ESG AT WECHAT PAY TO SUPPORT SMES

WeChat seized the opportunity when the industry transitioned from PC to phones, and turned it into a success. I don't think a product of the same kind will be a threat to us, but an emerging user demand might be, especially a social need that we fail to satisfy.

- Allen Zhang, Founder of WeChat[1]

Sitting in his office in Tencent's headquarters, Allen Zhang, the "father of WeChat," was thinking about how WeChat Pay could improve its service and products to small and medium-sized enterprises (SMEs), achieving the objective of "Value for Users, Tech for Good." WeChat was a business group of Tencent, a leading internet and technology company that was committed to improving its corporate environmental, social, and governance (ESG) criteria, an increasingly important trend in the business world. One of WeChat's ESG efforts was to provide technical solutions to assist SMEs. SMEs played an important role in the economy. However, they often had limited resources and different unmet business needs, which made it more difficult to survive and succeed than those larger companies.

When creating and developing WeChat, Allen Zhang emphasized product design and product usefulness for customers. Facing the rapid changes of mobile payments in China, Allen saw the need to redesign or improve product offerings. The SME sector was one of the important target customer groups WeChat Pay wanted to serve. Allen was considering how WeChat Pay could improve its existing SME product offerings and provide better technical solutions to help SMEs and have more positive social impact. In view of the diversity of SMEs and the difficulties SMEs faced in business operations, a consulting firm was brought in to brainstorm and propose alternative products that WeChat Pay could provide to SMEs.

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[1] Julian Birkinshaw and Dickie Liang-Hong Ke, "Changemakers: Allen Zhang," London Business School, 27 September 2019, https://www.london.edu/think/changemakers-allen-zhang, accessed 13 November 2021.

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SMEs in China

Currently, the pandemic, rising commodity prices and supply chain issues have formed multiple challenges to SMEs, which are at a difficult stage.

- Huiman Yi, Chair of the China Securities Regulatory Commission[2]

SMEs played an important role in China's economy. More than 90% of Chinese companies were SMEs, which created 80% of job opportunities, owned over 70% of patents, and contributed to more than 50% of tax revenue and 60% of GDP in the country. [3] In 2021, the number of small businesses in China reached 28.93 million, an increase of 29.5% from 2020. [4]

But SMEs' survival rate was low. Worldwide, about 20% of SMEs failed in the first year and only one-third survived for 10 years or more.[5] One of the major reasons was the lack of funding. Financial institutions were reluctant to lend to SMEs and often required collateral[6] or other forms of financial guarantees, because SMEs had higher risks, higher failure rates, and lower profit margins than large companies. Additionally, many small business owners lacked human capital and necessary business skills, such as business planning, marketing, and IT skills, to make their business a success.

The survival of SMEs became more difficult after the outbreak of the coronavirus pandemic. In China, the failure rate of SMEs was 18.5% in 2020, nearly triple that in 2019.[7] The lack of sufficient business agility and digital savvy put SMEs in difficult situations when they faced some major challenges, such as supply chain breakdowns, raw material shortages, rising commodity prices, labor shortages, and lack of demand.

The Chinese government launched a number of policies to help companies, including tax reduction, rent relief, employee social security payment deferrals, and subsidies. In the first seven months of 2021, for instance, the People's Bank of China's loans to small and micro-sized enterprises reached RMB17.8tn (about USD2.75tn), which was up 29.3% year on year.[8] Supporting the development of the large number of SMEs was the priority of the Chinese government to achieve "six stability" and "six guarantees" work,[9] ensuring China's stable and healthy economic development in the turbulent world economy. [10] Despite the government's efforts, compared to large companies, SMEs found it more difficult to cope with the pandemic

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[2] Daye Chu, "China to offer more policies to support financing for SMEs," *Global Times*, 7 September 2021, https://www.globaltimes.cn/page/202109/1233614.shtml, accessed 23 October 2021.

[3] C. Textor, "Number of SMEs in China 2012-2020," Statista, 11 March 2021, https://www.statista.com/statistics/783899/china-number-of-small-to-medium-size-enterprises/, accessed 23 October 2021.

[4] Daye Chu, "China to offer more policies to support financing for SMEs."

[5] US Small Business Administration, "Frequently Asked Questions," September 2019, https://cdn.advocacy.sba.gov/wp-content/uploads/2019/09/23172241/Frequently-Asked-Questions-Small-Business-20191.pdf, accessed 1 December 2021.

[6] Collateral means "the valuable property owned by someone who wants to borrow money, that they agree will become the property of the company or person who lends the money if the debt is not paid back." [Cambridge Dictionary, "collateral," https://dictionary.cambridge.org/dictionary/english/collateral, accessed 11 March 2020.]

[7] Xiaobo Zhang, "Survey: China's small and medium-sized enterprises rebounded after the COVID-19 lockdown, but economic problems linger," 22 October 2020, https://www.ifpri.org/blog/survey-chinas-small-and-medium-sized-enterprises-rebounded-after-covid-19-lockdown-economic, accessed 1 December 2021.

[8] Daye Chu, "China to offer more policies to support financing for SMEs."

[9] Six stability refers to " keep employment, the financial sector, foreign trade, foreign and domestic investments, and expectations stable," while six gurantees refers to ensuring security in the areas of "employment, basic living needs, operation of market entities, food and energy security, stable industrial and supply chains and the normal functioning of primary-level government." [Source: *China Daily*, "ensure security in the six areas," 23 June 2020, https://language.chinadaily.com.cn/a/202006/23/WS5ef15ba5a310834817254c71.html, accessed 9 May 2022.]

[10] People's Bank of China, "The State Council Information Office: Supporting the development of small, medium and micro enterprises," 7 September, 2021, http://m.safe.gov.cn/safe/2021/0907/19769.html, in Chinese, accessed 9 May 2022.

and the increased costs of production and accounts receivable because of their limited income and few employees. [11] Therefore, the Chinese government also pledged more support to SMEs.

The Company

A Brief History of Tencent

Allen joined Tencent, the parent company of WeChat, after Tencent acquired Foxmail in 2005. Established in 1998, Tencent was headquartered in Shenzhen, China. Listed on the Hong Kong Stock Exchange in 2004, Tencent offered fintech, cloud computing, advertising, and other businesses.

In October 2010, Allen noticed that Kik, an application software with a free SMS chat function, immediately attracted the attention of 1 million users in just two weeks. He came up with the idea of developing an instant messaging (IM) mobile app and emailed Pony Ma, the cofounder and the CEO of Tencent. In January 2011, WeChat was formally launched in China.

Allen recalled that the competition was very intense at the start, and the introduction of voice messaging in May 2011 gave WeChat an edge to survive and thrive. In August, WeChat introduced the Shake function, allowing nearby strangers to communicate and make friends, which immediately boosted the number of users. In December, WeChat formally launched its international version along with the QR code function that enabled people to make friends by scanning the personal QR code. In April 2012, WeChat introduced Moments, a function that allowed users to share information with their friends using texts and images. It was the first attempt to become a social media platform.

> *I'm expecting more bottom-up innovations in future. Most may fail, but it's great even if only a few make it through. In particular, I am encouraging innovation in offerings around WeChat . . . But freedom to innovate also means taking responsibility. I have seen teams change from feeling totally self-assured to panic, the moment they know it's their full responsibility.*
>
> - Allen Zhang, Founder of WeChat[12]

In August 2013, WeChat Pay was launched, offering a wide range of payment options [**Exhibit 1**]. SMEs could use WeChat Pay's products and services in many ways, depending on their IT capabilities and needs [**Exhibit 2**]. If companies did not have IT capabilities, they could rely on external service providers. In 2019, WeChat Pay transformed its service provider system, changing its position from a "payment service provider" to an "operation service provider." WeChat wanted to leverage its capabilities not only to provide an online payment channel but also to develop ecosystems for various industries to improve production efficiency and reduce costs for companies.[13]

In December 2021, the global combined monthly active users (MAU) of Weixin and WeChat was 1,268 million, a 3.5% year-on-year increase from 1,225 million in 2020.[14] [See **Exhibit 3** for a brief history of WeChat development.]

[11] People's Bank of China, "The State Council Information Office: Supporting the development of small, medium and micro enterprises," 7 September, 2021, http://m.safe.gov.cn/safe/2021/0907/19769.html, in Chinese, accessed 9 May 2022.

[12] Julian Birkinshaw and Dickie Liang-Hong Ke, "Changemakers: Allen Zhang."

[13] Tencent, "WeChat Pay releases a multidimensional strategy for different industries with the aid of 'tool boxes'," 19 March 2019, https://www.tencent.com/en-us/articles/2200911.html, accessed 12 December 2021.

[14] Tencent Holdings Limited, 2021 Annual Report.

In the 2021 financial year, Tencent's revenue reached RMB560.1bn, representing a year-on-year increase of 16%.[15] [See **Exhibit 4** for Tencent's financial performance.] Revenue from fintech and business services increased by 31% to RMB172.2bn on a year-on-year basis, reflecting higher revenues from commercial payment, wealth management, and cloud services, which were driven by their expanded user base and business scale.[16] Tencent's social networks revenue accounted for nearly 21% of its total revenue and reached RMB117.3bn in 2021.[17]

Corporate ESG Efforts

Everything that Tencent does is focused on our users and our corporate mission is "Value for Users, Tech for Good." In line with this approach, we have been striving to fulfill our social responsibilities in all of our businesses.

- Ge Yan, Assistant General Manager, Corporate Social Responsibility (CSR) Division[18]

In September 2006, Tencent established Tencent Charity Foundation, which was the first charity foundation developed by a Chinese technology company. At first, Tencent donated about USD3.1mn as seed funding and promised to donate a percentage of its profits in each of the following years.[19] Tencent published its first CSR report in 2008, making Tencent the first technology company in China to do so. [20]

To become a conscientious and responsible internet company, Tencent followed the principle of sustainability and integrity, promoted industrywide shared growth and development, and emphasized environmental protection, staff development, and community welfare.

Tencent conducted and reviewed its ESG strategy from the following five perspectives [see **Exhibit 5** for Tencent's stakeholder analysis]:

- Business operations: Tencent wanted to ensure it operated with integrity in compliance with laws and regulations, while protecting shareholders' interests and caring for employees' welfares.

Adopting a "privacy by design" approach, Tencent placed user privacy and data security as top priorities and used advanced technologies including data encryption, data masking, de-identification, and quantum cryptography to ensure data security. [21] Tencent developed antifraud and whistleblowing policies to identify and prevent fraud and corruption. Tencent was committed to strengthening the board diversity of gender, background, and expertise to ensure effective governance.

- Users: When making business decisions, Tencent prioritized the interests of users by listening and responding to users' needs and improving product and service quality.

WeCounty, for example, was Tencent's digital solution for rural areas to support rural vitalization by connecting to the outside world, serving over 15,000 villages and 2.5 million

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[15] Tencent Holdings Limited 2021 Annual Report.

[16] Tencent Holdings Limited 2021 Annual Report.

[17] Mansoor Iqbal, "WeChat Revenue and Usage Statistics (2022)," 11 January 2022, https://www.businessofapps.com/data/wechat-statistics/, accessed 23 April 2022.

[18] Junxun Tan, "Doing good with technology: A Q&A with Tencent Charity Foundation," 28 April 2021, https://en.prnasia.com/blog/2021/04/doing-good-with-technology-a-qa-with-tencent-charity-foundation/, accessed 23 October 2021.

[19] Junxun Tan, "Doing good with technology."

[20] Junxun Tan, "Doing good with technology."

[21] Tencent Holdings Limited, 2020 Annual Report.

villagers.[22] In 2020, Tencent upgraded the Balanced Online Entertainment System in China and developed the "Parental Guardian Platform" and "Healthy Gameplay System" to enable parents to prevent their children from excessive online, especially gaming time. Tencent also continued to put efforts in promoting education, environmental protection, and cultural preservation.

- Business partners: Tencent wanted to ensure that its business partners, including suppliers and investee companies, were treated equally and fairly and benefited from their collaboration with Tencent.

Tencent developed business partnerships through strategic investments and mergers and acquisitions to co-create ecosystems in various industries. Then, the company leveraged the strength of these ecosystems to seek new business partners to exploit new business opportunities and improve ways to respond to market demands and expectations. To create a win-win situation, Tencent developed a few open platforms to incubate start-ups with potential and enhanced its collaboration with business partners. [23]

- Community: Tencent wanted to provide an open platform to bring benefits to the community by serving different purposes, such as charitable donations, promotion of technological innovation, industry development, and intellectual property (IP) right protection.

The Tencent Charity Platform was developed to be an efficient fundraiser; it also provided technology for charities to engage with supporters. In 2020, its flagship charity event, 99 Giving Day, engaged more than 18 million users and 10,000 charitible organizations, raising more than RMB3bn in three days. Through WeChat and QQ, [24] it bridged the digital divide for the disadvantaged and the elderly. [25] After the breakout of the COVID-19 pandemic, Tencent launched more than 100 antipandemic mini programs within eight weeks to meet the needs of contact tracing, remote health-care consultation, and pandemic-related education. It rapidly upgraded a range of products and services including Tencent Cloud, Tencent Meeting, and WeCom to support business continuity.[26] Tencent developed the Tencent Health Code System, which the Chinese government used during the pandemic. Additionally, Tencent, together with several renowned scientists, initiated the "Xplore Prize" to actively encourage young scientists to study key technologies and basic science.

- Environment: Tencent adopted a sustainable investment strategy and was committed to environmentally sustainable development.

Tencent used its strength in artificial intelligence (AI), big data, and cloud computing to help achieve zero carbon emissions. One of the initiatives was to equip the Tencent Cloud Data Centre in Dongguan, Guangdong Province, with several rooftop solar panels to generate clean energy and reduce energy consumption. This ultra-large cloud data center was established in July 2020, housing over 1 million servers, but with a very low PUE, below 1.25. [27] While improving the water and energy efficiency of data centers and office operations, Tencent also provided a variety of products and services, including Tencent Cloud, WeCom, and Tencent

[22] Tencent Holdings Limited, 2020 Annual Report.
[23] Tencent Holdings Limited, 2020 Annual Report.
[24] QQ was developed by Tencent to provide an instant messaging software service and a web portal offering games, microblogging, music, shopping, and other services.
[25] Tencent Holdings Limited, 2020 Annual Report.
[26] Tencent, 2019 Corporate Social Responsibility Report.
[27] PUE stands for Power Usage Effectiveness. It is the ratio of the energy consumption of the data center to the energy consumption of the equipment. Statista estimates that the average PUE of the largest data centers surveyed in 2020 was 1.59. [Source: Statista, "What is the average annual power usage effectiveness (PUE) for your largest data centre?" 19 April 2021, https://www.statista.com/statistics/1229367/data-center-average-annual-pue-worldwide/, accessed 1 November 2021.

Meeting, to enable its business partners to implement digital transformation and to drive the transition to a low-carbon, green, and circular economy.[28]

> *"Tech for Good" is neither empty talk nor an unrealistic fantasy; in fact, it should be woven into every piece of code we write, every product we develop, and every service we offer.*
>
> - Pony Ma, Cofounder, Chair of the Board, and CEO of Tencent[29]

Technology was used as an enabler in Tencent's social responsibility programs. "Tech for Good" was integrated into Tencent's new mission and vision in 2020. Tencent assessed the social impacts of Tech for Good communications on three levels. The first level was how a project reached various stakeholders, including users, stockholders, business partners, government institutions, public interest organizations, and local communities. The second level was whether the project was able to attract more peers, business partners, and industry experts to engage and respond. The third level was whether the project could add the value of sustainable development and positively influence corporate strategies and practices. [30]

The Tencent Charity Platform was the largest of its kind in the world supported by millions of donors. In 2020, blockchain technology was used to increase the transparency of the 99 Giving Day campaign. [31] The contributions in the charity projects were traceable, rechecked, and transparent throughout the whole process. During the same year, the "Charity SaaS Plan"[32] was launched to offer open source cloud computing and big data to charity organizations to improve their efficiency.

WeChat Pay's Journey with SMEs

China's rapid economic growth over the past few decades led to the saturation of employment in many industries, so the Chinese government strove to provide more employment opportunities in the high-tech industries and service industries and encouraged entrepreneurship through various incentive measures to create new job opportunities for society. By leveraging its platform resources and IT strengths, WeChat Pay created simple and easy-to-use business tools, lowered the entry barriers for entrepreneurs to start their own businesses, and contributed to solving the unemployment problem in China.

Allen firmly believed that a good product required a good design and should make a positive impact in the real world. He also believed that a good product should serve a specific purpose, rather than just a combination of different functions. WeChat Pay had a product team serving SMEs, the Small and Medium-Sized Merchant Product Centre. This product team was responsible for promoting new products and collecting customer feedback by visiting different shops. The objective was to make WeChat Pay the first choice for SMEs in China to receive money payments. Every week they talked to merchants about their experiences using WeChat Pay products, made friends with them, uncovered their new needs, and explored new business

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[28] Tencent Holdings Limited, 2020 Annual Report.

[29] Tencent, 2019 Corporate Social Responsibility Report.

[30] Junxun Tan, "Doing good with technology."

[31] 99 Giving Day is Tencent's flagship charity event, which relies on WeChat and QQ to help the elderly and the disadvantaged. In 2020, the event engaged over 18 million users and 10,000 charities and raised RMB3bn in three days. [Source: Tencent Holdings Limited, 2020 Annual Report.]

[32] The aim is to provide an internet charity ecosystem to improve operational efficiency of charitable organizations. The cloud technology allows charitable organizations to count donations, improve transparency, and boost digitalization. About 100 charities participated in the plan by the end of 2020. [Source: Tencent, "Going digital: The future of Internet-based charity," 11 September 2020, https://www.tencent.com/en-us/articles/2201082.html, accessed 18 April 2022.]

opportunities. Over the years, they had built up a solid infrastructure to serve SMEs, using a variety of operating tools to solve the pain points of SMEs and to achieve technological equality.

Implementing ESG on the Ground

At the end of 2021, Allen Zhang was deep in thought about how to move WeChat Pay forward. As industry competition was expected to intensify, Allen was looking for a strategic solution that could bring mutual benefits to both WeChat Pay and SMEs. Allen was very eager to know what product solutions would help address SMEs' concerns. WeChat wanted to use WeChat Pay to help SMEs survive and grow their business, achieving Tencent's ESG objective of "Value for Users, Tech for Good."

There were several specific challenges that the SME team needed to overcome: payment method, payment confirmation, business management, and merchant security assurance.

Payment Method Challenges

Before the Payment Collection QR Code was launched, WeChat Money Transfer, Red Pockets, and fund transfer functions were very popular. However, the transfer was limited only to users who had added each other as contacts. Receiving WeChat payments from customers required merchants to add customers as "friends" on WeChat one by one.

To simplify this process, in 2014 the product team had added a "+" to the upper right corner of the personal page of the WeChat app, allowing people to make or receive a payment using their own barcodes or QR codes. When it was first introduced, the product team tried to promote this function to taxi drivers but it was not well accepted.

By the end of 2015, most key account (KA) merchants had used WeChat Pay, and the transaction volume was growing steadily. The product team believed that the use of mobile payment should also help SMEs save time in dealing with cash payments and avoid the risks of receiving counterfeit money. But unlike the KA merchants, by the end of 2016, the majority of SMEs, including mom-and-pop shops, had not used WeChat Pay. The situation was similar to that with taxi drivers, who resisted marketing for the WeChat Pay function.

To use WeChat Pay, KA merchants needed a handheld QR scanner and a POS machine.[33] The cashier keyed the payment amount into the computer and scanned the customer's QR code to complete the payment process. This simple and efficient payment method was widely used in supermarkets, convenience store chains, and department stores.

For SMEs, the product team had considered using a smaller version of POS machines, mini-POS machines. They tested mini-POS machine prototypes by visiting more than 30 small businesses in Shenzhen. The first reaction of the SMEs was positive, and they expressed a willingness to use the machines. But they immediately lost interest when they were told they had to pay for the machine and about RMB6 a month for communications. From this experience, the product team learned that mini-POS machines would not work, and that they had to keep the costs of WeChat Pay to a minimum.

The product team also noticed that a significant number of "silent merchants" who applied and obtained WeChat Pay's official accounts had never conducted any transactions. To find out why, the product team called some of them. To the surprise of the product team, many silent

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[33] A POS (point-of-sale) machine refers to a hardware system that is used to accept and process different forms of digital payments in retail stores.

merchants had thought they could use WeChat Pay immediately after they registered, just like they used WeChat messaging. When they found out it did not work that way, they had easily given up because they lacked confidence in their IT knowledge. Later, the product team conducted an online survey of all silent merchants and found 70% were SMEs with fewer than 50 employees; 45.3% of the silent merchants had no idea of how to make it work, and 12.6% of the remaining merchants did not have the required IT skills.

In early 2017, the product team found that some merchants printed and displayed the Payment Collection QR Code near their cashiers. These codes were usually printed on paper in different sizes in black-and-white, and they did not look good or durable. If a merchant wanted to have a good-looking color version, the merchant had to spend nearly RMB100 at a print shop.

The product team also found that, at that time, people in fourth- and fifth-tiered cities and remote towns had little experience using the internet. In a village near Chongqing, for instance, the shop owner of a budget supermarket had no idea how to print out the Payment Collection QR Code. There was no print shop nearby.

Payment Confirmation Challenge

For SMEs, to receive the right amounts of payment in a timely manner was not always as easy as it sounded. When customers paid cash, they paid on the spot and left. If the amount was incorrect, it was very difficult and even impossible to trace the customer. When visiting small businesses on the street, the product team found that many merchants had to spend time checking their WeChat Pay account to ensure they received the correct payment for each transaction. In September 2017, the product team developed a mobile phone voice confirmation to notify the mobile phone holder when a payment was received. This function became very popular and was used by over 90% of WeChat Pay registered users.

But the problem was that the mobile phone holder had to stay at the business premises. For instance, a couple was working hard to run a small and busy mom-and-pop shop selling Scallion Chicken near Tencent's headquarters. Since the wife's mobile was used for receiving payments, she had to stay in the shop nearly all the time when the business was running. When she was away, the husband had to always be on the phone with her to check whether the correct payment was received for each transaction. Although her husband wanted her to take a vacation, it was hard to achieve.

Another headache facing SMEs was the problem of skipped payments. Many small businesses made only a few hundred dollars a day, so a customer's skipped payment could mean they worked hard all day for nothing in return. For elderly merchants, the problem could be more serious. Many people on the product team could not forget the story of Ms. Pan, a nearly 70-year-old farmer. Every morning she picked some fruit from her farm to sell on the street. Not only did she carry a heavy coin purse, but she also received counterfeit money from time to time and accidentally gave the wrong change. Later, Ms. Pan started to use WeChat Pay in her business. On one occasion, however, the customer only paid RMB2.5 for the transaction worth RMB25. When she found out afterward, she had to turn to WeChat for help.

Mobile voice broadcasts could help merchants to avoid skipped payments, but it did not work all the time. When the merchant was too busy dealing with a large number of transactions, the mobile voice broadcast could not keep up with the transaction speed because each payment process lasted only a few seconds. Mobile voice broadcasts might also be interrupted by phone calls, text messages, and internet connection issues.

If the business environment was noisy, the mobile voice broadcast could not be heard clearly. But the operating environments of small merchants varied a lot. For instance, some had small shops, some set up a stall by the roadside, and some just used mobile carts. Some merchants had to stay outside without Wi-Fi facilities or power supplies for more than 10 hours.

The product team also discovered that the personal payment confirmation was mixed with the business payment confirmation when the same mobile phone was used. Some merchants sought different ways to solve this problem, for instance, using one mobile phone for personal use and the other for business use. Some used a mobile phone to collect payment and a Bluetooth speaker to amplify the payment notification. But these solutions were not permanent.

Business Management Challenge

Like banks, WeChat Pay was required by law to perform know-your-customer (KYC) checks on its customers to prevent identity theft, fight money laundering, and prevent fraudulent financial activities. To register as commercial customers, SMEs were required to submit their documents, including business license and payment verification, to WeChat Pay.

SMEs had to use personal computers and follow the required procedure to submit their documents. But not all the SMEs had a personal computer and the required IT skills. Even if they did, it normally took an SME at least two or three days from starting the registration process to receiving the first payment using WeChat Pay, which affected its business.

Time was indeed an invaluable resource for SMEs. While taking care of her daughter, for instance, Ms. Liu ran a small apparel business using WeChat with a customer base of over 1,000 members. Every day she had to prepare advertisements for new products, answer customers' inquiries, and sort out the order information from the long chat history, among others. She took care of her daughter during the day and handled products and processed orders until late at night. She was not alone. The product team's research suggested that many SMEs operated in similar ways. They spent a lot of time managing their business, and at the end of each business day it took hours for them to go through all the transactions one by one to prepare financial reports.

When visiting the merchants, the product team also found that some took the initiative to add their customers' WeChat and developed their customer groups in order to promote their products. Though the data suggested that these merchants performed better than those who did not add their customers as WeChat friends, customer relationship management took time.

Some business challenges facing SMEs varied by industry. In the catering industry, for example, merchants found it difficult to display their products online and communicate with customers when the customers wanted to place an order. In the past, SMEs often relied on leading food delivery platforms, such as Meituan and Ele. In November 2019, both Meituan and Ele increased the percentage of commissions charged to the merchants from 12% to 22%, causing dissatisfaction among merchants. Since merchants were already struggling with an increase in operating costs, the increased commissions added an extra financial burden that could cause their business to go from profit to loss.[34] Mr. Sun was a barbecue shop owner in a small county. Owing to the high commissions charged, he decided to do takeaway business himself. His customers used WeChat messaging or called him to place an order. Having spent too much on ineffective communications, he had lost some old customers because he did not have sufficient time to handle the large number of orders.

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[34] Chen Weishan and Liu Xinyue, "Rising commission disturbance of Meituan and Ele in Yugan, Jiangxi," *China Economic Weekly*, 23 November 2019, https://www.sohu.com/a/355595029_467340, in Chinese, accessed 22 November 2021.

Merchant Security Assurance Challenge

SMEs were under increasing pressure for higher-quality standards, tighter cost control, and faster market response time to use IT to accelerate process and product innovation. They faced higher risks than larger companies when it came to leveraging innovation, due to the former's limited technical and managerial competence, limited financial resources, and limited access to information.[35] One unsuccessful process development could threaten an SME's survival.

Steven Zou, a member of the product team, remembered that once he went to buy a bottle of water from the newspaper stall and could not find the WeChat code to make the payment. The stall owner had hidden the code under a newspaper because he was afraid that people would copy and use his code to do something bad. It made the product team realize the need to assure SME owners that the Payment Collection QR code was safe to use. Unlike larger companies, SMEs rarely had a safety net, because the insurance products available for SMEs were either very expensive or too demanding.

Emerging SME Business Challenges

After the COVID-19 pandemic broke out, SMEs faced a number of unexpected business challenges. Many SMEs had to temporarily close their physical operations for different reasons such as employee health concerns, reduction in demand, and supply chain disruptions. Some had moved their businesses online but found it difficult to achieve online and off-line business integration. Moreover, compared to large companies, SMEs had very limited knowledge of using digital tools to market their products and services and improve customer experiences. In addition to dealing with the pandemic, WeChat Pay might also need to help SMEs address the challenges brought by interconnection and the introduction of individual business payment collection codes.

Interconnection

In July 2021, the Ministry of Industry and Information Technology launched a six-month special rectification action for the internet industry, focusing on the disrupted market order, infringement on user rights, threats to data security, violation of resources, qualification management regulations, and other issues for centralized rectification. Among them, blocking URL links was one of the key rectification issues. Major online platforms, such as WeChat and Taobao, would gradually become interconnected.

In early December 2021, WeChat enabled its peer-to-peer chatting to directly visit external links provided by other service providers. Later, visiting external links would also be tested in group chatting scenarios. When using WeChat messaging, users were able to share the Alibaba Taobao product's link, which could directly connect to the Taobao web page and make a purchase. It was expected that the opening of WeChat to other online platforms could bring WeChat RMB300bn to 700bn in e-commerce diversion turnover. If WeChat and other online platforms could be interconnected, it might bring additional RMB70bn e-commerce revenue.[36]

As most merchants using WeChat and other platforms were SMEs, interconnection would level the competition and bring business opportunities and challenges to WeChat SME merchants. With user retention time becoming a key part of the e-commerce economy, WeChat had to rethink its strategies and improve the services it provided to SMEs. One the one hand, WeChat

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[35] David Brown, "Managing risk and innovation: the challenge for smaller business," 1997, https://www.oecd.org/innovation/inno/2368582.pdf, accessed 23 March 2022.

[36] Xin Huang, "WeChat opens e-commerce external connection – Internet ecosystem's huge transformation is on the road," *Economy Daily*, 6 December 2021, http://finance.people.com.cn/BIG5/n1/2021/1206/c1004-32300312.html, accessed 10 December 2021.

could help its SME customers identify market trends and leverage interconnection opportunities to market their products and services. On the other hand, WeChat could help to provide a safe business environment for SMEs. After achieving interconnection, the cross-platform flow of information might bring security risks, such as privacy leakage and network fraud.

Customer Segmentation Improvement

Effective customer segmentation would enable WeChat to serve target customers better. For the time being, KA customers were served by WeChat Pay's KA teams and external service providers. SMEs that only used face-to-face payments were served by WeChat's SME Merchant Product Center. Those SMEs that required more comprehensive services, such as card payments, could use the service of small and medium-sized external service providers. Compared to KA customers, it was more difficult to segment SMEs, due to their diversity and complexity.[37] To deliver "Value for Users, Tech for Good," WeChat used machine learning, data analytics, and industry knowledge and experience to study different WeChat Pay application scenarios, such as merchant registration, business operation, industrial trends, and user analysis, to refine SME customer segmentation.

On 13 October 2021, the People's Bank of China issued a notice requiring online payment platforms, including WeChat Pay, to strengthen the management of those individuals using personal payment codes[38] for business transactions. After 1 March 2022, personal payment codes could only be used for making and receiving face-to-face payments unless the permission was granted under special circumstances. [39] The Announcement of China Payment and Clearing Association in Feburary 2022 further clarified that personal payment collection codes would remain the same and "personal business payment collection codes" would be introduced in March 2022. While the latter provided more business support like credit card payment processing, account management, and risk management to the users than did the former, it was up to individual users to decide which one to use.

Hence SMEs could decide whether they wanted to use the business payment collection codes or continue to use their personal ones. The government acknowledged that the increasingly popular personal payment collection code could effectively meet the individualized and diversified payment needs of the public and improved the efficiency of fund receipt and payment in the small and micro economy. But the government wanted to address the hidden risks in personal payment barcodes, such as online transfer of illegal gambling funds. As WeChat Pay was charging its business customers 0.3% to 0.6% of transaction value as a service fee, depending on the industry, the challenge for WeChat Pay was, therefore, how to provide more value-added services at competitive prices to meet the diverse needs its SME customers and attract more SMEs to use its business services,.

Looking Forward

Balancing innovation and pragmatism is crucial for the future of philanthropy.

- Yidan Chen, Cofounder of Tencent, Founder of Tencent Charity Foundation[40]

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[37] WeChat follows the Ministry of Industry and Information Technology's "Small and medium-sized enterprise classification standards" <<中小企业划型标准规定>>to identify SMEs, and the standards' latest revised exposure draft was published in April 2021 (See: https://www.tid.gov.hk/english/aboutus/tradecircular/cic/asia/2021/files/ci2021286a.pdf [in Chinese])
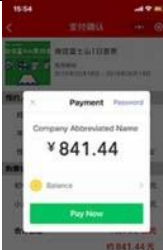
[38] Codes can take different forms, such as barcodes and QR codes.

[39] People.cn, "Will Alipay and WeChat Pay's personal receipt barcodes be forbidden using for commercial purposes? Here comes the truth," 26 November 2021, http://finance.people.com.cn/n1/2021/1126/c1004-32292994.html, accessed 10 December 2021.

[40] Tencent, 2019 Corporate Social Responsibility Report.

Allen Zhang hoped that WeChat Pay's product offerings could not only help SMEs develop their businesses but also facilitate financial inclusion, creating value for both SMEs and WeChat. How could WeChat Pay develop IT solutions that really addressed the needs of SMEs? What could WeChat do to help SMEs achieve more sustainable growth in the long term?

EXHIBIT 1: WECHAT PAY OPTIONS

Name of Payment	Graphic Presentation	Procedures
Quick Pay		The merchant scans the WeChat Pay payment code presented by the customer to take the payment.
QR Code Payment		The merchant's QR code is scanned by the customer using WeChat. The customer needs to confirm the amount and pass the security checks to make the payment.
Mini Program Payment		The merchant creates Mini Programs inside WeChat, which the customer can use to pay for goods and services.
Official Account Payment		Merchants can use its Official Account to market its products to their followers. When there is a deal, the merchant's Official Account can accept the payment from the customer.
In-App Payment		The merchant can integrate WeChat Pay's Software Development Kit (SDK) into its apps. In the merchant's apps, the customer can use WeChat Pay to make a purchase.
Web Payment		The merchant's web page can provide a payment code, which allows the customer use WeChat's "Scan" feature to make an online payment.

EXHIBIT 2: WECHAT PAY OPTIONS FOR DIFFERENT CUSTOMER GROUPS

Customer Needs	Suitable WeChat Pay Option
Off-line store owner	Face-to-face WeChat Pay methods
Off-line store owner with several branches with the need to use bank transfer payment and support credit card payment	WeChat Pay for commercial merchants
Store owner who has no technical R&D skills but has individualized needs (e.g., to use both WeChat Pay and Alipay)	Use an IT service provider
Store owner who has no technical R&D skills but has individualized needs and is worried about the trustworthiness of IT service providers	Use a bank as an agent
Store owner with R&D skills who cares about privacy and capital safety	Use WeChat Pay's merchant model
Business with a huge transaction volume who has individualized needs	Use WeCom to contact WeChat Pay Assistant
A company who wants to become IT service provider	Use WeCom to contact WeChat Pay Assistant

Source: The company.

EXHIBIT 3: MILESTONES IN WECHAT'S DEVELOPMENT

January 2011	• Launched WeChat
April 2012	• Introduced the Moments
July 2012	• Introduced Official Accounts
February 2013	• Used QR codes
August 2013	• Introduced WeChat Pay
January 2014	• WeChat Pay introduced digital red packets
January 2017	• WeChat introduced Mini Programs
December 2018	• Introduced the Time Capsule feature
August 2020	• Introduced the Mini Shop platform

EXHIBIT 4: TENCENT FINANCIAL STATEMENTS

Tencent Condensed Balance Sheet
(31 December, in RMB Million)

	2016	2017	2018	2019	2020	2021
Total assets	395,899	554,672	723,521	953,986	1,333,425	1,612,364
Total equity	186,247	277,093	356,207	488,824	778,043	876,693
Total liabilities	209,652	151,740	202,435	240,156	555,382	735,671

Tencent Consolidated Income Statement
(31 December, in RMB Million)

	2016	2017	2018	2019	2020	2021
Revenues	151,938	237,760	312,694	377,289	482,064	560,118
Gross profit	84,499	116,925	142,120	167,533	221,532	245,944
Profit before tax	51,640	88,215	94,466	109,400	180,022	248,062
Profit for the year	41,447	72,471	79,984	95,888	160,125	227,810

Tencent Revenue Streams
(31 December 2021)

	2021		2020		2019	
	Amount (RMB in millions)	% of total revenue	Amount (RMB in millions)	% of total revenue	Amount (RMB in millions)	% of total revenue
VAS	291,572	52%	264,212	55%	199,991	53%
Online Advertising	88,666	16%	82,271	17%	68,377	18%
FinTech and Business Services	172,195	31%	128,086	27%	101,355	27%
Others	7,685	1%	7,495	1%	7,566	2%
Total Revenues	560,118	100%	482,064	100%	377,289	100%

Tencent Costs of Revenue Streams
(31 December 2021)

	2021		2020		2019	
	Amount (RMB in millions)	% of segment revenue	Amount (RMB in millions)	% of segment revenue	Amount (RMB in millions)	% of segment revenue
VAS	138,636	48%	121,287	46%	94,086	47%
Online Advertising	48,072	54%	40,011	49%	34,860	51%
FinTech and Business Services	120,799	70%	91,835	72%	73,831	73%
Others	6,667	87%	7,399	99%	6,979	92%
Total Revenues	314,174		260,532		209,756	

Source: Tencent Holdings Limited, 2020 and 2021 Annual Reports.

EXHIBIT 5: STAKEHOLDER ANALYSIS FROM TENCENT

Stakeholders	Key Topics	Key Communication Channels
Community and public	Charity Volunteering Environmental protection	Tencent Charity Foundation, fundraising platform
Employees	Employee benefits Career development Healthy work environment	Employee satisfaction survey, employee training, annual employee rally, face-to-face discussion forum, featured magazines, social media platform
Government and regulatory bodies	Compliance Corporate governance	Meetings, policy consultation, incident reporting, official visit, information disclosure
Nongovernmental organizations and media	Products and service quality Environmental protection Compliance Charity	Social media platform, industry events, press conference
Shareholders and investors	Investment return Business strategy Information transparency	Corporate announcements, investor conference, official website, regular meetings
Suppliers	Fair cooperation Integrity	Regular meetings, supplier assessment, site visit
Users	Products and service quality Privacy protection	User experience research, customer service hotline, online customer service, WeChat, and face-to-face customer support

Source: Adopted from Tencent Holdings Limited, 2020 Annual Report.