

CASE STUDY
EXECUTIVE SUMMARY

APRIL
2017

Social Networks,
e-Commerce Platforms,
and the Growth of Digital
Payment Ecosystems in China:
What It Means for Other Countries



CHINA

CHINA Case Study

The rapid growth of social networks and e-commerce platforms has transformed the way people communicate and transact around the world. Integrating digital payments into these growing networks and platforms has presented vast opportunities to drive economic opportunity, financial inclusion, transparency, security, and growth. In practically all countries individuals, businesses, and policymakers are recognizing these opportunities and acting on them, but perhaps nowhere more so than in China.

This report examines two of China's most far-reaching applications - WeChat and Alipay - and explores their role in the development of one of the world's largest and most sophisticated digital payments ecosystems. The report illustrates how incorporating digital payments into existing services has unlocked economic opportunities for hundreds of millions of users, including through low-risk savings accounts, new credit assessment and lending services, and by opening up new markets for micro, small, and medium enterprises.

As China's economy is unique, this report has also identified key factors in the successful integration of digital payments into social networks and payment platforms. In this way, the report aims to provide lessons that can be assessed, and where relevant, applied in other markets beyond China. As social networks and e-commerce continue to grow and offer new opportunities as well as risks, the report adds to a body of knowledge about how digital payments can improve lives and strengthen economies in all parts of the world.

EXECUTIVE SUMMARY

As governments and businesses worldwide look to boost financial inclusion and growth, the power of digital payments is becoming increasingly apparent. Notably in poor communities, digital payments are proving to be an effective way to open up new economic opportunities and markets for individuals and small businesses. For people who have been excluded from the formal economy, particularly women, these new opportunities are opening the door to transform their lives. In September 2016, G20 Heads of State and Government recognized this capacity of digital payments to improve lives by endorsing the High-Level Principles of Digital Financial Inclusion (HLPs)¹ at their meeting in Hangzhou, China.²

Putting these principles in practice is a complex task. One approach that has been successfully adopted in China is to bring together key public- and private-sector actors to grow digital payment ecosystems, using existing e-commerce platforms and social networks as their foundation. These electronic payments networks are used by governments, businesses, and consumers to buy and sell physical goods as well as make payments and transfers.³ To help businesses and policymakers in other countries learn from these experiences in China, this report focuses on two major Chinese companies that have built on their existing e-commerce platforms and social networks to drive the uptake and usage of digital payments significantly, and support broader financial inclusion and economic activity:

- Alipay was first launched in 2004 as an internet-based payment service using the e-commerce platform Alibaba and then further developed for mobile with the Alipay application (app) in 2009. By 2016, Alipay was processing 175 million transactions per day, 60% of which were completed through a mobile phone.
- Tencent was founded in 1998 and now provides digital payment options utilizing its two major social apps, QQ and Weixin (WeChat, as it is known in English), which have a combined monthly active user rate of 846 million as of 2016.⁴ QQ is an online communications platform with both chat and email functions. WeChat is similar in some respects to Facebook and WhatsApp. The success of WeChat has been rapid: Since just 2012, active daily users have grown from 195 million to approximately 806 million in 2016, a 43% growth rate.
- In 2015, Alipay had 450 million monthly active users, who each spent US\$2,921 on average.⁵ By comparison, WeChat had 697 million users in 2015, who spent \$568 on average, although in 2016 this figure grew 168%, to \$1,526 per user.⁶

Kaiyu Ma runs a small store selling used clothing on Taobao. She says this is a great way to earn money on the side while she looks after her young daughter. Ma's situation is not unique. At a micro level, digital payment services allow individuals to **improve their own or their family's lives**. At a macro level, digital payment services have the potential to dramatically **improve living standards** for large sections of the population, especially in developing countries, through increased transparency, security, cost savings, and financial inclusion, particularly for women.



- Together these two companies have dominated the digital payments space in China, and have seen dramatic growth in digital payments over the past few years:
- Alipay payments (by value) have risen from less than RMB 0.5 trillion (US\$70 billion) in 2012 to an estimated RMB 11.5 trillion (US\$1.7 trillion) in 2016 – a 23-fold increase in four years.
- WeChat payments (by value) have risen from less than RMB 0.1 trillion (US\$11.6 billion) in 2012 to an estimated RMB 8.5 trillion (US\$1.2 trillion) in 2016 – an 85-fold increase in four years.
- Combined Alipay and WeChat payments (by value) have risen from less than RMB 1 trillion (US\$81 billion) in 2012 to an estimated RMB 20 trillion (US\$2.9 trillion) in 2016 – a 20-fold increase in four years.
- In 2015, non-cash payments accounted for nearly 60% of retail transactions in China. Of all non-cash payments, Alipay and WeChat Pay captured 28% of all retail transaction fees; effectively what would have been nearly US\$20 billion in payments fees on transactions had they been processed on traditional card payment networks.⁷
- Digital payments as a whole have grown rapidly from about 3.5% of all retail transactions in China in 2010, to about 17% in 2015.

All of this took place during a transformative period in China:

- Starting in 2011 and ending in 2015, China's GDP per capita grew 31%, from \$4,971 to \$6,497.⁸
- Access to internet services in China increased from 38 people out of every 100 to 50 in just five years (2011-2015).⁹
- The economy began reorienting itself: Exports fell from 26.5% of GDP in 2011 to 22.1% in 2015, while retail sales grew from 38.6% of GDP to 44.1% over the same time frame.¹⁰

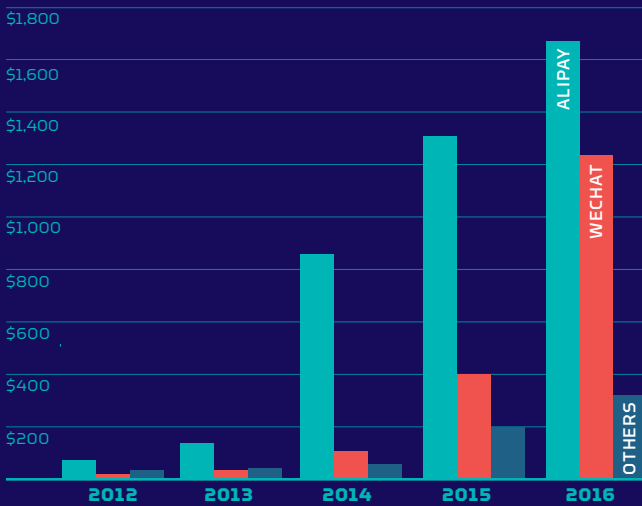
In 2010, nearly 61% of China's retail consumption was still transacted in cash, even as debit card penetration reached about 1.8 cards per person.¹¹ However, the payment landscape is changing rapidly as cards, mobile, and internet payments have grown in importance, with the proportion of retail consumption transacted in cash falling to 40% in 2015.¹² As a point of comparison, in the UK in 2016 cash accounted for 45% of all transactions.¹³

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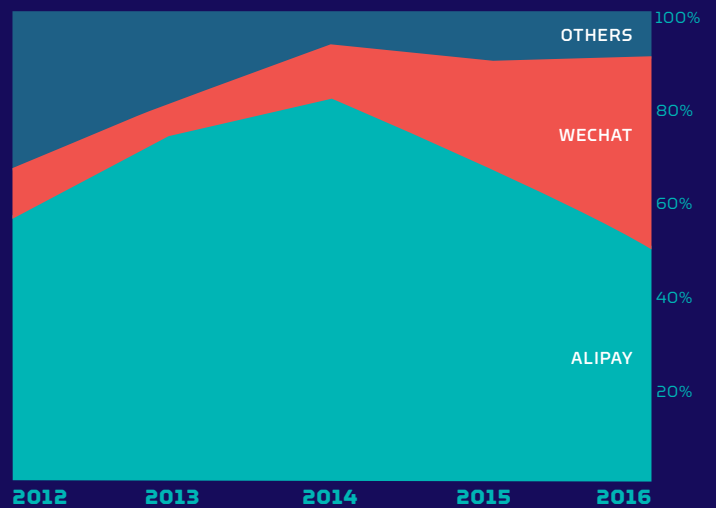
Mobile Payments by Value

Yearly Total Mobile Payments, Billion USD



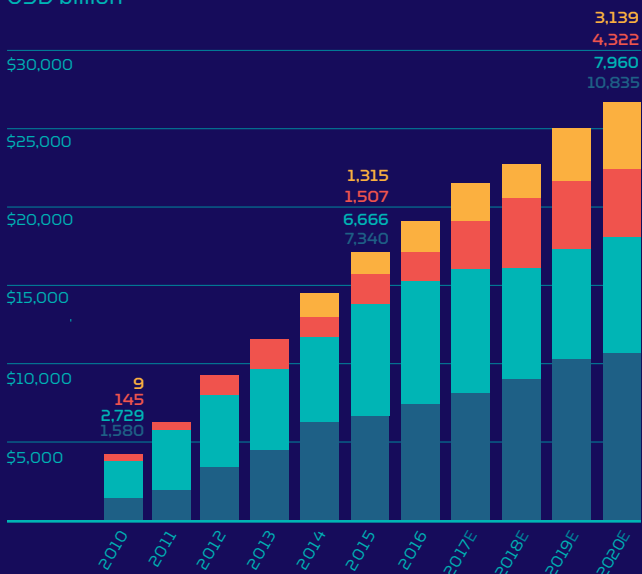
Integration of payments into WeChat has helped Tencent capture mobile payment market share from the market leader Alipay

PSP market share: mobile payments



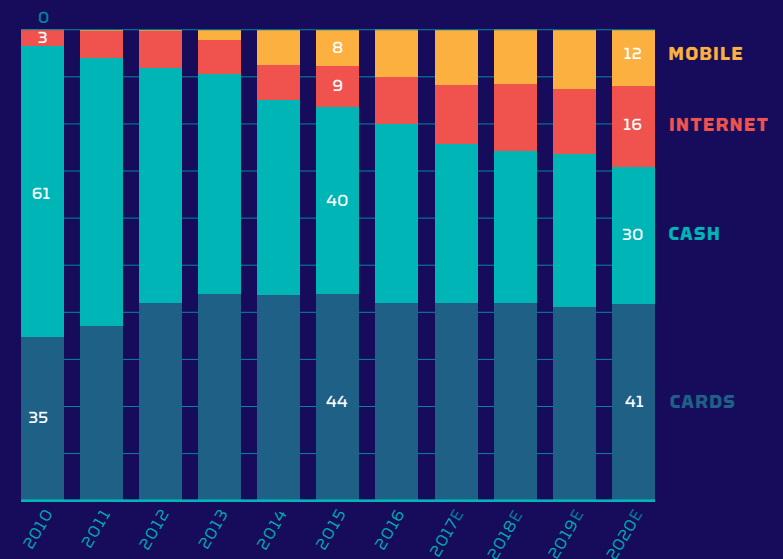
China Retail Consumption Value by Payment Type

USD billion



China Retail Consumption by Payment Type

(% of total payments value)



KEY FINDINGS

Significantly, the growth of digital payments using existing platforms and networks in China has brought with it a much wider range of digital financial services that are both expanding financial inclusion and economic opportunity for individuals, and creating valuable new business models for companies. Key findings of this report include:

1 New financial services have proven highly popular, delivering benefits to large numbers of people.

Alibaba worked with Tianhong Asset Management and launched the Yu'e bao (meaning "leftover treasure") product, a low-risk money market account similar to a bank savings account. Customers can take the money "left behind" on their digital wallets and invest it on the Yu'e bao product. While these services usually involve small individual amounts, they nonetheless provide benefits that can be helpful particularly for people living on low incomes. The scale of these individual savings products when viewed in aggregate is significant, helping to explain how these products represent new business models that are attracting attention in countries around the world. Yu'e bao has grown from having 0.2 billion RMB (US\$29 million) in assets under management (AUM) in 2013 to more than 810 billion RMB (US\$117 billion), serving more than 152 million customers three years later and making it one of the largest money market funds in the world.

2 Digital finance has dramatically increased economic activity and e-commerce among merchants and consumers.

As of September 2016, one provider, Ant Financial, had lent a total of RMB 740 billion (US\$107.3 billion) to over 4.11 million small and micro-enterprises and entrepreneurs.¹⁴ New business models enabling lending to people on low incomes are driving significant new usage of digital payments in a country where 79% of adults have had a bank account at some point, but only 10% of these have ever borrowed in the formal financial system. For example, Huabei or "Just Spend," is a service launched in 2014 which allows shoppers to take out small month-to-month loans. On Single's Day 2016 (a major consumer-focused holiday similar to Valentine's Day), consumers spent a total of RMB 26.8 billion (US\$3.9 billion) using the Huabei service on two major e-commerce platforms.¹⁵

3 Effective incentives and demonstrable utility are key factors in stimulating initial use and cultivating customer loyalty.

For example, in 2014, Tencent launched its WeChat Red Envelope campaign – a digital version of an old Chinese custom of giving small amounts of money to friends and family in red envelopes during Chinese New Year. In order to receive the red envelopes, the recipient was required to have a WeChat account that was connected to a bank account. Within the first week, more than 8 million people used the service, and the number of new bank accounts connected to WeChat surged by the millions.¹⁶ During Chinese New Year 2017, WeChat users sent each other 46 billion digital red envelopes, an increase of 43% from 2016.¹⁷

4 New credit scoring services are becoming available which are increasing access to credit, particularly for people on low incomes and small businesses.

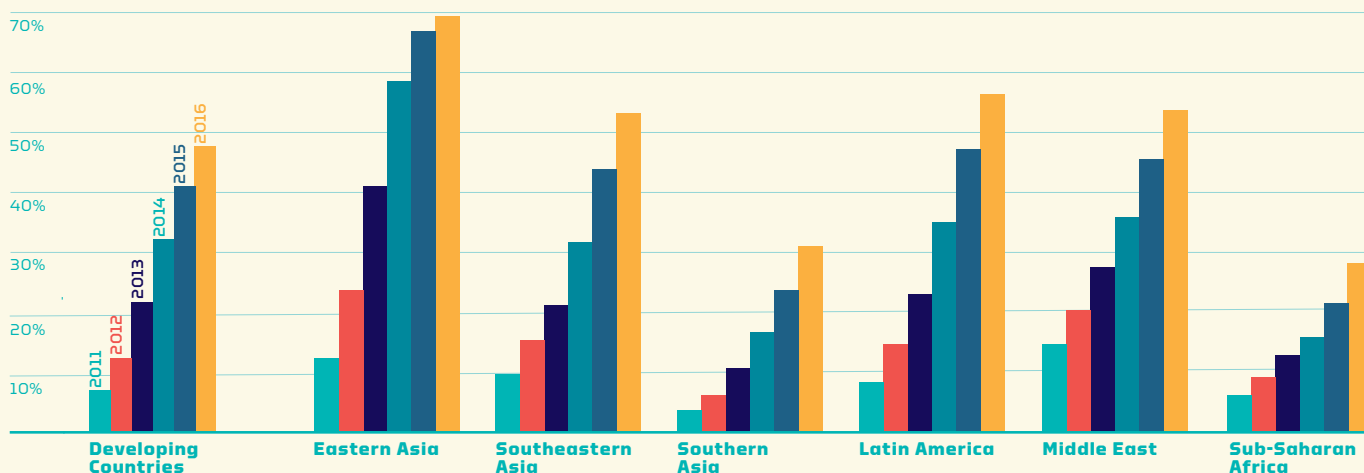
One such service – Sesame Credit – is able to assess creditworthiness for over 350 million real-name registered users and 37 million small businesses that buy and sell on Alibaba Group marketplaces. When users sign up for Sesame Credit they agree to allow Ant Financial to use their transaction data to determine their credit score. These credit-scoring services are increasingly being used outside of China in both the public and private sector. For example, a trial program was set up in June 2015 with the Luxembourg Government to allow credit scores to be used in place of bank records in securing a visa for the Schengen travel area in Europe.

5 The major digital payments providers are rapidly expanding beyond China, and investing in new financial technology companies.

Users can now use Alipay and WeChat Pay in Thailand, one of the most popular destinations for Chinese tourists, to pay for goods and services in many stores. Alibaba has made a significant investment in India's PayTM¹⁸ and Tencent into India's PayU, two of the largest digital payment providers in India. Tencent has also recently launched a joint-venture initiative in Africa, allowing for payment in South African Rand.

Smartphone Adoption as % of Mobile Connections 2011-2016

GSMA Intelligence



These and other experiences in China show there are clearly vast opportunities that other countries can harness by using existing e-commerce platforms and social networks as a foundation for expanding the digital payments ecosystem. A 2016 report from the McKinsey Global Institute estimated that digital finance could add US\$3.7 trillion to GDP across all emerging economies in aggregate by 2025, a 6% boost above the projected baseline, and create 95 million new jobs.¹⁹ For China, it could mean an additional US\$1.05 trillion (RMB 7.25 trillion), a 4.2% GDP boost above the projected baseline GDP for 2025.²⁰ In China, that shift to digital – which is now well underway – would not have been possible without existing platforms and infrastructure.

Similar preconditions exist elsewhere: 51% of all global mobile connections are now smartphones,²¹ and 34% of the world’s population – 2.5 billion people – use social media on their mobile phones.²² Facebook alone has over 1.8 billion subscribers, 80% of whom access the service using their mobile. In several developing countries, mobile has become the dominant form of internet access, and social media platforms are growing rapidly, laying the groundwork for easy payments integration:

- **South Africa** is a market in which smartphone adoption has grown 30% year-on-year from 2012-2016, reaching 30 million smartphones in a country of 55 million people.²³ Although 78% of all internet traffic takes place over mobile channels – one of the highest rates in the world – only 15% of South Africans reported making a purchase on a mobile phone in the preceding month when surveyed in 2016,²⁴ indicating a large opportunity to expand digital payment access. Moreover, although South Africa is WhatsApp’s strongest market in terms of penetration with over 10 million users, WeChat had reached 5 million users in 2014 by establishing linkages with Standard Bank and SnapScan, a popular retail payments app.²⁵ Linking more retail points and financial services to these growing networks could enable millions more South Africans to gain access to digital payment channels.

- **Indonesia** was the fastest-growing m-commerce market in the world in 2016, expanding 155% from January 2016 to January 2017.²⁶ Some of this growth may be due to the release in 2015 of BBM Pay's Instant Mobile Payments.²⁷ The popular BBM chat app has over 55 million users in Indonesia, and BBM Pay had previously allowed those users to transfer money just as they would photos or files. The Mobile Payments function allows them to pay for goods and services with participating merchants, and was directly inspired by the ecosystem that WeChat has built in China.²⁸
- Looking regionally, many **South American** markets have the infrastructure necessary to build payment ecosystems similar to those seen in China. 59% of the South American population uses social media, and 52% connect with social media over their mobile phone.²⁹ 75% of the population has access to broadband,³⁰ and 57% of all connections are smartphones, far higher than Africa or South Asia.³¹ Yet the digital payments space remains fractured, and no payments provider has linked their service to these platforms in a significant way, or vice versa. With Facebook, Facebook Messenger, and WhatsApp the dominant platforms in South America (Brazil alone makes up 10% of all Facebook usage globally),³² attention will be focused on whether payments integrated into those networks will emerge as a viable point of entry. Facebook's recent announcement that it has acquired a payment license in Europe points toward eventual integration of payments into one or more of its platforms.³³ Whether this will impact countries in South America, where traditional banks and card companies are well established, remains to be seen.

The purpose of this report is to explain the opportunities presented by social networks and e-commerce platforms to expand digital payments, and in doing so, help other countries use these experiences as a guide and reference in building out inclusive digital payments ecosystems in their own market context. To this end, the report identifies the key factors underpinning China's successes and points out potential pitfalls for governments and businesses seeking to learn from their experience. It also identifies particular use cases that may be readily applicable in other countries, although as always, each market context has its own individual factors that need to be taken into consideration in applying any lessons from China set out in this report.

To help other countries and geographies better understand China's experiences, this report first discusses the background and historical development of payments in China. It then details the development of Alipay and WeChat Pay. In particular, it highlights the steps that were taken to build trust among users and establish scale, and explores how these services are currently using existing e-commerce platforms and social networks as a foundation to build digital payments ecosystems that are increasing access to financial services.

LESSONS LEARNED

For payment providers, e-commerce firms, and social networks:

- **Attracting users by building on existing e-commerce platforms and social networks, using strategic incentives to deepen usage.** For example, Tencent was able to build a widespread digital payment product within an existing service, which helped it gain rapid acceptance. Major payment platforms in China have developed a variety of additional incentives for users, such as vendor promotions and discounts, and creative gamification concepts around popular cultural events.
- **Making platform tools openly available to innovators for seamless integration.** For example, making software development tools, such as application program interfaces (APIs), available can enable third-party vendors and Small and Medium Enterprises (SMEs) to make their own innovative additions to the ecosystem in response to user needs and preferences, thereby organically growing the ecosystem.
- **Enabling universal access for users and businesses by developing ecosystems that function across various platforms.** China's two most popular payment apps are "hardware-agnostic," in that both work across the Android and Apple iOS platforms, which combined, account for 99.3% of smartphone operating systems in urban areas. This has helped to drive uptake and build out a large inclusive digital payments ecosystem. For payment providers, embracing interoperable platforms adds clear value for users and can help to grow a wider network of merchants and acceptance points.

For governments:

- **Developing a supportive regulatory environment that strikes a careful balance between encouraging innovation and managing risk.** In its efforts to strike a balance between these two objectives, China has announced policies to foster domestic development and competition, and support innovation. The G20 High Level principles also recognize the need to support innovation while managing risk and encouraging development of digital financial products and services. In China, the government has taken a "wait and see" approach to regulation which allows for innovation by industry participants within informal limits, under careful supervision by the relevant regulators. As products mature and their implications for users and the ecosystem emerge, the regulators develop the appropriate guidelines and rules to address these implications, protect consumers, and support a more cohesive payments ecosystem. This approach of protecting and fostering domestic players may not be appropriate for every country, and each country should consider their own circumstances, but China does offer an illustrative example of how this strategy can work.

- **Setting public investment priorities that encourage digitization.**

This is particularly the case with the vital preconditions of digitization, such as effective infrastructure for internet and mobile telecommunications. In 2016, China had 530 million 4G users. This exceeds the number of 4G users in the United States and Europe combined. China expects to spend RMB 1.2 trillion (US\$1.88 billion) over the next three years to further improve the quality of its broadband connectivity and mobile access.³⁴ This will support the use of mobile smartphones – an important element in digital payments and digital finance usage.

For both businesses and governments:

- **Encouraging public-private partnerships (PPPs) to develop an ID verification system or similar method to identify payers and payees accurately.** Having a widely adopted and secure means of identifying customers is vital to enable secure and transparent payments and improve consumer protection. It is also important in order to advance Know Your Customer (KYC), Anti-Money Laundering (AML), and Combating the Financing of Terrorism (CFT) efforts, and meet international standards in these areas. Governments and payment providers can work together to enhance adoption and use of identification.
- **Incorporating lessons of successful business models in payments over messaging platforms to drive adoption of digital payments in their own markets.** As more examples emerge of companies successfully expanding their payments businesses internationally, there is a growing knowledge base that can reduce the trial-and-error component of building out inclusive digital payment ecosystems, particularly by anticipating key risks that have emerged in other countries, and observing commercial and regulatory approaches that have proven effective. China's tech giants (particularly Tencent and Ant Financial) are rapidly expanding internationally, PayPal continues to grow its global footprint, and companies like Facebook are pushing into international payments, heralding a period of rapid international expansion of payment platforms. As these companies expand, national or regional players can both observe and incorporate their experiences, or partner with them to drive their own transitions to digital payments.

All of these success factors have been integral to developing inclusive digital financial ecosystems in China, and merit consideration by government, businesses, and other stakeholders outside China seeking to develop digital payments and digital payments ecosystems in their own countries. They have also played a part recently – along with many other factors – in the remarkable success in tackling poverty that China has achieved, having reduced the number of people living in poverty from 755 million in 1990 to 25 million in 2013. Clearly this large-scale improvement in the lives of millions of Chinese has many causes, but by expanding the opportunities available to people – particularly those on low incomes – to participate more widely in economic life, digital payments can rightfully claim an important role among them.

The Better Than Cash Alliance Research Series

Our case study and country diagnostic series seeks to highlight specific examples of shifts from cash to digital payments by governments, companies, and international organizations. Each case study and country diagnostic aims to provide insights for a wide audience on the factors that have helped or hindered the digitization process, and also present key results and benefits of the transition away from cash. We hope that readers will be able to adapt the lessons from these cases to their own contexts and local conditions.

Acknowledgments

We are just at the beginning of what will likely be a long journey for China's financial industry as it grapples with the effects of new technology and its impact on nearly every aspect of how consumers and enterprises handle their financial affairs. Trying to adequately encapsulate the narrative of how the industry developed, what others can learn from it and what it means for the future is no small task, and certainly would not have been possible without the help of industry experts.

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About Kapronasia:

Kapronasia is a provider of market insight focused on Asia's financial services industry. Through its offices in Shanghai, Singapore and India, it provides a combination of research and consulting services to help clients better understand the changing dynamics in Asia's payments, banking and capital markets.

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About The Better Than Cash Alliance

The Better Than Cash Alliance is a global partnership of governments, companies, and international organizations that accelerates the transition from cash to digital payments in order to reduce poverty and drive inclusive growth. Based at the United Nations Capital Development Fund (UNCDF), the Alliance has over 50 members, works closely with other global organizations, and is an implementing partner for the G20 Global Partnership for Financial Inclusion.



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