,889</u>	<u>(1,339)</u>	<u>2,267,870</u>
Cost of revenues <sup>(2)</sup>	(1,189,500)	(265,662)	320	(1,454,842)
<b>Gross profit</b>	<u>734,820</u>	<u>79,227</u>	<u>(1,019)</u>	<u>813,028</u>
<b>Operating expenses<sup>(2)</sup></b>				
Research and development expenses	(163,634)	(132,635)	766	(295,503)
Sales and marketing expenses	(295,395)	(74,260)	78	(369,577)
General and administrative expenses	(52,906)	(69,930)	175	(122,661)
<b>Total operating expenses</b>	<u>(511,935)</u>	<u>(276,825)</u>	<u>1,019</u>	<u>(787,741)</u>
Loss on deconsolidation and disposal of subsidiaries	—	(6,177)	—	(6,177)
Other income	7,240	2,465	—	9,705
<b>Operating income (loss)</b>	<u>230,125</u>	<u>(201,310)</u>	<u>—</u>	<u>28,815</u>
Interest expense	(6,761)	(8,759)	5,100	(10,420)
Interest income and investment income	43,518	146,794	(5,100)	185,212
Foreign currency exchange losses, net	(174)	(2,732)	—	(2,906)
Gain on disposal and deemed disposal of investments	—	74,851	—	74,851
(Loss) gain on fair value changes of investment	(400)	12,825	—	12,425
<b>Income before income tax expenses</b>	<u>266,308</u>	<u>21,669</u>	<u>—</u>	<u>287,977</u>
Income tax expenses	(17,007)	(1,849)	—	(18,856)
<b>Income before share of income in equity method investments, net of income taxes</b>	<u>249,301</u>	<u>19,820</u>	<u>—</u>	<u>269,121</u>
Share of income in equity method investments, net of income taxes	—	3,297	—	3,297
<b>Net income</b>	<u>249,301</u>	<u>23,117</u>	<u>—</u>	<u>272,418</u>

(1) The elimination mainly consists of revenues and expenses generated from services among BIGO and All other segments, and interest income and interest expenses generated from the loan between BIGO and All other segments.

(2) Share-based compensation was allocated in cost of revenues and operating expenses as follows:

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

**33. Segment Reporting (continued)**

(a) The following table presents summary information by segment (continued):

	<u>BIGO</u>	<u>All other</u>	<u>Total</u>
	US\$	US\$	US\$
Cost of revenues	1,958	1,617	3,575
Research and development expenses	8,967	10,448	19,415
Sales and marketing expenses	341	456	797
General and administrative expenses	1,829	6,363	8,192

For the year ended December 31, 2022:

	<u>BIGO</u>	<u>All other</u>	<u>Elimination <sup>(1)</sup></u>	<u>Total</u>
	US\$	US\$	US\$	US\$
<b>Net revenues</b>				
Live streaming	1,905,045	320,473	—	2,225,518
Others	91,976	94,267	(245)	185,998
<b>Total net revenues</b>	<u>1,997,021</u>	<u>414,740</u>	<u>(245)</u>	<u>2,411,516</u>
Cost of revenues <sup>(2)</sup>	(1,249,361)	(310,272)	245	(1,559,388)
<b>Gross profit</b>	<u>747,660</u>	<u>104,468</u>	<u>—</u>	<u>852,128</u>
<b>Operating expenses<sup>(2)</sup></b>				
Research and development expenses	(168,148)	(93,659)	—	(261,807)
Sales and marketing expenses	(311,545)	(88,890)	—	(400,435)
General and administrative expenses	(60,843)	(80,983)	—	(141,826)
Goodwill impairment	—	(14,830)	—	(14,830)
<b>Total operating expenses</b>	<u>(540,536)</u>	<u>(278,362)</u>	<u>—</u>	<u>(818,898)</u>
Other income	12,944	4,561	—	17,505
<b>Operating income (loss)</b>	<u>220,068</u>	<u>(169,333)</u>	<u>—</u>	<u>50,735</u>
Interest expense	(4,458)	(11,922)	3,610	(12,770)
Interest income and investment income	9,592	87,166	(3,610)	93,148
Foreign currency exchange gain (losses), net	13,120	(1,454)	—	11,666
Gain on disposal and deemed disposal of investments	—	4,113	—	4,113
Gain on fair value changes of investment	1,979	422,325	—	424,304
Gain on extinguishment of debt and derivative	—	63,378	—	63,378
<b>Income before income tax expenses</b>	<u>240,301</u>	<u>394,273</u>	<u>—</u>	<u>634,574</u>
Income tax expenses	(14,433)	(20,142)	—	(34,575)
<b>Income before share of loss in equity method investments, net of income taxes</b>	<u>225,868</u>	<u>374,131</u>	<u>—</u>	<u>599,999</u>
Share of loss in equity method investments, net of income taxes	—	(498,431)	—	(498,431)
<b>Net income (loss)</b>	<u>225,868</u>	<u>(124,300)</u>	<u>—</u>	<u>101,568</u>

(1) The elimination mainly consists of revenues and expenses generated from services among BIGO and All other segments, and interest income and interest expenses generated from the loan between BIGO and All other segments.

(2) Share-based compensation was allocated in cost of revenues and operating expenses as follows:

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**33. Segment Reporting (continued)**

(a) The following table presents summary information by segment (continued):

	<u>BIGO</u>	<u>All other</u>	<u>Total</u>
	US\$	US\$	US\$
Cost of revenues	3,341	4,844	8,185
Research and development expenses	14,012	11,158	25,170
Sales and marketing expenses	234	543	777
General and administrative expenses	4,416	5,548	9,964

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

**33. Segment Reporting (continued)**

For the year ended December 31, 2021:

	BIGO US\$	All other US\$	Elimination <sup>(1)</sup> US\$	Total US\$
<b>Net revenues</b>				
Live streaming	2,231,366	245,424	—	2,476,790
Others	92,392	49,936	(67)	142,261
<b>Total net revenues</b>	<u>2,323,758</u>	<u>295,360</u>	<u>(67)</u>	<u>2,619,051</u>
Cost of revenues <sup>(2)</sup>	(1,539,188)	(242,029)	67	(1,781,150)
<b>Gross profit</b>	<u>784,570</u>	<u>53,331</u>	<u>—</u>	<u>837,901</u>
<b>Operating expenses<sup>(2)</sup></b>				
Research and development expenses	(204,597)	(75,184)	—	(279,781)
Sales and marketing expenses	(402,476)	(65,931)	—	(468,407)
General and administrative expenses	(56,827)	(164,904)	—	(221,731)
<b>Total operating expenses</b>	<u>(663,900)</u>	<u>(306,019)</u>	<u>—</u>	<u>(969,919)</u>
Gain on disposal of business	—	4,959	—	4,959
Other income	6,929	13,447	—	20,376
<b>Operating income (loss)</b>	<u>127,599</u>	<u>(234,282)</u>	<u>—</u>	<u>(106,683)</u>
Interest expense	(3,460)	(13,468)	2,453	(14,475)
Interest income and investment income	1,316	92,370	(2,453)	91,233
Foreign currency exchange losses, net	(12,444)	(933)	—	(13,377)
Loss on disposal and deemed disposal of investments	—	(23,762)	—	(23,762)
Loss on fair value changes of investment	—	(15,435)	—	(15,435)
(Loss) gain on extinguishment of debt and derivative	(52)	5,343	—	5,291
Other non-operating expenses	—	(381)	—	(381)
<b>Income (loss) before income tax expenses</b>	<u>112,959</u>	<u>(190,548)</u>	<u>—</u>	<u>(77,589)</u>
Income tax expense	(9,153)	(16,592)	—	(25,745)
<b>Income (loss) before share of loss in equity method investments, net of income taxes</b>	<u>103,806</u>	<u>(207,140)</u>	<u>—</u>	<u>(103,334)</u>
Share of loss in equity method investments, net of income taxes	—	(26,217)	—	(26,217)
<b>Net income (loss)</b>	<u>103,806</u>	<u>(233,357)</u>	<u>—</u>	<u>(129,551)</u>

(1) The elimination mainly consists of interest income and interest expenses generated from the loan between BIGO and All other segments.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

**33. Segment Reporting (continued)**

(a) The following table presents summary information by segment (continued):

(2) Share-based compensation was allocated in cost of revenues and operating expenses as follows:

	<u>BIGO</u> US\$	<u>All other</u> US\$	<u>Total</u> US\$
Cost of revenues	5,974	2,115	8,089
Research and development expenses	17,179	6,874	24,053
Sales and marketing expenses	654	631	1,285
General and administrative expenses	(5,297)	5,252	(45)

(b) The following tables set forth revenues and property and equipment, net for the Company's geographic operations:

	<u>For the years ended December 31,</u>		
	<u>2021</u> US\$	<u>2022</u> US\$	<u>2023</u> US\$
<b>Revenues:</b>			
Mainland China	440,797	473,941	347,825
Developed countries and regions	913,947	866,107	968,225
Middle East	621,775	514,992	441,277
Southeast Asia and others	642,532	556,476	510,543

Developed countries and region mainly included the United States of America, Great Britain, Japan, South Korea and Australia, Middle East mainly included Saudi Arabia and other countries located in the region, and Southeast Asia and others mainly included countries located in Southeast Asia and India.

	<u>As of December 31,</u>	
	<u>2022</u> US\$	<u>2023</u> US\$
<b>Property and equipment, net:</b>		
Mainland China	303,204	376,585
Singapore	24,022	5,491
Others	15,975	8,605

## List of Significant Subsidiaries and Variable Interest Entities of JOYY Inc.

<b>Subsidiaries</b>	<b>Place of Incorporation</b>
Duowan Entertainment Corporation	British Virgin Islands
Funstage Technology Ltd	British Virgin Islands
Topstage Technology Ltd	British Virgin Islands
NeoTasks Inc.	Cayman Islands
Cloud Solution Inc	Cayman Islands
Bigo Inc	Cayman Islands
Shoptline Corporation Limited	Cayman Islands
Mangatoon Inc	Cayman Islands
Engage Capital Partners I. L.P.	Cayman Islands
Engage Capital Partners III. L.P.	Cayman Islands
Singularity IM, Inc.	Delaware
PageBites, Inc.	Delaware
Cube Technology Pte. Ltd.	Singapore
Bigo Technology Pte. Ltd.	Singapore
Likeme Pte. Ltd.	Singapore
Bigo Internet Information Pte. Ltd.	Singapore
Sandhill Solution Pte. Ltd.	Singapore
Indigo Technology Pte. Ltd.	Singapore
Dol Technology Pte. Ltd.	Singapore
Digital Rosetta Technology Pte. Ltd.	Singapore
Rambojoy Technology Pte. Ltd.	Singapore
Hago Singapore Pte. Ltd.	Singapore
Gokoo Technology Pte. Ltd.	Singapore
NeoTasks Limited	Hong Kong
Bigo (Hong Kong) Limited	Hong Kong
Starling Labs Limited	Hong Kong
Shoptline Solutions Limited	Hong Kong
Mangatoon HK Limited	Hong Kong
Guangzhou Huanju Shidai Information Technology Co., Ltd.	Mainland China
Guangzhou BaiGuoYuan Information Technology Co., Ltd.	Mainland China
Guangzhou Wangxing Information Technology Co., Ltd.	Mainland China
Shenzhen Shanglian Logistics Co., Ltd.	Mainland China
Shangxian Technology (Shenzhen) Co., Ltd.	Mainland China
Cloud Internet Service Limited	United Kingdom
<b>Consolidated Variable Interest Entities and their Subsidiaries</b>	<b>Place of Incorporation</b>
Beijing Tuda Science and Technology Co., Ltd.	Mainland China
Guangzhou Tuyue Network Technology Co., Ltd.	Mainland China
Guangzhou Huaduo Network Technology Co., Ltd.	Mainland China
Guangzhou Huanju Electronic Commerce Co., Ltd.	Mainland China
Foshan Tuyi Network Technology Co., Ltd.	Mainland China
Guangzhou Ruyi Information Technology Co., Ltd.	Mainland China
Hainan Lanlan Network Technology Co., Ltd.	Mainland China
Ningxia Julan Network Technology Co., Ltd.	Mainland China
Guangzhou Jusheng Network Technology Co., Ltd.	Mainland China
Guangzhou BaiGuoYuan Network Technology Co., Ltd.	Mainland China
Chengdu Yunbu Network Technology Co., Ltd.	Mainland China
Chengdu Luota Network Technology Co., Ltd.	Mainland China
Chengdu Jiyue Network Technology Co., Ltd.	Mainland China

Guangzhou AnSiChuang Information Technology Co., Ltd.	Mainland China
Guangzhou Ruicheng Network Technology Co., Ltd.	Mainland China
Guangzhou Huanju Microfinance Co., Ltd.	Mainland China
Guangzhou Ruiyun Network Technology Co., Ltd.	Mainland China
Guangzhou Huanju Make Network Information Co., Ltd.	Mainland China
Guangzhou Julianyun Network Technology Co., Ltd.	Mainland China
Guangzhou Yilian Yixing Equity Investment Partnership (LP)	Mainland China

**YY Live Entities\***

**Place of Incorporation**

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Runderfo Inc.	Cayman Islands
Goldenage Technology Investment Group Limited	Hong Kong
Guangzhou Xiling Technology Co., Ltd.	Mainland China
Guangzhou Yiling Network Technology Co., Ltd.	Mainland China

\*These entities represent the holding/operating entities for YY Live. For the latest development in connection with YY Live, see “Item 4. Information on the Company—A. History and Development of the Company.”

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**Certification by the Principal Executive Officer  
Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002**

I, David Xueling Li, certify that:

1. I have reviewed this annual report on Form 20-F of JOYY Inc. (the "Company");
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Company as of, and for, the periods presented in this report;
4. The Company's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Company and have:
  - (a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - (c) evaluated the effectiveness of the Company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (d) disclosed in this report any change in the Company's internal control over financial reporting that occurred during the period covered by this annual report that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting; and
5. The Company's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Company's auditors and the audit committee of the Company's board of directors (or persons performing the equivalent functions):
  - (a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Company's ability to record, process, summarize and report financial information; and
  - (b) any fraud, whether or not material, that involves management or other employees who have a significant role in the Company's internal control over financial reporting.

Date: April 26, 2024

By: /s/ David Xueling Li

Name: David Xueling Li

Title: Chief Executive Officer

---

**Certification by the Principal Financial Officer  
Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002**

I, Fuyong Liu, certify that:

1. I have reviewed this annual report on Form 20-F of JOYY Inc. (the “Company”);
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Company as of, and for, the periods presented in this report;
4. The Company’s other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Company and have:
  - (a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - (c) evaluated the effectiveness of the Company’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (d) disclosed in this report any change in the Company’s internal control over financial reporting that occurred during the period covered by this annual report that has materially affected, or is reasonably likely to materially affect, the Company’s internal control over financial reporting; and
5. The Company’s other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Company’s auditors and the audit committee of the Company’s board of directors (or persons performing the equivalent functions):
  - (a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Company’s ability to record, process, summarize and report financial information; and
  - (b) any fraud, whether or not material, that involves management or other employees who have a significant role in the Company’s internal control over financial reporting.

Date: April 26, 2024

By: /s/ Fuyong Liu

\_\_\_\_\_  
Name: Fuyong Liu

Title: Vice President of Finance

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**Certification by the Principal Executive Officer  
Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002**

In connection with the Annual Report of JOYY Inc. (the "Company") on Form 20-F for the year ended December 31, 2023 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, David Xueling Li, Chief Executive Officer of the Company, hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: April 26, 2024

By: /s/ David Xueling Li

\_\_\_\_\_  
Name: David Xueling Li

Title: Chief Executive Officer

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**Certification by the Principal Financial Officer  
Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002**

In connection with the Annual Report of JOYY Inc. (the “Company”) on Form 20-F for the year ended December 31, 2023 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Fuyong Liu, Vice President of Finance of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: April 26, 2024

By: /s/ Fuyong Liu

Name: Fuyong Liu

Title: Vice President of Finance

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Our ref  
Direct tel  
E-mail

JOYY Inc.  
30 Pasir Panjang Road  
#15-31A Mapletree Business City,  
Singapore 117440

26 April 2024

Dear Sir

**JOYY Inc.**

We have acted as legal advisors as to the laws of the Cayman Islands to JOYY Inc., an exempted company incorporated with limited liability under the laws of the Cayman Islands (the "**Company**"), in connection with the filing by the Company with the United States Securities and Exchange Commission (the "**SEC**") of an annual report on Form 20-F for the year ended 31 December 2023 (the "**Annual Report**"), which will be filed with the Securities and Exchange Commission in the month of April 2024.

We hereby consent to the reference of our name under the heading "Item 5. Operating and Financial Review and Prospects—A. Operating Results—Taxation" in the Annual Report, and further consent to the incorporation by reference into the Registration Statements on Form S-8 (File No. 333-187074, File No. 333-215742, File No. 333-229099 and File No. 333-234003) of the summary of our opinion under the headings "Item 5. Operating and Financial Review and Prospects—A. Operating Results—Taxation—Cayman Islands" and Item 10. Additional Information—E. Taxation— Cayman Islands Taxation". We also consent to the filing with the SEC of this consent letter as an exhibit to the Annual Report.

Yours faithfully

/s/ Maples and Calder (Hong Kong) LLP  
Maples and Calder (Hong Kong) LLP

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方達律師事務所  
FANGDA PARTNERS

Shanghai·Beijing·Shenzhen·Hong Kong·Guangzhou·Nanjing  
<http://www.fangdalaw.com>

E-mail:  
Tel.:  
Fax:  
Ref.:

24/F, HKRI Center Two, HKRI Taikoo Hui  
288 Shi Men Yi Road  
Shanghai 200041, PRC

To:

JOYY Inc.  
30 Pasir Panjang Road #15-31A Mapletree Business City  
Singapore 117440

April 26, 2024

Re: 2023 Annual Report on Form 20-F of JOYY Inc.

Dear Sirs,

We consent to the reference to our firm under the headings “Item 3. Key Information—D. Risk Factors” and “Item 4. Information on the Company—B. Business Overview—Regulations in Multiple Jurisdictions Where We Operate—Mainland China Regulations” in JOYY Inc.’s Annual Report on Form 20-F for the year ended December 31, 2023 (the “**Annual Report**”), which will be filed with the Securities and Exchange Commission (the “**SEC**”) in the month of April 2024, and further consent to the incorporation by reference of the summaries of our opinions under these captions into the JOYY Inc.’s registration statements on Form S-8 (No. 333-187074, No. 333-215742, No. 333-229099 and No. 333-234003). We also consent to the filing with the SEC of this consent letter as an exhibit to the Annual Report on Form 20-F for the year ended December 31, 2023.

Yours sincerely,

/s/ Fangda Partners  
Fangda Partners

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**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (No. 333-187074, No. 333-215742, No. 333-229099 and No. 333-234003) of JOYY Inc. of our report dated April 26, 2024 relating to the financial statements and the effectiveness of internal control over financial reporting, which appears in this Form 20-F.

/s/ PricewaterhouseCoopers LLP  
Singapore  
April 26, 2024

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/s/ PricewaterhouseCoopers Zhong Tian LLP  
Guangzhou, the People's Republic of China

April 26, 2024

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## JOYY INC.

## CLAWBACK POLICY

The Compensation Committee (the “Committee”) of the Board of Directors (the “Board”) of JOYY Inc. (the “Company”) believes that it is appropriate for the Company to adopt this Clawback Policy (the “Policy”) to be applied to the Executive Officers of the Company and adopts this Policy to be effective as of the Effective Date.

**1. Definitions**

For purposes of this Policy, the following definitions shall apply:

- a) “Company Group” means the Company and each of its subsidiaries or consolidated variable interest entities, as applicable.
  - b) “Covered Compensation” means any Incentive-Based Compensation granted, vested or paid to a person who served as an Executive Officer at any time during the performance period for the Incentive-Based Compensation and that was Received (i) on or after October 2, 2023 (the effective date of the Nasdaq listing standards), (ii) after the person became an Executive Officer, and (iii) at a time that the Company had a class of securities listed on a national securities exchange or a national securities association such as Nasdaq.
  - c) “Effective Date” means December 1, 2023.
  - d) “Erroneously Awarded Compensation” means the amount of Covered Compensation granted, vested or paid to a person during the fiscal period when the applicable Financial Reporting Measure relating to such Covered Compensation was attained that exceeds the amount of Covered Compensation that otherwise would have been granted, vested or paid to the person had such amount been determined based on the applicable Restatement, computed without regard to any taxes paid (i.e., on a pre-tax basis). For Covered Compensation based on stock price or total shareholder return, where the amount of Erroneously Awarded Compensation is not subject to mathematical recalculation directly from the information in a Restatement, the Committee will determine the amount of such Covered Compensation that constitutes Erroneously Awarded Compensation, if any, based on a reasonable estimate of the effect of the Restatement on the stock price or total shareholder return upon which the Covered Compensation was granted, vested or paid and the Committee shall maintain documentation of such determination and provide such documentation to Nasdaq.
  - e) “Exchange Act” means the U.S. Securities Exchange Act of 1934.
  - f) “Executive Officer” means the Company’s president, principal financial officer, principal accounting officer (or if there is no such accounting officer, the controller), any vice-president of the Company in charge of a principal business unit, division, or function (such as sales, administration, or finance), any other officer who performs a policy-making function, or any other person (whether or not an officer or employee of the Company) who performs similar policy-making functions for the Company. “Policy-making function” does not
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include policy-making functions that are not significant. Both current and former Executive Officers are subject to the Policy in accordance with its terms.

- g) “Financial Reporting Measure” means (i) any measure that is determined and presented in accordance with the accounting principles used in preparing the Company’s financial statements, and any measures derived wholly or in part from such measures and may consist of IFRS/U.S. GAAP or non-IFRS/non-U.S. GAAP financial measures (as defined under Regulation G of the Exchange Act and Item 10 of Regulation S-K under the Exchange Act), (ii) stock price or (iii) total shareholder return. Financial Reporting Measures need not be presented within the Company’s financial statements or included in a filing with the SEC.
  - h) “Home Country” means the Company’s jurisdiction of incorporation, i.e., the Cayman Islands.
  - i) “Incentive-Based Compensation” means any compensation that is granted, earned or vested based wholly or in part upon the attainment of a Financial Reporting Measure.
  - j) “Lookback Period” means the three completed fiscal years (plus any transition period of less than nine months that is within or immediately following the three completed fiscal years and that results from a change in the Company’s fiscal year) immediately preceding the date on which the Company is required to prepare a Restatement for a given reporting period, with such date being the earlier of: (i) the date the Board, a committee of the Board, or the officer or officers of the Company authorized to take such action if Board action is not required, concludes, or reasonably should have concluded, that the Company is required to prepare a Restatement, or (ii) the date a court, regulator or other legally authorized body directs the Company to prepare a Restatement. Recovery of any Erroneously Awarded Compensation under the Policy is not dependent on whether or when the Restatement is actually filed.
  - k) “Nasdaq” means the Nasdaq Stock Market.
  - l) “Received”: Incentive-Based Compensation is deemed “Received” in the Company’s fiscal period during which the Financial Reporting Measure specified in or otherwise relating to the Incentive-Based Compensation award is attained, even if the grant, vesting or payment of the Incentive-Based Compensation occurs after the end of that period.
  - m) “Restatement” means a required accounting restatement of any Company financial statement due to the material noncompliance of the Company with any financial reporting requirement under the securities laws, including (i) to correct an error in previously issued financial statements that is material to the previously issued financial statements (commonly referred to as a “Big R” restatement) or (ii) to correct an error in previously issued financial statements that is not material to the previously issued financial statements but that would result in a material misstatement if the error were corrected in the current period or left uncorrected in the current period (commonly referred to as a “little r” restatement). Changes to the Company’s financial statements that do not represent error corrections under the then-current relevant accounting standards will not constitute Restatements. Recovery of any Erroneously Awarded Compensation under the Policy is not dependent on fraud or misconduct by any person in connection with the Restatement.
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n) “SEC” means the U.S. Securities and Exchange Commission.

## **2. Recovery of Erroneously Awarded Compensation**

In the event of a Restatement, any Erroneously Awarded Compensation Received during the Lookback Period prior to the Restatement (a) that is then-outstanding but has not yet been paid shall be automatically and immediately forfeited and (b) that has been paid to any person shall be subject to reasonably prompt repayment to the Company Group in accordance with Section 3 of this Policy. The Committee must pursue (and shall not have the discretion to waive) the forfeiture and/or repayment of such Erroneously Awarded Compensation in accordance with Section 3 of this Policy, except as provided below.

Notwithstanding the foregoing, the Committee (or, if the Committee is not a committee of the Board responsible for the Company’s executive compensation decisions and composed entirely of independent directors, a majority of the independent directors serving on the Board) may determine not to pursue the forfeiture and/or recovery of Erroneously Awarded Compensation from any person if the Committee determines that such forfeiture and/or recovery would be impracticable due to any of the following circumstances: (i) the direct expense paid to a third party (for example, reasonable legal expenses and consulting fees) to assist in enforcing the Policy would exceed the amount to be recovered, including the costs that could be incurred if pursuing such recovery would violate local laws other than the Company’s Home Country laws (following reasonable attempts by the Company Group to recover such Erroneously Awarded Compensation, the documentation of such attempts, and the provision of such documentation to Nasdaq), (ii) pursuing such recovery would violate the Company’s Home Country laws adopted prior to November 28, 2022 (provided that the Company obtains an opinion of Home Country counsel acceptable to Nasdaq that recovery would result in such a violation and provides such opinion to Nasdaq), or (iii) recovery would likely cause any otherwise tax-qualified retirement plan, under which benefits are broadly available to employees of the Company Group, to fail to meet the requirements of 26 U.S.C. 401(a)(13) or 26 U.S.C. 411(a) and regulations thereunder.

## **3. Means of Repayment**

In the event that the Committee determines that any person shall repay any Erroneously Awarded Compensation, the Committee shall provide written notice to such person by email or certified mail to the physical address on file with the Company Group for such person, and the person shall satisfy such repayment in a manner and on such terms as required by the Committee, and the Company Group shall be entitled to set off the repayment amount against any amount owed to the person by the Company Group, to require the forfeiture of any award granted by the Company Group to the person, or to take any and all necessary actions to reasonably promptly recover the repayment amount from the person, in each case, to the fullest extent permitted under applicable law, including without limitation, Section 409A of the U.S. Internal Revenue Code and the regulations and guidance thereunder. If the Committee does not specify a repayment timing in the written notice described above, the applicable person shall be required to repay the Erroneously Awarded Compensation to the Company Group by wire, cash, cashier’s check or other means as agreed by the Committee no later than thirty (30) days after receipt of such notice.

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#### **4. No Indemnification**

No person shall be indemnified, insured or reimbursed by the Company Group in respect of any loss of compensation by such person in accordance with this Policy, nor shall any person receive any advancement of expenses for disputes related to any loss of compensation by such person in accordance with this Policy, and no person shall be paid or reimbursed by the Company Group for any premiums paid by such person for any third-party insurance policy covering potential recovery obligations under this Policy. For this purpose, “indemnification” includes any modification to current compensation arrangements or other means that would amount to *de facto* indemnification (for example, providing the person a new cash award which would be cancelled to effect the recovery of any Erroneously Awarded Compensation). In no event shall the Company Group be required to award any person an additional payment if any Restatement would result in a higher incentive compensation payment.

#### **5. Miscellaneous**

This Policy generally will be administered and interpreted by the Committee, provided that the Board may, from time to time, exercise discretion to administer and interpret this Policy, in which case, all references herein to “Committee” shall be deemed to refer to the Board. Any determination by the Committee with respect to this Policy shall be final, conclusive and binding on all interested parties. Any discretionary determinations of the Committee under this Policy, if any, need not be uniform with respect to all persons, and may be made selectively amongst persons, whether or not such persons are similarly situated.

This Policy is intended to satisfy the requirements of Section 954 of the Dodd-Frank Wall Street Reform and Consumer Protection Act, as it may be amended from time to time, and any related rules or regulations promulgated by the SEC or the Nasdaq, including any additional or new requirements that become effective after the Effective Date which upon effectiveness shall be deemed to automatically amend this Policy to the extent necessary to comply with such additional or new requirements.

The provisions in this Policy are intended to be applied to the fullest extent of the law. To the extent that any provision of this Policy is found to be unenforceable or invalid under any applicable law, such provision will be applied to the maximum extent permitted and shall automatically be deemed amended in a manner consistent with its objectives to the extent necessary to conform to applicable law. The invalidity or unenforceability of any provision of this Policy shall not affect the validity or enforceability of any other provision of this Policy. Recovery of Erroneously Awarded Compensation under this Policy is not dependent upon the Company Group satisfying any conditions in this Policy, including any requirements to provide applicable documentation to the Nasdaq.

The rights of the Company Group under this Policy to seek forfeiture or reimbursement are in addition to, and not in lieu of, any rights of recovery, or remedies or rights other than recovery, that may be available to the Company Group pursuant to the terms of any law, government regulation or stock exchange listing requirement or any other policy, code of conduct, employee handbook, employment agreement, equity award agreement, or other plan or agreement of the Company Group.

#### **6. Amendment and Termination**

To the extent permitted by, and in a manner consistent with applicable law, including SEC and Nasdaq rules, the Committee may terminate, suspend or amend this Policy at any time in its discretion.

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## **7. Successors**

This Policy shall be binding and enforceable against all persons and their respective beneficiaries, heirs, executors, administrators or other legal representatives with respect to any Covered Compensation granted, vested or paid to or administered by such persons or entities.

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