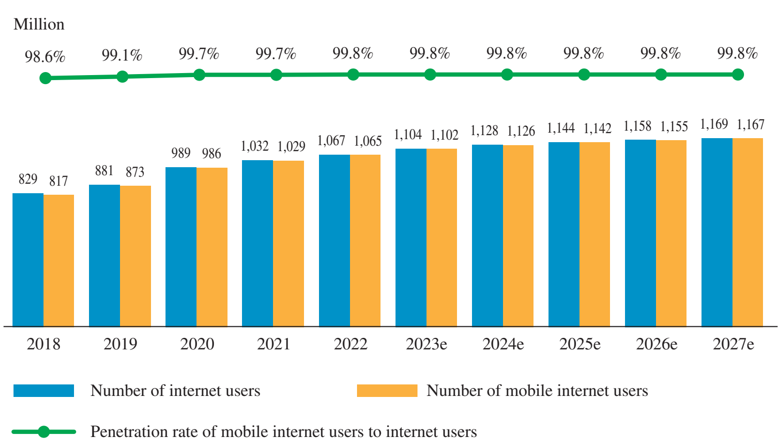
The information presented in this section is derived from various official government publications and other publications and from the iResearch Report which was commissioned by us, unless otherwise indicated. The information from official government sources has not been independently verified by us, the Sole Sponsor, the [REDACTED], the [REDACTED], the [REDACTED], the [REDACTED], the [REDACTED], any of their respective directors, agents, advisers or affiliates or any other party involved in the [REDACTED] (except for iResearch) and no representation is given as to its accuracy.

THE INTERNET MARKET IN CHINA

China's internet industry has been developing continuously in recent years. The internet continues to create new industry opportunities and connects more closely with people's lives. Although the growth rate of the number of internet users in China has slowed down in recent years, the overall internet penetration level in China is high and will further improve in the future.

According to China Internet Network Information Center ("**CNNIC**") and iResearch, in 2022, the number of internet users in China is approximately 1,067 million, the number of mobile internet users is approximately 1,065 million, the penetration rate of mobile internet users to internet users is 99.8%. As people rely more and more on smart phones and other smart devices, the penetration rate of mobile internet has been gradually increasing, nearly close to 100.0%. In addition, the use of resources on mobile apps permeates all aspects of daily life and mobile apps become important platforms for mobile online marketing.

Number of internet users and mobile internet users in China, 2018–2027e



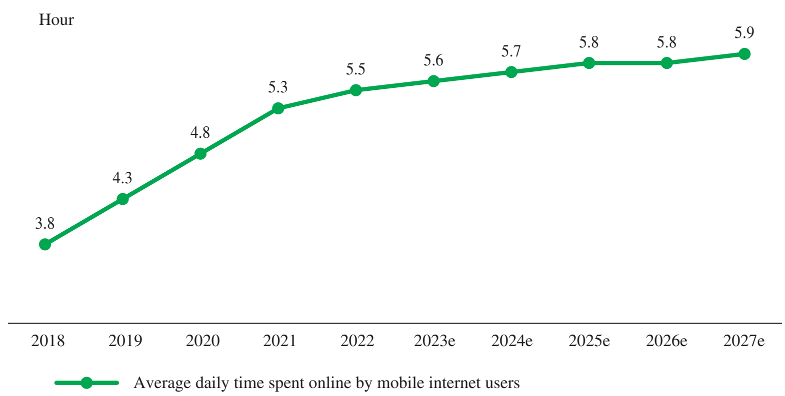
Source: CNNIC, iResearch

In recent years, with the maturity of mobile internet network construction, the average mobile internet user traffic cost in China has been declining, from RMB86 per Gigabyte (GB) in 2015 at a CAGR of approximately -39.3% to approximately RMB2.6 per GB in 2022, according to MIIT and iResearch. In addition, it is expected to further decrease from 2022 at a CAGR of approximately -6.1% to approximately RMB1.9 per GB in 2027. Mobile internet users can use the mobile internet at a lower cost, which has also stimulated the growth of mobile internet access traffic. Mobile internet traffic in PRC increased from approximately 4.2 billion GB in 2015 to approximately 261.8 billion GB in 2022 at a CAGR of approximately 79.1%. The decline in mobile internet costs, and the development of network infrastructure and 5G technology have continuously optimised the user experience of mobile internet and attracted more mobile internet users, which have created good user base for mobile internet marketing.

Average daily time spent online by mobile internet users in China

Mobile internet users in China spend more time online gradually. In 2022, the average daily time spent online by mobile users was approximately 5.5 hours in China, approximately 3.4% more than that in 2021. The COVID-19 pandemic and the rapid development of mobile information technology are the two core reasons for the increase. It is expected that there will be an increase in the average daily time spent online by mobile users in the future because of the continuous escalation of mobile terminal equipment before a saturation point is gradually reached.

Average daily time spent online by mobile internet users in China, 2018–2027e



Source: iResearch

IMPACT OF COVID-19 TO THE INTERNET MARKET

iResearch had also fully taken account of the mixed impacts brought by the COVID-19 to online marketing market into consideration in the assumptions regarding the market sizing forecast, including the following aspects:

- **More time spent on mobile devices.** During the COVID-19 pandemic, people spent less time outside in order to respond the "Social Distancing" regulation. Meanwhile, they studied, worked and sought for entertainment through online channels. Hence, average daily time spent online by mobile users has greatly increased.

- **Advertising shifted to online.** Under the influence of COVID-19, online office software, education and other online entertainment apps were thriving in 2020. To cope with limited offline exposure during COVID-19, some advertisers have adjusted marketing tactics and shifted advertising budget to online.

- **Some industries hit by COVID-19.** Because of the travel restriction and inconvenience of offline consumption, industries such as tourism, catering and lodging are vulnerable to COVID-19. The advertising budget from such industries may have decreased.

- **Marketing activities postponed to control budget.** Exposed to business operation pressure, some advertisers adopt a more conservative way to carry out advertising and tend to postpone certain marketing activities for the sake of controlling budget.

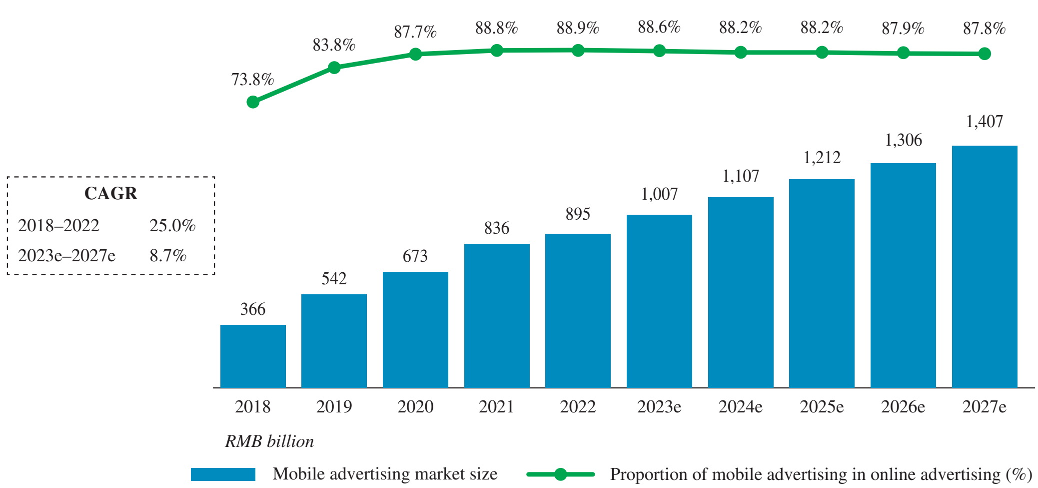
In summary, COVID-19 pandemic has not had material adverse impact on mobile advertising market in 2021 and the market size of mobile advertising in 2021 increased compared with that in 2020. In early 2022, the COVID-19 resurged across several regions in China, which exerted negative influence on economic activities and enterprise operation. Under such circumstances, some marketers tend to tighten the marketing budgets to some extent, and, thus, the growth in advertising industry slowed down in 2022. With the release of "10 New Measures" and the optimisation of epidemic prevention and control policy since December 2022, consumers will regain confidence and production capacity of enterprises will recover gradually. Therefore, it is expected that there will be an increase in demand for advertising and mobile advertising scale will expand further in 2023.

THE MOBILE ADVERTISING INDUSTRY IN CHINA

The market size of mobile advertising industry

Mobile advertising has a huge lead in online advertising industry. According to the iResearch Report, the market size of mobile advertising industry in China, as measured by total advertising gross billing, increased from approximately RMB366 billion in 2018 to approximately RMB895 billion in 2022 with a CAGR of approximately 25.0%, and it is expected to reach approximately RMB1,407 billion in 2027. With the popularity of mobile devices and user migration pattern across media platforms, the share of mobile advertising as a proportion of online advertising gradually increased. Mobile advertising industry accounted for approximately 88.9% of the online advertising industry in China in 2022 and it is expected to reach approximately 87.8% in 2027.

Market size of mobile advertising industry in China, 2018–2027e



Source: iResearch

Price of advertising space in the mobile advertising industry

Ad inventory refers to advertising space available on media platforms offered by media publishers. Each media publisher has its respective ad inventory pricing and bidding mechanism for each of its media platforms and such mechanism is not completely transparent. Media publishers generally control the bidding process for advertising space and they may place restrictions on the use of advertising space. Advertisers generally compete with each other to bid for high quality advertising space on media platforms with high content quality and large user base in order to achieve maximum exposure. The price of advertising space on media platforms varies. Top media publishers which operate various media platforms with high content quality and large user base generally have more bargaining power over advertisers. In the past few years, the mobile advertising industry in the PRC experienced rapid expansion. There was a growth in the price of advertising space possessed by top media publishers as advertisers had strong advertising needs and high quality advertising space were limited. It is expected that the growth in the mobile advertising industry will be moderate and the pricing and bidding mechanism will become stabilised and mature and, thus, the increase in the price of advertising space will slow down or remain relatively stable. It is a common market practice that any increase in the price of advertising space purchased by mobile advertising service providers would be passed on to advertisers or be borne by the advertisers in full.

The value chain of mobile advertising industry

The value chain of PRC mobile advertising industry mainly involves 5 main players, namely advertisers, mobile advertising service providers, content creators, media platforms and consumers.

- **Advertisers:** A person or business that promotes its brands, products and services through advertising activities.

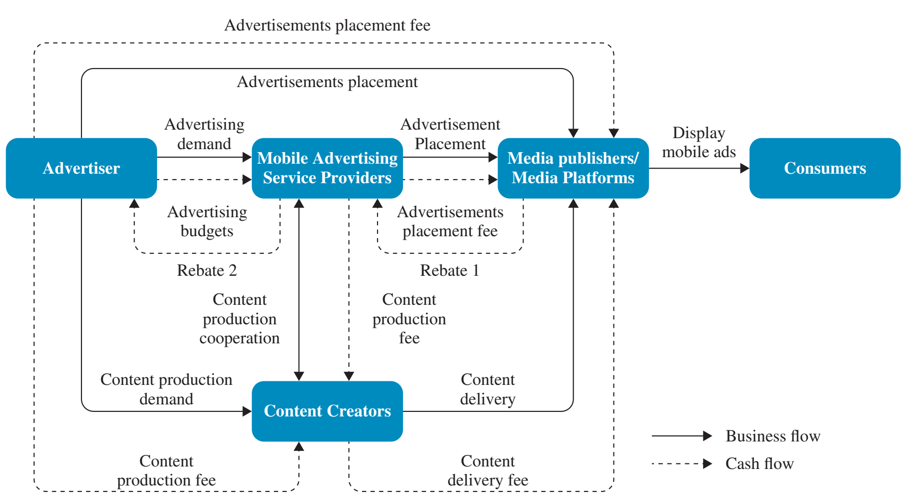
- **Mobile advertising service providers:** Mobile advertising service providers are the bridge linking advertisers and media platforms. They have established close relationship with top media platforms and are equipped with rich industry experience, which can help advertisers optimise advertising strategies and improve marketing efficiency. In addition to advertising placement services, some of them also provide creative design, advertising strategies, data analysis and other related services. Mobile advertising service providers usually provide both mobile advertising solutions services and advertisement distribution services. To enhance their competitiveness in the mobile advertising industry, they would generally expand their capacities to provide value-added services to advertisers.

- **Content creators:** A person or business that produce ad contents, whose service scope generally cover animated graphics and texts production, short video filming and etc. Depending on the business needs, advertisers may create the content directly or appoint mobile advertising service providers to serve as content creators.

- **Media platforms:** A system of platform for disseminating information over the mobile internet, including social media, search engines, e-commerce platforms, news portals and app stores, etc. Advertising is an important approach for media platforms to monetise traffic.

- **Consumers:** A person or business that perceive advertising activities and may purchase goods or services.

The Value Chain of mobile advertising industry in China



Source: iResearch

Competitive landscape of internet media platforms

According to the iResearch Report, the top internet enterprises takes up the major market share in mobile online advertising industry. In terms of the top 5 internet enterprises (Alibaba, ByteDance, Pinduoduo, Tencent and Baidu), their advertising revenue has occupied over 75% of online advertising industry in China in 2022. The industry market of media publishers is highly concentrated. As the online advertising industry continue to develop, it is estimated that the traffic source and advertising revenue will be more concentrated on the top internet enterprises and their market share in the industry will be higher in the future. Therefore, (i) it is common for mobile advertising service providers in the PRC to acquire advertising space for placement of mobile ads from a few operators of online media platforms; and (ii) it is common for media publishers to be customers when they have the marketing needs to promote their brands, products, and/or services on other online media platforms.

Value of mobile advertising service providers

It is uncommon and not economically efficient for top media platforms to transact with advertisers directly, as (i) compared to acquisition of advertising space from top media platforms, advertisers are in greater need of value-added services provided by online marketing solutions providers, such as creative planning of ad campaign, production of ad creatives and management of campaign performance, to achieve better marketing effectiveness; while media platforms generally do not offer such value-added services as they have to invest time and efforts to learn about advertisers' diverse and evolving marketing needs and closely monitor campaign performance to achieve desired results; and (ii) to monetise user traffic is more economically efficient than to provide value-added services and is currently the primary monetisation method for media platforms. In short, mobile advertising service providers generally provide more services to advertisers than media platforms and monetise advertising inventories of media platforms in a more efficient manner.

Media publishers usually engage mobile advertising service providers on advertising space distribution, for the purpose of saving cost, so that they do not need to maintain a large team of manpower to handle placement requests from the advertisers. Generally, advertisers choose to engage mobile advertising service providers, which can place mobile ads or liaise with media publishers directly, owing to the discounts and add-on services offered by the mobile advertising service providers.

THE IN-FEED ADVERTISING

Mobile advertising service providers generally provide mobile ads displayed in different forms and in-feed advertising is one of the major types of mobile ads. In-feed refers to a new way of displaying content, and in-feed advertising refers to the mobile ads appearing in the information flow content. In-feed ads do not disturb the user experience on the media platforms and are effective for advertisers to market their brands, products and services. Users can continuously obtain information through sliding down on the screen when viewing the content of the mobile platforms. According to the form of content in in-feed, it can be divided into text and image in-feed and short video in-feed. In-feed content is integrated seamlessly in the content of the feeds of an app or website, or consistent with the components of the app or web interface. The user can browse to the advertising space in a fixed position by constantly refreshing the information flow content. Mobile advertising service providers with capacities for production of ad contents, which are attractive and creative, can enhance the user experience on the media platforms and can meet marketing goals of their customers in an effective manner. The commonly used pricing model of in-feed advertising is CPM and CPC.

In-feed advertising generally in the form of text, image and/or short video. According to the iResearch Report, short videos have become a major content form of in-feed advertising due to the easy access and attention catching content of short videos. In-feed advertising in the form of short video has gained great popularity among audiences and advertisers, and has become a major form of entertainment. Compared to texts and images, short videos are intrinsically (i) able to convey more abundant and diversified content; (ii) easier to capture the attention of internet users and more memorable, enabling internet users to retain more information from the video content; and (iii) more engaging, enhancing internet users' social interaction and driving more user traffic.

Key drivers of the mobile advertising industry in China

The mobile advertising industry and in-feed advertising in China are expected to continue its growth and such expectation is determined by several key drivers as set out below:

- **Growing number of mobile users.** According to CNNIC, as of December 2022, the number of mobile internet users in China has exceeded 1 billion. The increasing penetration rate of mobile internet users shows that internet users are gradually migrating to the mobile devices. Internet users' browsing behaviours and consumption habits have been reshaped in the mobile era.

- **Rising marketing needs.** The role of advertising is diversified. In face of industry competition and marketing needs, advertising can assist advertisers to build brand awareness, acquire new customers, retain existing customers and particularly achieve business growth. The rising marketing demand boosts the development of the advertising industry. Further, as advertisers show increasing preference on in-feed contents, their needs for in-feed advertising also increase. From strategic advice to data monitoring, every procedure of short video advertising contains large potential business opportunities, thus motivates the development of short video ad service.

- **Expanding monetisation demand.** The media platforms meet mobile users' needs and accumulate user traffic through differentiated contents and scenes. Since advertising is an important commercialisation approach for various media publishers of media platforms, they strive to optimise placement of mobile ads and improve user interaction based on different scenarios.

- **Technological innovation and application of advanced technologies.** With the development of 5G and VR (virtual reality) technology, the application of technology in advertising industry has become more and more extensive and flexible. Technology innovation makes advertising activities more immersive and efficient, enhances customers' viewing experience and improves advertisers' ROI. Moreover, the application of advanced technologies will also drive the demand for in-feed ads. The application of 5G technology and infrastructure will improve in-feed user experience, diversify in-feed presentation forms and advance the technology development of in-feed. In particular, big data analytics are able to optimise ad performance on a real-time basis and improve the marketing efficiency. AR (augmented reality) is able to provide more vivid visual effects and improve the immersive and interactive user experiences for the in-feed ads. AI (artificial intelligence) is able to achieve accurate audience profiling through deep learning and help advertisers precisely target and reach the types of audiences best suited in the ad campaigns. All of the abovementioned advanced technologies help stimulate target consumers' desires to spend and maximise the rate of return of the advertising spending of advertisers, which in turn further expands the use of in-feed ads for advertising.

- **User demand of in-feed content.** In the era of mobile internet, the user's content consumption habits are more fragmented since new forms of media capture attention of consumers. The short and convenient in-feed content better meets the needs of mobile users. Therefore, the demand of mobile user for in-feed content promotes the rapid development of in-feed advertising.

- **Commercialisation of in-feed advertising platforms.** The growth of in-feed advertising platforms has entered into a steady development phase and in-feed advertising platforms are motivated to commercialise their products and services. The in-feed advertising platforms monetise their user traffic by offering advertising space to advertisers, which brings immense business opportunities for advertising service providers with a focus on in-feed advertising.

Barriers to entry of the mobile advertising industry in China

New entrants with a focus on in-feed advertising of the mobile advertising industry in China face the following entry barriers:

- **Media resources.** Media resources are essential to mobile advertising service providers and the main reasons are as follows: (a) media publishers of the top media platforms generally have larger user base, mature advertising ecology and higher internet exposure; and (b) establishment of long-term and stable partnerships with the media platforms helps advertising service providers to keep abreast of media platforms' advertising policies, attract advertisers and achieve performance growth. New advertising market entrants may lack in media resources and industry knowledge and experience.

- **Service and in-feed advertising optimisation capabilities.** The business scope and service are also one of the entry barriers in mobile advertising market. Currently, types of advertisers are increasingly abundant and complicated, including multiple dimensions such as creative ad design, ad display, data analysis and so on. Mobile advertising service providers that can cover integrated services and with a focus on in-feed advertising are supposed to capture more market shares. In-feed ads is one of the major types of mobile ads. One of the characteristics of in-feed content is personalised push, and users can obtain content according to their own interests and preferences. It also requires a lot of in-feed personalised advertising optimisation to recommend in-feed advertising to more appropriate users in in-feed content. Therefore, in-feed advertising service providers with more professional in-feed advertising optimisation team and rich experience in in-feed advertising optimisation will have greater barriers to competition.

- **Capital reserve.** Advertising service providers with sufficient funds may attract advertisers to cooperate as they can appropriately extend the billing periods for them. At the same time, funds can be invested in talent recruitment, research and development and other programmes that are beneficial to the prospects of the advertising service providers.

- **Content production and advertising creative ability.** When advertisers carry out in-feed advertising activities, they usually need to produce a large number of content materials and advertising creativity. Therefore, in-feed content production and advertising creative ability are also important competitive barriers for advertising service providers with a focus on in-feed advertising.

- **Technology barriers.** Proprietary technologies, including AI and big data analytics capabilities, are essential for the provision of precise advertising solutions. Data analysis will assist advertising service providers to better serve advertisers and formulate development strategies. In addition, reliable technology infrastructure serves as the foundation for launching and managing large scale ad campaigns in real-time, which cannot be replicated by new market entrants in a short period of time.

Risk and threats of the mobile advertising industry in China

Market players with a focus on in-feed advertising in the mobile advertising industry in China may face the following risk and threats as set out below:

- **Partnership with media platforms.** Generally speaking, the framework agreement between media platforms and mobile advertising service providers is signed/renewed on an annual basis. Advertisers prefer top media channels as those media channels accumulate huge traffic and have large user bases. Therefore, if the partnership relationship with media platforms changes, mobile advertising service providers may face higher churn rate.

- **Application of technology.** The application of technology in advertising industry continues to deepen. If mobile advertising service providers fail to seize the opportunities of technological innovation or improve their own technical capabilities, it will affect their service quality in the long run.

- **Macroeconomic situation.** China's mobile advertising development is inextricably linked to macro-economy. If downward pressure on PRC and global economy increases, advertisers' business operations will be negatively affected and advertising budgets tend to shrink. From another prospective, spending willingness and power of consumers will decline under economy fluctuation.

- **Policy risk.** Policies on the advertising industry, media or mobile operating system will directly impact mobile advertising service providers and advertisers. For instance, IDFA (Identifier for Advertising), which is an anonymised device identifier assigned by Apple to a user's device, is used to track data such as user behaviours for the purpose of ad targeting, personalisation and measurement. Under new policy, IDFA will be turned off unless getting express authorisation. This policy leads to low opt-in rate and affects mobile ads targeting to some extent. National Press and Publication Administration released the rule that requires online game enterprises to impose time limits on minors and tighten the examination of game contents. In addition, online game account trading services are prohibited for underage gamers.

- **Cashflow mismatch.** There may be timing mismatch between the payments for advertising space to media partners and the receipt of payments from customers. Such timing mismatch may expose the mobile advertising service providers to liquidity issue and credit risk.

Competitive landscape

China's mobile advertising industry experienced rapid growth and have achieved solid growth in the market size in recent years. To enrich advertisers' needs, it is expected that mobile advertising service providers will tend to expand their business and provide one-stop mobile advertising solutions services, including traffic acquisition, ad contents creation and production, ad placement and data analysis. Additionally, mobile advertising service providers with established relationship with media partners, strong service and production capacities and sufficient capital reserve capabilities are expected to maintain their market position and are in the better position to capture development opportunities in the foreseeable future.

According to the iResearch Report, the mobile advertising market is fragmented and competitive with the 5 largest players accounting for approximately 9.6% of market share in terms of gross billing in 2022. We are one of the service providers in the mobile advertising industry in China with a market share of approximately 0.1% in terms of gross billing in 2022.

Top 5 advertising service providers in terms of gross billing in mobile advertising industry in 2022

Ranking	Company	Gross billing, 2022 *(approximately RMB billion)*	Market share	Background	Listing status
1	Beijing Yunrui International Culture Media Co., Ltd.* (北京雲銳國際文化傳媒有限公司) *(Note 1)*	25	2.8%	It is a member of a leading media communications service group in the PRC that provides one-stop integrated marketing services	Non-listed
2	Xia Ke Xing (Shanghai) Advertising Co., Ltd.* (俠客行 (上海) 廣告有限公司) *(Note 1)*	17	1.9%	It is a fast-growing digital advertising company that provides marketing services in the PRC	Non-listed
3	Beijing Aspiration Internet Technology Co., Ltd.* (北京派瑞威行互聯技術有限公司) *(Notes 1&2)*	16	1.8%	It is a digital advertising services provider with business covering advertising, creative services, live stream marketing and etc., in the PRC	It is a subsidiary of Zhewen Interactive Group Co., Ltd., the shares of which are listed on the Shanghai Stock Exchange (stock code: 600986)
4	Shanghai Cue Co., Ltd (上海開域信息科技有限公司) *(Note 1)*	15	1.7%	It delivered digital services and solutions such as digital marketing for customers' business	Non-listed

Ranking	Company	Gross billing, 2022 *(approximately RMB billion)*	Market share	Background	Listing status
5	UJU Holding Limited	12	1.4%	It provides one-stop cross-media online marketing solutions, in particular online short video marketing, in the PRC	The shares of this company is listed on the Stock Exchange (stock code: 1948)
—	Our Group	0.8	0.1%	See "Business" in this document	—

Notes:

1. The information on gross billing is not publicly available information and was obtained by iResearch through their interviews.

2. The information on gross billing is not available in the annual report of Zhewen Interactive Group Co., Ltd. and is different from the amount of revenue disclosed in its annual report.

Source: iResearch

Competitive advantages of our Group

For a detailed discussion of our Group's competitive strengths, see "Business — Competitive strengths" in this document.

Future trends of the mobile advertising industry in China

The mobile advertising industry and in-feed advertising in China are expected to be influenced by the following trends:

- **Marketing SaaS.** Marketing SaaS refers to providing marketing services to advertisers in the form of SaaS. Marketing SaaS covers a wide range of services, including Strategic & Insight, Content & Creative, Media & Ads and Customer Management. The advantages of marketing SaaS platforms are as follows: (1) greatly improve campaign efficiency; (2) reduce resource consumption; (3) accumulate vital data assets; (4) gain better transparency and instant feedback from campaigns; and (5) support marketing strategy optimisation.

- **Advertising industry compliance.** The implementation of the Personal Information Protection Law (《中華人民共和國個人信息保護法》) regulates personal information processing and guarantees the safety of personal information and data. Under advertising ecology, personal information should be handled in the manner of "express notification-consent". Also, using personal information for automated decision making should not apply unreasonable treatment to individuals in terms of transaction prices and other conditions. In the long run, industry chain main players will jointly promote the healthy development and compliance of advertising industry.

- **In-depth advertising service.** With the enrichment of advertisers' needs, advertising service providers tend to expand their business and provide one-stop mobile advertising solution services, including but not limited to traffic acquisition, advertising contents creation and production, advertising placement and data analysis. It is a trend in advertising market that mobile advertising service providers also serve as content creators. Based on the industry knowledge and service experiences of advertising service providers, they will continuously enhance technical capability, modify advertising strategies and provide more personalised and in-depth services for advertisers in different industries.

- **Short video becomes the main content form for in-feed advertising.** The most common forms of in-feed advertising are text, image and short video. With the increase of internet speeds and the formation of users' short video reading habits, in-feed content will gradually take short video content as the main presentation mode in the future.

- **Full cycle service capability.** In order to meet evolving needs of advertisers, mobile advertising service providers with a focus on in-feed advertising tend to provide full cycle advertising services, including traffic acquisition, production of ad creatives, precise targeting and data analysis, rather than acting as an intermediary, which only provides advertisement distribution services.

- **Establishment of in-house content production team.** Content production capability is a key factor that differentiates in-feed advertising service providers as the attractiveness of quality ad contents contributes to the success of ad campaigns. Especially short video streaming advertising, it is expected that an increasing number of advertising service providers with a focus on in-feed ads in video format will establish in-house content production team to diversify and strengthen their service offerings.

- **Development of data technologies.** Data assets are critical to advertising service providers. With data analytics technologies, in-feed advertising service providers are able to collect, monitor and analyse data assets to obtain valuable insights and evaluate the performance of ad campaigns. This allows both advertisers and in-feed advertising service providers to adjust and implement marketing strategies more accurately.

SOURCE OF INFORMATION

Industry report from iResearch

We have commissioned iResearch, an Independent Third Party, to conduct a research on the online marketing industry in the PRC and to prepare the iResearch Report at a total fee of RMB580,000. Founded in 2002, iResearch is an independent provider of online user data and consumer insights in China. Headquartered in Beijing and Shanghai, iResearch has a management team with over 600 employees worldwide and has accumulated extensive experience in researching and monitoring the development of the internet industry in the PRC.

Methodology

Data for the iResearch Report on market size and online users is mainly obtained through interviews with industry participants, marketing surveys, secondary sources and other research methods. Due to the limitations of such research methods, sample and size and scope of data collection, such data may not precisely reflect actual market conditions.

Assumptions and parameters

iResearch has prepared the iResearch Report on the assumptions that (i) the global and China's social, economic and political environments will remain stable during the period from 2023 to 2027, which will ensure a sustainable and steady development of online marketing industry; (ii) the data quoted from authoritative agencies remains unchanged; (iii) the revenue-sharing arrangements among the market participants follow market standards; and (iv) there is no abrupt changes to the law and regulations of the mobile advertising industry in the PRC. iResearch believes that the basic assumptions used in preparing the iResearch Report, including those used to make future projections, are correct, reasonable and not misleading. iResearch has independently analysed the information obtained from its research, but the findings contained in the iResearch Report largely rely on the accuracy of the information collected.

Except as otherwise noted, all of the data and forecasts contained in this section are derived from the iResearch Report, and other reliable sources such as various official government and other publications. After making reasonable inquiries, our Directors confirm that there has been no adverse change in the market information presented in the iResearch Report since the date of its issuance which may materially qualify, contradict or impact the information in this section.