

# ASIA IN A NEW ERA OF DIGITAL PAYMENTS

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## EXECUTIVE SUMMARY

Distinct forces of change are sweeping across Asia, transforming commerce and payments. From the push for a cashless society to the rise of platforms in the sharing economy, payments are becoming invisible and no longer just a gateway to facilitate the flow of funds.

Mobile-savvy consumers are accelerating the push for noncash payments, heralding a new era in digital payments, not just in China but the world over. Innovative business models — with customer experience at the centre of their value proposition — are disrupting industries and markets not seen before. In 2019, consumers in Asia charged US\$25 trillion to their credit and debit cards, whilst mobile wallet spend topped US\$51 trillion (source: IDC, 2020). By 2022, these figures will reach US\$41 trillion and US\$85 trillion, respectively, with cards and mobile wallets seeing close to 30% annual growth over three years. Merchants will have to ask themselves if they are behind the curve, playing catch up or ready to join the digital payments revolution.

This IDC White Paper, commissioned by NTT DATA, aims to help merchants better understand the state of the payments landscape across 10 markets: China,



India, Indonesia, Japan, Korea, Malaysia, Philippines, Taiwan, Thailand, and Vietnam. Research insights in this white paper are drawn from IDC's syndicated research as well as phone interviews with CEOs and senior business heads of major payment providers conducted in Q1 2020. These payment trends are also seen from the lens of some of Asia's largest merchants across retail, ecommerce, airlines as well as industry regulatory bodies.

### Among the key takeaways:



Electronic payments such as mobile wallets and cards are set to grow at impressive rates until 2022.



China is the regional and global leader in mobile wallet usage and the race towards a cashless society. Trailing behind is South Korea, albeit using cards instead of mobile wallets. These two markets represent the divergent evolutionary paths seen in Asia.



India, Indonesia and Malaysia are looking to emulate China's mobile wallet penetration and success.

Growth rates for mobile wallets and other electronic payments will remain strong amid the emergence of new digital currencies and new forms of payments.



Payments data will increase in importance as a competitive tool, driving merchants to rethink their strategies and how digital payments can unlock new opportunities.



Looking ahead into 2030, IDC's modelling based on the 10-country data as well as information from government sources, industry interviews, and publicly available information is telling of the

shifting payments landscape. Consumers' familiarity and preferences will dictate which payment mode will reign in the new era of digital commerce.

# ASIA'S DIVERSITY IN COMMERCE AND PAYMENTS

Home to 60% of the world's population and over 40% of global GDP in 2019 (source: World Bank), Asia's commerce and payment ecosystem is layered and complex. Each market carries its own payment and commerce champions, making it hard for any single player to claim regional dominance. IDC's research reveals the following standout trends in the region's continually changing payments landscape:

## China leads in mobile payments

China is, and will continue to be, the giant of the region in terms of its volume, value and impact on the payments industry. Once a hugely cash-reliant society, China now leads in not just online but mobile payments; 90% of consumers now use mobile wallets on either the Alipay or WeChat platforms. No other nation comes close to the level that China has reached in terms of being a truly cashless society.

## Cash is still king elsewhere

In stark contrast, South Korea's card usage per

capita is amongst the highest globally for consumer payments, whilst Japan continues to show a preference for cash payments over credit-based systems.

In the same vein as China's move, emerging markets such as Indonesia, India and Malaysia are seeing major growth in mobile wallets. The rise in mobile and ecommerce is also spurring fintech-driven payments in highly unbanked markets. The Philippines is witnessing noteworthy growth in this area as fintech-driven payment platforms gain ground as alternatives to bank accounts.

The key factors influencing these payment method stem from a combination of cultural and historical preferences towards financial services. These factors, however, are far from static and continue to evolve. IDC's research reveals five macro trends that are driving the next stage of Asia's fast-changing payments landscape (see Figure 1).

Figure 1

## The Five Macro Trends Impacting Asia's Payments Evolution

### Cashless Society

- The shift from cash to cards, mobile wallets and other digital payments
- Often driven by regulators and governments in a push to bring more transparency, accountability and efficiency to fiscal systems as well as reduce cash-handling costs

#### Macro Trend Most Evident in

- China • Malaysia • India

### Digital Ecosystems

- The drive to use payments which are associated with digital ecosystems such as ecommerce or ride hailing platforms
- The associated race for these digital players to create viable and sufficiently broad ecosystems to allow their customers to exist in the "gated" walls. This includes extra services such as credit offered within their platforms

#### Macro Trend Most Evident in

- China • India • Indonesia

### Financial Inclusion

- The usage of payment systems, such as wallets as alternatives for formal bank accounts, especially in markets where the unbanked population remains high.
- Using such wallets and other fintech developments as the catalyst to bring people into the financial system for the first time and offer them a variety of financial products

#### Macro Trend Most Evident in

- Philippines • India • Indonesia

### Payments Data

- The increasing trend for payment data to be seen by merchants as a valuable source of information and revenue stream
- Payment data seen by providers as their next big revenue stream in the face of declining merchant fees – doubling down on data and its importance

#### Macro Trend Most Evident in

- China • Korea

### Cross-Border Commerce

- Global trade, both physical and online, is rapidly increasing, while payment models are converging
- Increased cross-border compatibility and usability of payment systems and more acceptance and seamlessness when accepting international payment methods

#### Macro Trend Most Evident in

- China • Japan • Thailand

Source: IDC, 2020



# TOWARDS A CASHLESS SOCIETY

Moving away from cash and towards cashless methods, such as mobile wallets or cards, is a much sought after goal of both the public and private sectors in Asia.

## Benefits to public and private

For the public sector, going cashless eliminates inefficiencies, builds transparency, boosts economic development, and combats fraud, corruption and other illegal cash-related activities.

Reducing cash or even eliminating it totally enables small and large corporations alike to address inherent problems, such as trust and security issues associated with the handling and depositing of cash as well as reconciliation of transactions. The cost tied to accepting electronic card payment systems is one of the reasons smaller merchants prefer cash; some merchants pass those fees onto their customers, perpetuating the cash cycle when customers refuse to bear the burden. Ever-present security issues and fear of fraudulent credit-card payments are also reasons for merchants and customers to stick with using cash.

## Small businesses win

Mobile wallets may well be the solution to cracking the small and medium-sized business (SMB) sector — and even the micro-business segment which account for over 90% of businesses in markets such as India and Indonesia (source: Ministry of Commerce and Industry India and Ministry of Trade Indonesia). Mobile wallets for the unbanked, coupled with the lower processing fee compared to cards, helps level the playing field for smaller merchants looking to ride the wave of ecommerce and electronic payments.

## Shift to cards and mobile for transparency

Various tactics, including promotions, discounts and cashbacks, are being used to push mobile wallets

mainstream. In 2020, the **Malaysian** government announced RM30 (US\$7) to every citizen for deposit in the mobile wallet of his or her choice. The countrywide effort is to get citizens to embrace digital payments and eventually for the government to gain better visibility into payments, provide better transparency for tax issues, and reduce corruption. **India** also stands out as taking aggressive steps towards a cashless society. In 2019, the government's efforts include mandating all vendors of a certain size to accept at least one electronic payment and launching a government-backed debit card system. The government also considered a proposal for salaries of government employees to be paid into debit card accounts in a combined effort to drive usage of electronic payments.

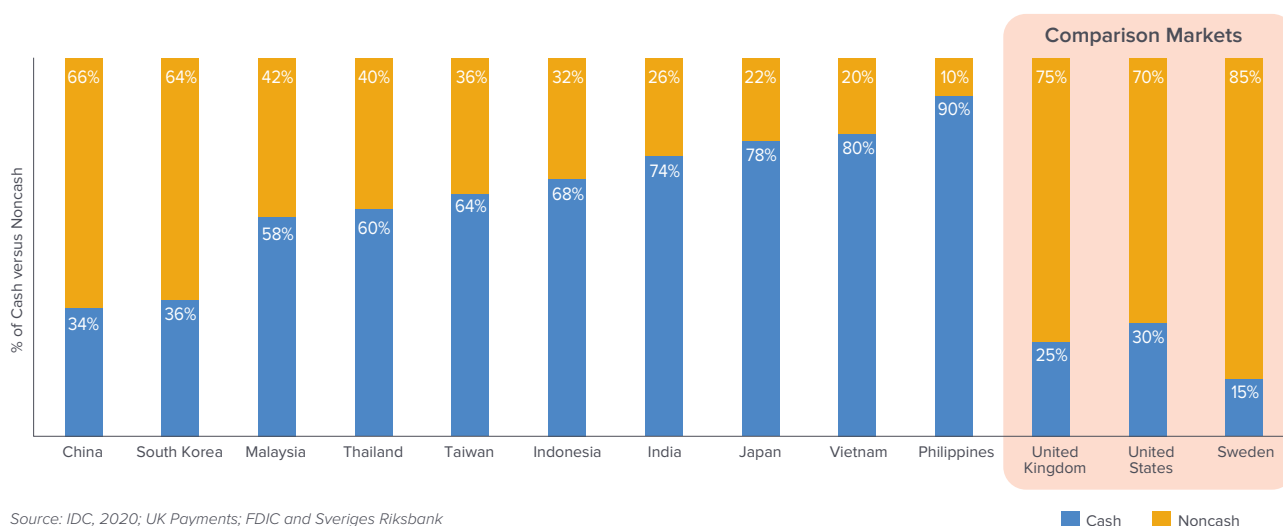
## Asia stands in a strong position to move further towards cashless societies

As shown in Figure 2, cash is losing its stronghold in several traditionally cash-reliant markets. The move towards cashless payments, however, will be different for each market. Unlike China with mobile payments, the rest of the region will likely not see the distinction of one payment type due to varying market forces, the presence of payment service providers as well as differences in technology infrastructure and cultural preferences. These have an impact on the pace and form of the development of a cashless economy.

China and South Korea compare favourably to United States, United Kingdom, and Sweden, which are the global leaders in cashless payments as standouts for low usage of cash and high usage of cards. South Korea has also taken the card route to cashless, whilst China has moved away from cash to mobile payments. The other markets in Asia will likely leverage a mix of cards, mobile wallets and other payment methods as their reliance on cash falls.

Figure 2

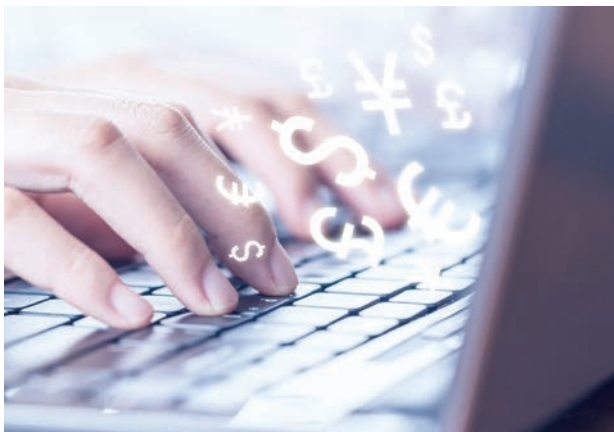
## Cash versus Noncash Payments for Total Consumer Transactions 2019 (Online and Offline)



Source: IDC, 2020; UK Payments; FDIC and Sveriges Riksbank

# RISE OF DIGITAL ECOSYSTEMS

China has reached a mature development stage in its efforts in creating digital ecosystems, thanks to Tencent and Alibaba with their respective WeChat and Alipay apps. Competition is set to intensify as rivals race to build similar digital ecosystems across Asia.



## Eyes on Southeast Asia

Shared services company Grab has possibly come closest in Southeast Asia to reach the depth of services as seen in China. Grab offers ride hailing, fintech services, food delivery, on-demand deliveries and other services from its single app across almost all major markets in Southeast Asia. These services are tied by Grab's payment wallet, GrabPay, which supports both online and online-to-offline transactions. Other notable examples with similar ecosystem propositions include GoJek in Indonesia and Sea (formerly known as Garena) which both offer a wide range of digital services across Southeast Asia. Alibaba itself has made significant efforts at building an ecosystem of its own through ecommerce and

***Digital ecosystems create different "currencies" to be used across varying domains, online and offline. Accepting new digital payment methods presents merchants with opportunities that are poised for growth.***

fintech investments across Asia. Whilst none of these Southeast Asian players has reached the level of market dominance of China's two major players, they continue to attract investments from both traditional and digital players.

## Opportunities beyond payments

Digital ecosystems create different "currencies" to be used across varying domains, online and offline. Accepting new digital payment methods presents merchants with opportunities that are poised for growth. However, merchants should be aware of "walled gardens", or closed digital ecosystems, and decide which suits them better. Bystanders risk losing out on potentially lucrative new opportunities — not just extra revenue. Merchants gain access to further services, such as loans, data and cross-promotions within the app, which help raise visibility for the business. Those who choose to support different payments often face processing and reconciliation challenges arising from having extra point-of-sale (POS) devices.

# PAYMENTS DATA: A VALUABLE SOURCE OF INFORMATION AND REVENUE STREAMS



eCommerce and ride-hailing companies build their business models on data. Leveraging this same data, in conjunction with analytics to make both strategic and tactical decisions, creates opportunities for merchants to drive new revenue.

## A good way to understand customers

Depending on how payment authorisation and authentication is configured, payment data can be obtained via less intrusive payment flows, when compared to membership schemes and in-store apps. Payment data provides a comprehensive

record of transactions, along with customer details, which when used in isolation can produce many insights. However, when analysed with other streams which add resolution and depth to the data, the potential of payment records can be fully seen. An analytics engine using data from multiple sources is more effective in deriving actionable insights. Merchants can then leverage this to shape effective customer experience strategies to drive customer signups.

### Data from payments can also be leveraged in other ways

The transaction data repositories that payment service providers have amassed from multiple merchants across industries are a valuable treasure trove. Merchants can leverage this data in finetuning their customer acquisition and marketing strategies. Data as a service is a feature now being introduced by several forward-looking payment service providers across Asia as value to their

merchant customers. For merchants, the ability to view and analyse data across the industry gives rise to the potential for even deeper insights than might be available with their own data sets in isolation. Being able to derive the most value from such assets, however, will require the right people and the technologies for this data analysis.



## THE RISE IN CROSS-BORDER COMMERCE

Card and digital payment players are expanding their services in international markets, giving tourists the convenience of using familiar payment modes when they are overseas. Alipay, WeChat, UnionPay and JCB have all struck significant deals for overseas expansion, and these agreements bode well for markets like Thailand which depend heavily on tourism.



The upcoming Olympics in 2021 in Tokyo has also seen a similar push to introduce near-field communications (NFC) Europay/Mastercard/Visa (EMV) card payments to Japan for the first time. Whilst Japan already has a host of NFC payments used locally, acceptance of the more internationally used NFC card standard is still rare. Merchants are ramping up and upgrading their payment systems in anticipation of the mass inflow of international tourists converging in on Tokyo.

***For ecommerce businesses in some markets, cross-border orders make up a significant percentage of total revenue. Some merchants have, in a bid to support multiple payment options, resorted to partnering with multiple different payment providers.***

### An ecommerce booster

Offering support for familiar payment methods will help to reduce cart abandonment and build customer loyalty. For ecommerce businesses in some markets, cross-border orders make up a significant percentage of total revenue. Some merchants have, in a bid to support multiple payment options, resorted to partnering with multiple different payment providers. This can lead to issues with order tracking and reconciliation, a scenario that can be avoided by working with a strategic partner that offers a range of commonly used international payments on a single platform. This reduces many of the headaches that arise from dealing with multiple currencies across different geographies.

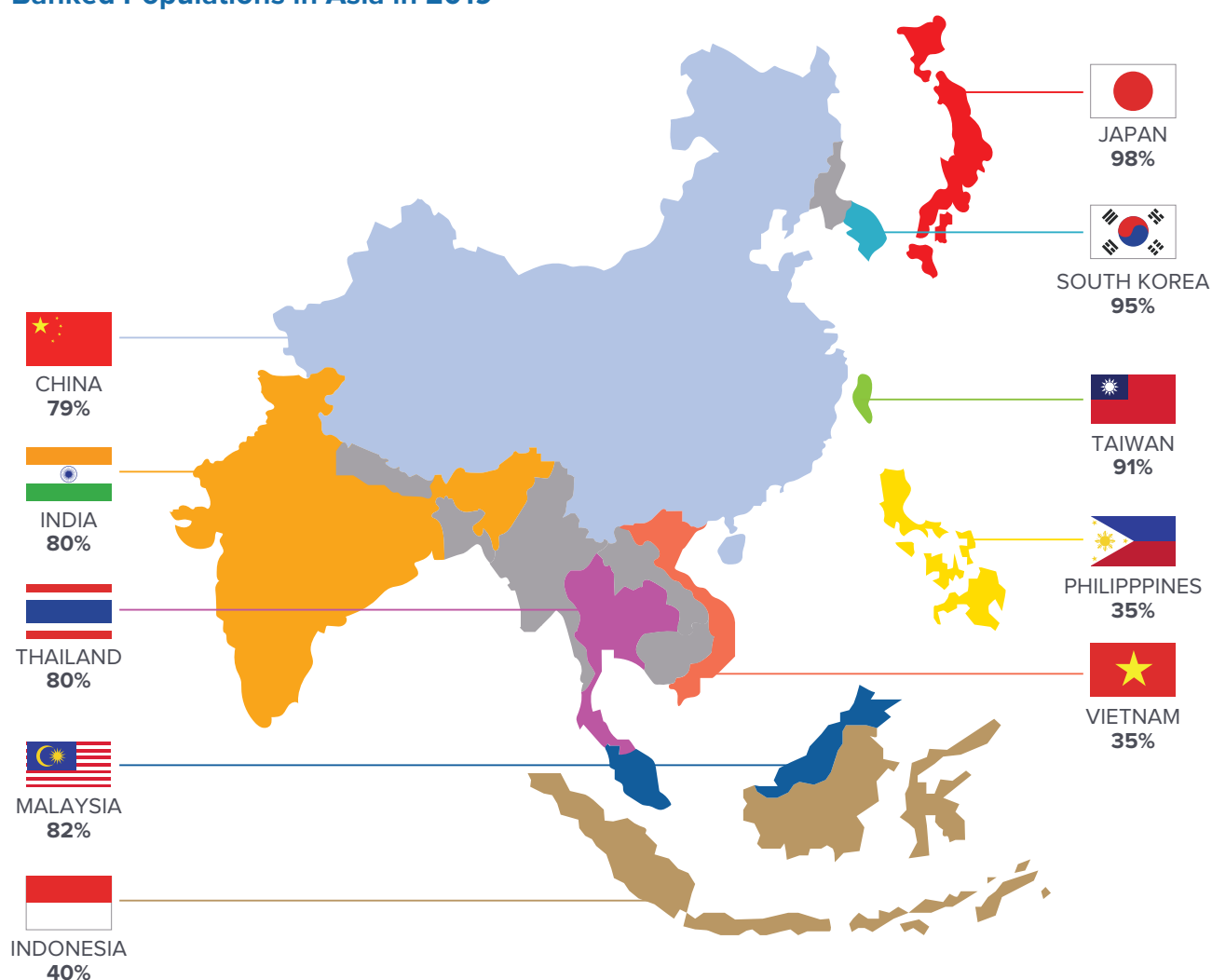
# THE GATEWAY TO FINANCIAL INCLUSION

The opportunity for fintech-driven financial services, as shown in Figure 3, is huge in markets like **Indonesia, Philippines** and **Vietnam**, which have low banked populations of 35%-40% (source: World Bank). The mechanisms of financial inclusions via digital means vary, but common to many is the issuance of a digital wallet which serves the basic key functions of a bank account and allows for

funds in and out — the most essential of financial services. Where local regulation permits, many fintech companies have also used these wallets to offer small loans and other financial products based on customer behaviour profiles and transaction history. In markets like Indonesia, these programs have government support to bring people into the financial sphere for the first time.

**Figure 3**

## Banked Populations in Asia in 2019



Source: World Bank, 2019

**India's** financial inclusion schemes have expanded beyond basic services to address the needs of its large unbanked population. These schemes include national biometric IDs which allow for electronic know-your-customer (eKYC) process for remote banking and its Unified Payments Interface (UPI) which seeks to assign a common payment ID to every citizen who is not tied to a bank or other

financial institution. This bypasses the need for merchant fees and investment. The impact of these financial inclusion schemes, coupled with the relaxing of restrictions on minimum balances in bank accounts, has seen India's banked population surge from 53% in 2014, to 80% in 2019 (source: Reserve Bank of India [RBI]).



# HOW CONSUMERS PAY

Deeply entrenched credit and debit cards are seeing mobile payments join the fray, driven by smartphone adoption, rising ecommerce, and various offline digital payment options. How consumers in Asia choose to pay for their goods is due to a mix of both availability, benefits and convenience, with different payments being used for different situations or platforms. Asia, as a whole, has differences in consumers' payment method preferences due to environment and cultural factors.

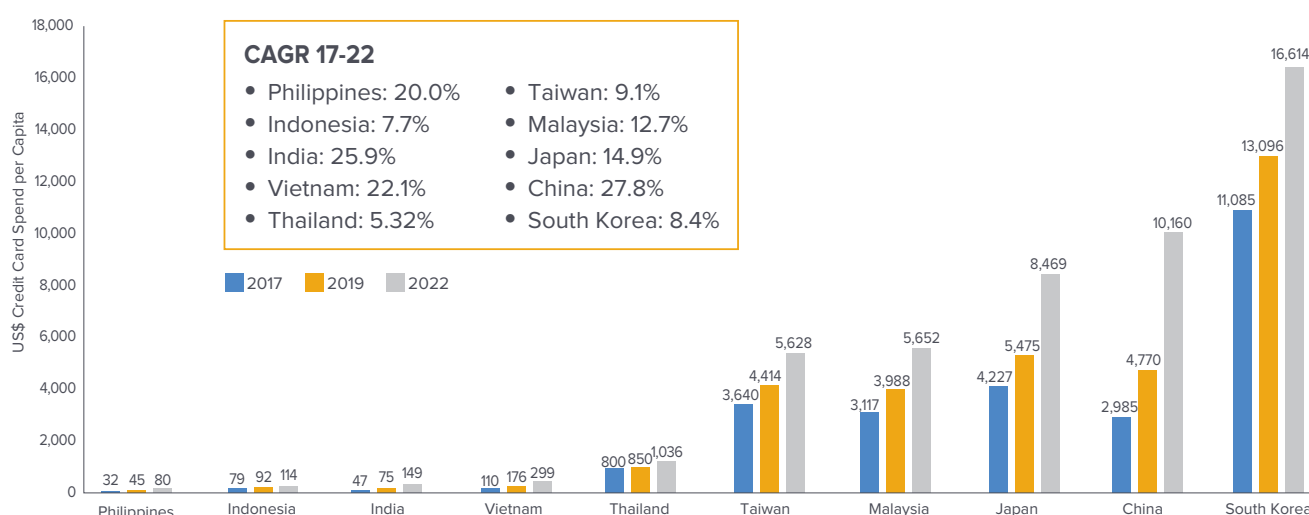
## In credit they trust

South Korea shows itself to be the leader in credit

card payments for the Asia region, as shown in Figure 4. South Korea's growth rate is the lowest of the group, reflecting its maturity as a market. **China**, despite being a market which has traditionally not seen extensive use of credit, has the highest growth rate of credit card transactions. This is due to several factors, including increased overseas travel, increased domestic spending, and topping up of mobile wallets. By 2022, China is expected to close much of the gap with South Korea in terms of per capita credit card spending. However, China will still lead the region by virtue of its massive population size in terms of the total value of payments.

Figure 4

## Credit Card Spend per Capita 2017-2022 (All Markets) in US\$



Source: IDC, 2020

Elsewhere in Asia paints a different story. **Japan's** credit card spending is far below that of South Korea and will be outpaced by China in 2022. This is despite its higher annual average household income: Japan at US\$19,512; South Korea at US\$16,567, and China at US\$4,806 (source: OECD, 2019). Usage is expected to get a boost from the Olympics in 2021 and sustain until 2022, but not enough to get ahead of China.

Despite its relatively developed economy, **Taiwan** shows similar levels of card spend to Malaysia. Cultural, behavioural and security concerns are amongst the key factors impacting growth.

**Malaysia** tells a different story of fast-growing usage of credit cards. Aggressive promotions from banks for cards as well as fast-growing ecommerce and sharing economy markets have driven Malaysia up to a respectable rate of credit card usage. Credit card spend is still low in **Thailand, Vietnam, India, Indonesia** and the **Philippines**. This is due largely to the low penetration of cards and POS terminals in brick-and-mortar stores. Some markets such as Vietnam have shown strong growth rates from their small bases. This will continue in the future as ecommerce purchases increase and more card terminals are rolled out.

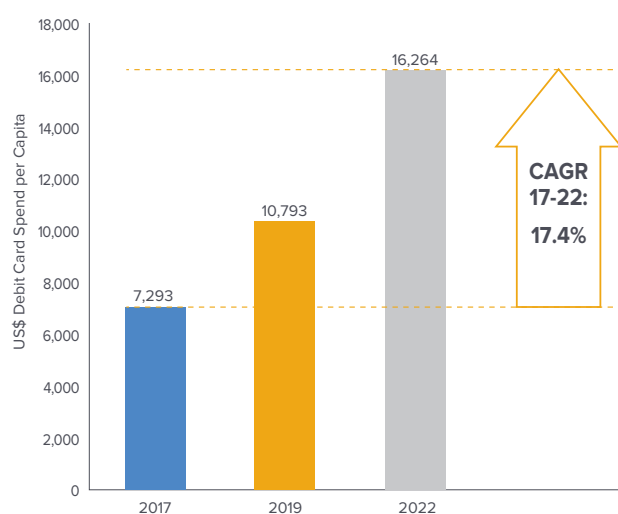
## Debit cards: China spends three times as much

Debit card spending in Asia tells a very different story to that of credit cards. In 2019, China led the region by a huge margin with debit card spend at over three times the second nearest

market of South Korea, and that of which is almost all processed by UnionPay. The increase in debit card spend is driven by ecommerce and sharing economy services. Consumers in China are also binding their debit cards for mobile wallet top-ups.

Figure 5

### Debit Card Spend per Capita 2017-2022 (China Only) in US\$

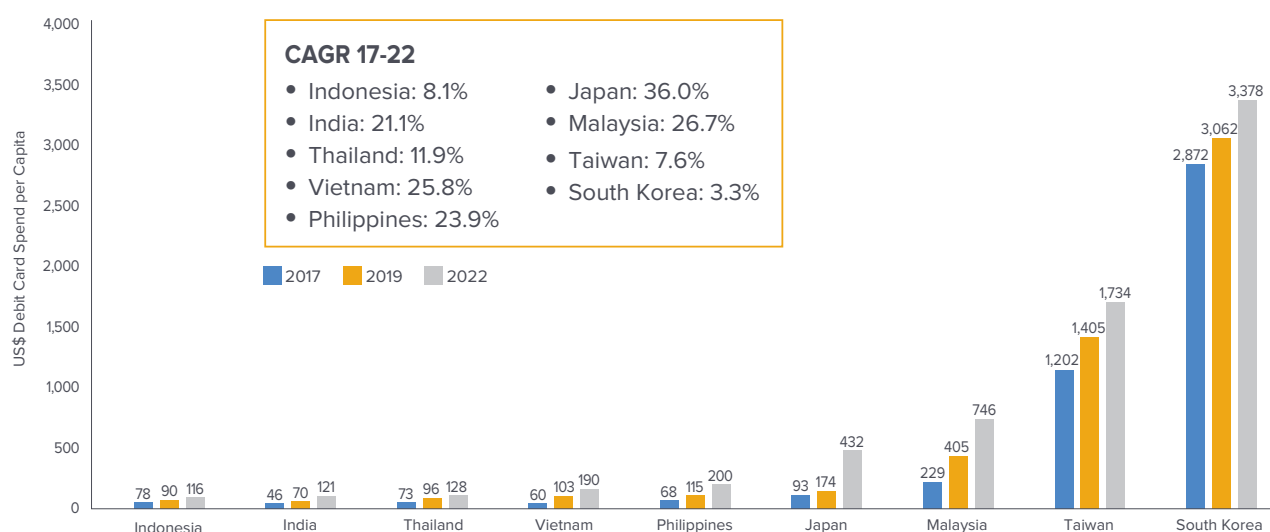


Source: IDC, 2020

Whilst China has shown significant debit card usage, this is not reflected across the rest of Asia, as shown in Figure 6. In markets like **Indonesia** and **Vietnam**, cards with debit capabilities for payments are relatively new to the market. There is also a lack of awareness amongst card holders of this payments feature. **Malaysia** has had success in increasing debit card usage, thanks to better educating of banking customers through informational programs by the issuing banks. In a move to further boost debit card usage, Malaysia introduced its own debit card payment system, MyDebit, with lower fees than other payment providers. The **Bank of Thailand**, too, has set concrete goals to reduce the reliance on cash by encouraging debit card usage. The largest debit card-based movement seen in the region is in **India** with its RuPay system. Debit card issuance crossed the 1-billion mark in 2018, from 84 million just 10 years back (source: RBI). Whilst debit cards are now common amongst the general population, more education and incentives are needed to encourage usage.

Figure 6

### Debit Card Spend per Capita 2017-2022 (All Markets Except China) in US\$



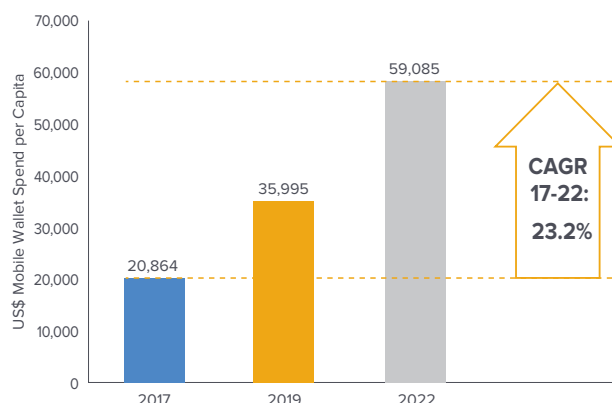
Source: IDC, 2020

## China's mobile wallet growth remains unmatched globally

The growth trajectory of this newest category of electronic payments is a tale of two giants: Alipay and WeChat Pay each both controls roughly half of the total mobile payments market (source: Xinhua), leaving the tiny remainder of the market held by other payment providers. The extent of mobile payments being used in China cannot be overstated. As shown in Figures 6 and 7, the current spend on mobile payments per capita is 28 times that of the second highest spending market. Mobile payments transactions per capita far exceed China's combined credit card and debit card spend (Figures 4 and 5).

Figure 7

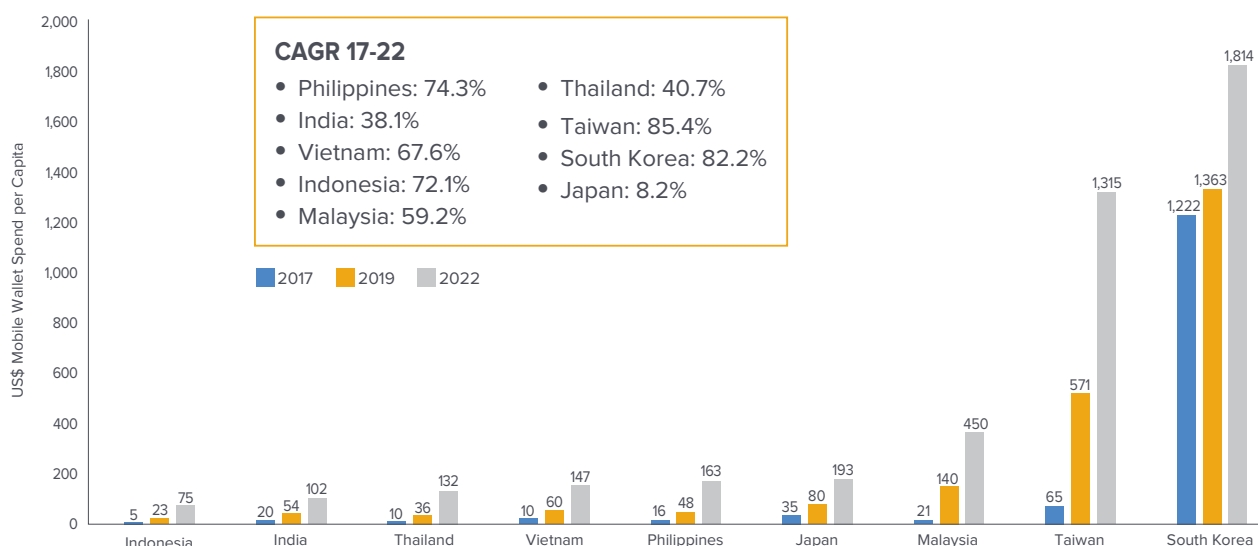
## Mobile Wallet Spend per Capita 2017-2022 (China Only) in US\$



Source: IDC, 2020

Figure 8

## Mobile Wallet Spend per Capita 2017-2022 (All Markets Except China) in US\$



Source: IDC, 2020

Coming in second place, **Japanese** consumers trail the Chinese in mobile wallet usage. Despite being the first market globally to release a viable mobile payments system in the form of Osaifu-Ketai, which was introduced in the early 2000s, the system remains fairly limited in its use cases. The recent wave of mobile payments, based on Internet technology such as QR codes for payments rather than specific hardware standards of Osaifu-Ketai, may be Japan's second shot at putting itself on the mobile payments map. LinePay, part of the greater Line social media ecosystem, is now accepted in multiple major retailers and ecommerce sites in Japan. The Japanese mobile wallet systems, however, remain complex with numerous providers in operation using different hardware and software standards.

## Buy now, pay later

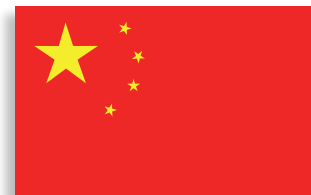
All eyes are on the emerging area of "Pay Later" which are post-paid payment and installment loans services available today on digital platforms such as Grab and Shopee. **Japan, South Korea, Malaysia and Indonesia** have seen this payment method rise in popularity as digital platforms seek to offer customers more payment choices. The move to "Pay Later" payments shifts revenue models closer to a monthly subscription, even for on-demand services such as ride hailing. This also allows for revenue to be stabilised and opens the door for new income streams from interest earned on late payments. Such pay later loans have already become popular elsewhere globally in markets such as the United Kingdom and Australia where they are now commonly available on both smaller and major platforms.

# COUNTRY PROFILE: CHINA

Once a highly cash-reliant economy, daily payments in China are now largely driven by Alibaba and Tencent. Their digital payment platforms have expanded to cater to both online and offline commerce payments. Alipay and WeChat mobile wallets have become ubiquitous in acceptance for brick-and-mortar payments in mainland China. eCommerce payments are also led by mobile wallets, with some usage of debit and credit cards. Cash on delivery (COD), once the most common payment method in China, has been reduced to almost marginal levels. The pace of change will hasten even more with the introduction of the digital yuan, the digital edition of the Chinese national currency.

## QUICK FACTS (2019 Figure or Latest)

Population	:	1.4 billion
Banked Population	:	83%
Credit and Debit Cards per Capita	:	6.2
Total Cash vs Noncash Transactions	:	34% vs 66%
Credit Card Spend per Capita	:	US\$4,770
Debit Card Spend per Capita	:	US\$10,793
Mobile Wallet Spend per Capita	:	US\$35,995
eCommerce Spend per Capita	:	US\$1,357



Source: IDC, 2020 and World Bank

## KEY DEVELOPMENTS

- Alibaba's Alipay proved to be the perfect online payment tool for China's needs, introducing a concept of funds in a wallet and allowing the user to top-up using bank accounts. Alipay customers can choose how much they want to keep in their mobile wallets and their bank account balances are not exposed.
- Tencent's now ubiquitous WeChat Social media platform rolled out payments for peer-to-peer (P2P) transactions which became a hit with consumers. Introducing QR codes was a significant step in enabling offline payments.
- Unlike other technologies such as NFC, QR codes have the advantage of requiring zero additional investments to accept and make payments. Codes can be generated either on the user's phone or displayed on a paper print out. The current mobile payments boom is credited to WeChat and Alipay's added support for these offline payments. As of 2019, cash transactions accounted for only 26%, and mobile payments are the default payment for daily transactions both online and offline.
- The strength of both Alibaba and Tencent in creating digital ecosystems has resulted in a duopoly digital economy. As some merchants accept only one of the two major payment methods, most users will still have to use both payments for their daily needs, but a unified QR code interface is in the works from the government.
- Card usage is growing, albeit mainly for online purchases, overseas payments and for topping up mobile wallets. Credit cards are generally reserved for online and larger payments by higher income segments of the population.

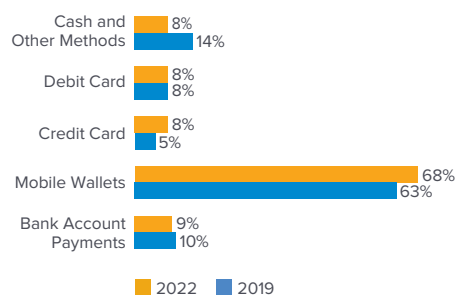




# COUNTRY PROFILE: CHINA (cont'd)

## HOW ONLINE PAYMENTS ARE MADE

- Mobile wallets lead the online payments and will continue to grow the most until 2020. Its current advantage means that new use cases and places to transact will continue to be added, driving further spend online for wallets.
- Credit cards will also see strong growth, albeit tied to online debit card transactions in 2020. Other payment methods such as debit cards, bank account payments and even COD will either stay at the same levels or see reductions in their usage based on analysis of current trends.



Source: IDC, 2020

## ROLE OF THE GOVERNMENT

- Support for inter-bank payments.
- Plans to launch a digital yuan after five years of government-funded research into distributed ledger technology (DLT) such as blockchain. Trials to begin in selected cities in 2020.
- Encourages the major banks to research into the potential of a new digital currency.
- Going cashless identified as a major step to achieve greater transparency within the financial system, more precise control over currency flow and better insight into transactions.

## REGULATORY ISSUES

- In 2019, the People's Bank of China, the mainland's central bank, created a new body with responsibility for the regulation of digital payments, blockchain services and other fintech products. All payment service providers are regulated and heavily scrutinised for their technology and products, including details such as where customer data is held. Data must be kept within the country and open to government audit.
- Foreign participation in the payments market is fraught with difficulty. In 2020, Visa, Mastercard and Amex obtained the relevant licences for credit card clearing, largely a product of the US-China trade deal. The key players within the Chinese payment network are currently the domestic giants and will likely remain this way for the foreseeable future.

## FUTURE DEVELOPMENTS

- Although the entry of foreign card players — Visa, Mastercard and Amex — is not unlikely to disrupt the current payments scene, expect card promotions targeting new customer profiles such as frequent travellers.
- UnionPay's partnership with Tencent to integrate their QR code systems possibly opens the door for the financial services firm to become a third major player in the market. A unified QR code is a step forward in the central bank's goal to establish a regulatory framework and mechanism for mobile payments in China by 2021.
- People's Bank of China's bold vision for a digital yuan could create a second revolution in payments, not just in China but globally, as a transactable and exchangeable digital currency backed by a central government.

# COUNTRY PROFILE: INDIA

A traditionally cash-driven market, the introduction of UPI brought real-time payments to bank-to-bank transfers on mobile platforms in 2016. New bank licences, also known as "payments banks" that only accept deposits and make transactions without the ability to offer loans, have been issued over the past few years with the aim of onboarding millions of unbanked Indian citizens.

## QUICK FACTS (2019 Figure or Latest)

Population	:	1.4 billion
Banked Population	:	80%
Credit and Debit Cards per Capita	:	0.7
Total Cash vs Noncash Transactions	:	74% vs 26%
Credit Card Spend per Capita	:	US\$74.5
Debit Card Spend per Capita	:	US\$69.9
Mobile Wallet Spend per Capita	:	US\$54.2
eCommerce Spend per Capita	:	US\$29.1



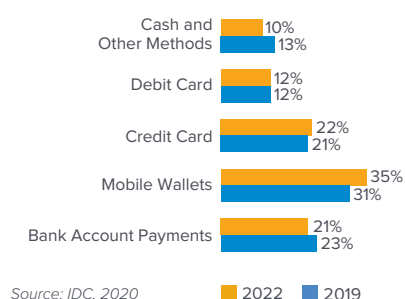
Source: IDC, 2020 and World Bank

## KEY DEVELOPMENTS

- eCommerce giants such as Flipkart and Amazon have driven the rise in digital payments to complete transactions.
- In 2016, the much-reported demonetisation of cash, while primarily used to fight corruption, also had an auxiliary effect of driving up mobile wallet usage. All major ecommerce players offered their own wallet solution. Many of the international players such as Google, Alibaba and Tencent have services in India, not only in payments but also in full digital ecosystems; making India an interesting battleground for new payments.
- All eyes are on the "India Stack", a set of application programming interfaces (APIs) aimed at digitalising processes in both government and the private sector. Elements of this stack include the RuPay, a debit card system that has sought to bring an alternative to the more typical debit card systems with high merchant fees.
- India's new ID system, Aadhar, uses biometric data and is now a prerequisite for buying cell phones and opening bank accounts. It has greatly helped the push for financial services by enabling eKYC for account opening and other transactions.

## HOW ONLINE PAYMENTS ARE MADE

- Mobile wallets' growth continues to be strong for online payments, driven by cashback schemes, promotions and other discounts.
- COD methods are expected to fall as consumers choose more convenient methods and merchants are unwilling to bear the burden of imposed fees.



# COUNTRY PROFILE: INDIA (cont'd)



## ROLE OF THE GOVERNMENT

- The government waived debit card transaction fees for certain merchant categories in 2019 and is now considering mandating debit card accounts to be used for all salary payments in India. India's banked population is now 80%, thanks to a combination of government-driven programs which have put nearly 1 billion debit cards in the hands of its citizens.
- The next challenge is to increase card usage to meet its potential in reducing cash. Credit and debit card usage per capita still ranks amongst the lowest of the markets in this research and average mobile wallet usage is also behind the leaders in Asia. However, the growth rates for credit cards, debit cards and mobile wallets are promising. Card payments are increasing at an average of over 20% a year. Mobile wallets usage is rising at close to 40% — one of the highest recorded rates in this study. India's UPI recorded 10 billion transactions in 2019, growing close to 200% from its 2018 levels and making up 12% of total transactions in India (source: Reserve Bank of India [RBI]).

## REGULATORY ISSUES

- The RBI successfully increased usage of new payment systems through mandates to move payments to newer platforms such as Real Time Gross Settlement (RTGS), spurring overall development of the financial industry.
- Companies providing payment services must be registered with RBI and undergo stringent testing of their technology platforms, including resilience and security before being introduced to the general public. Usage of cloud in financial services has sector-specific regulations. Financial services firms are required to hold data within the country and are not allowed to offshore personal data. India still lags other countries in not having a firm data protection law in writing, but as digital services continue to grow, it will become highly necessary.

## FUTURE DEVELOPMENTS

- There are plans to increase usage of the RuPay systems and cards in general, as well as the UPI system, from its current acceptance at 100 million merchants. Further iterations of existing policies and refinements, along with new tactical mechanisms to provide quick incentives, will help boost specific payment tool usage.
- With the increasing penetration of POS devices, prices for acquiring devices will be competitive with the introduction of new mobile solutions with lower fees than traditional POS. A combination of POS devices that take card payments and QR code payments from mobile wallets will become commonplace.
- For card payments, NFC card payments will likely lead to an aggressive push for new machines to be issued. Secured electronic payments will be a focus to combat fraud.

# COUNTRY PROFILE: INDONESIA

Indonesia, like most of Southeast Asia, remains a cash-reliant market. Its geographical spread makes little economic sense for banks to set up branches on thinly populated islands, leaving much of the population cut off from financial services without access to even a basic bank account, despite efforts to introduce rural finance schemes. Credit and debit cards are available but largely for the urbanised middle-class. GoJek, a poster child for Indonesia's digital economy, has helped drive the acceleration of digital payments and expand the nation's transformation goals.

## QUICK FACTS (2019 Figure or Latest)

Population	:	264 million
Banked Population	:	40%
Credit and Debit Cards per Capita	:	0.8
Total Cash vs Noncash Transactions	:	68% vs 32%
Credit Card Spend per Capita	:	US\$91.6
Debit Card Spend per Capita	:	US\$89.9
Mobile Wallet Spend per Capita	:	US\$59.7
eCommerce Spend per Capita	:	US\$48.9



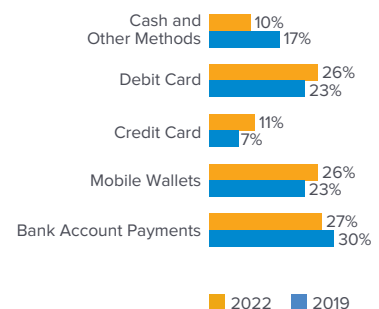
Source: IDC, 2020 and World Bank

## KEY DEVELOPMENTS

- Several players including GoJek and Grab (ride-hailing technology companies) as well as Tokopedia, Bukalapak and Shopee (ecommerce players) are major exponents of solving payment issues for the largely unbanked community, by equipping them with tools to enable online payments.
- GoJek and Grab have received funding to build "super apps" from the major Chinese mobile wallets players, making them proxy units in the fight for Southeast Asia dominance in the payments space.

## HOW ONLINE PAYMENTS ARE MADE

- Online spending is fulfilled by a mix of payment methods, with a majority choosing bank payments. Whilst popular, these bank payments are far from seamless and require multiple steps including redirection to other sites that provide a less-than-ideal user experience.
- By 2022, IDC forecasts a slight fall in bank transactions due to mobile wallets which will be the second most popular method tied with debit cards. IDC predicts that credit card payments will also see increased usage.
- COD will see the biggest drop (by half in 2022) for online payments, as customers and merchants embrace digital payments



Source: IDC, 2020



# COUNTRY PROFILE: INDONESIA (cont'd)



## ROLE OF THE GOVERNMENT

- Bank Indonesia (BI), the industry regulator, has introduced a unified QR code standard for mobile wallets and created a supportive working environment for fintech companies.
- Regulatory sandboxes support experiments with innovative financial products.

## REGULATORY ISSUES

- BI continues to support the nation's move to cashless transactions, including cashless experiments and a regulatory framework to monitor fintech. eMoney is generally allowed through the set-up of a local company or through a joint venture. Government regulation PP82/2012 states that Indonesian's financial and customer data must be kept on-site within the country and limits the use of cloud providers.
- BI is also seeking to establish a centralised infrastructure that can oversee all payment data in Indonesia. This entails setting up a payment ID for local citizens. Payment data from this project will be collected and analysed at a granular level for purposes including reporting and investigation. Future developments in payments will follow the framework of the 2025 vision.

## FUTURE DEVELOPMENTS

- BI has introduced a unified QR code system as part of its overall "Indonesia's 2025 Payment Vision" initiative. Unified QR code payments are limited to a maximum of US\$150 per single transaction.
- Other aims of the vision include the national payment gateway to act as the centralised switching unit for all retail transactions including cards, emoney and bank direct to account payments.

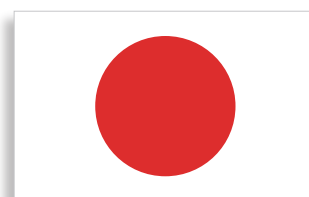
# COUNTRY PROFILE: JAPAN

Despite its high level of income and economic development, Japan has been hesitant towards noncash retail payments at both online and brick-and-mortar stores. Japan's card usage, particularly debit cards, lags behind other developed regions such as North America, Western Europe and Australia. Whilst the average number of cards per capita is fairly high, card issuers will need to address Japanese consumers' security concerns to boost usage.

Japan's mobile wallet foray with the introduction of the Osaifu-Keitai system failed to make an impact. The reason is the lack of a unified platform to increase ecosystem participation from merchants and other service providers, as seen in today's more successful platforms.

## QUICK FACTS (2019 Figure or Latest)

Population	:	127 million
Banked Population	:	98%
Credit and Debit Cards per Capita	:	5.8
Total Cash vs Noncash Transactions	:	78% vs 22%
Credit Card Spend per Capita	:	US\$5,475
Debit Card Spend per Capita	:	US\$174
Mobile Wallet Spend per Capita	:	US\$1,363
eCommerce Spend per Capita	:	US\$1,039



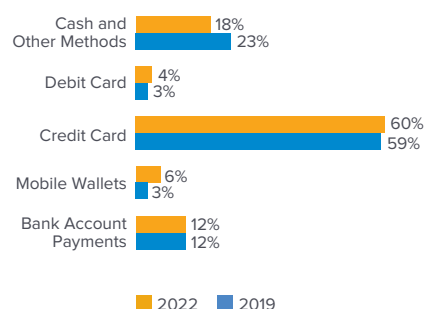
Source: IDC, 2020 and World Bank

## KEY DEVELOPMENTS

- Efforts are ramping up for cashless payments, such as QR codes and mobile wallets for offline payments, in anticipation of 40 million tourists for the upcoming summer Olympics in 2021 (source: Japan Tourism Bureau).
- The next payment wave will be NFC-capable cards and terminals that meet with the international EMV standard commonly seen in Visa PayWave, Mastercard PayPass, ApplePay and SamsungPay. EMV-compliant cards have recently started to be issued and terminals are fast being rolled out by all major payment players, including NTT DATA, in a bid to capture the benefits of offering seamless payments to both merchants and consumers. Terminals being issued are often of the mobile POS variety, aimed at offering convenient payment solutions to smaller businesses at a lower cost.

## HOW ONLINE PAYMENTS ARE MADE

- Japan's online transactions are predominantly credit-card based. Other popular modes of payment are COD and "convenience store payments". Japanese convenience stores are everywhere, making it easy for consumers to pay for their online purchases hours later at any 7-Eleven or FamilyMart store.
- Mobile wallets are expected to see the most growth over the next few years, although their overall contribution to total online payments will still be small.
- In terms of Pay Later schemes, the most notable is Paidy. The instant-credit provider has attracted attention with its business model aimed at ending Japanese consumers' security concerns over online payments. Touting a fast and secure way to check out online, customers make purchases using only an email address and phone number. No lengthy registration or credit card is needed.



Source: IDC, 2020

# COUNTRY PROFILE: JAPAN (cont'd)



## ROLE OF THE GOVERNMENT

- The government's push for more acceptance of credit and debit card payments in brick-and-mortar stores and public transport has led to the increased availability of POS terminals across Japan. This infrastructure is still much-needed in a market that has lower POS number per capita than other less developed markets in the region.

## REGULATORY ISSUES

- The majority of payment laws fall under the Prime Minister's purview, and these are passed onto the Financial Services Agency (FSA). The Bank of Japan (BOJ) plays a large role in ensuring smooth settlement of funds in the country. Japan remains a fairly open market to payments participation, although companies must meet a number of requirements, such as having a Japan office and sufficient assets.
- The announcement of an "Open Banking" framework which allows third-party's access to customer data through verified APIs has kickstarted many banks and other financial institutions to explore digital payments.
- The government has set a target of 40% of transactions over the next 10 years to be conducted digitally and has strongly encouraged participation from banks, fintechs and payment organisations in this new payment growth scheme.
- There is no specific regulation for payments companies in handling data and the jurisdiction falls under the Japan Act on the Protection of Personal Information (APPI). There may be some responsibility on the part of payment providers to ensure the data they handle is managed correctly.

## FUTURE DEVELOPMENTS

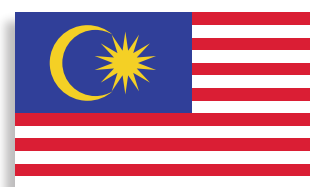
- SMBs, with their current low acceptance of noncash payments, remain a market space which carries huge potential for change, and it is likely where the current pushes for new payments will see inroads for growth in card payments.
- In addition to NFC payment terminals, newer terminal technologies, such as PIN on glass that allow smartphones to be used to authenticate payments and NFC tap on phones that allow consumer smart devices to be used as the only technology needed for NFC card payments, can bring down the cost of accepting card payments and provide more options for smaller businesses.
- Mobile wallets for offline payments will see growth, although their composition of total makeup of payments will likely remain confined to specific use cases such as in convenience stores which are aligned to those wallets.
- Online payments will remain card-driven with Pay Later schemes seeing growth at the expense of convenience store payments and other cash-related payments.
- Mobile wallets for online payments will start to find favour with customers who do not want or are unable to use a credit card. IDC predicts that mobile wallets will start incorporating Pay Later options or some form of credit either by creating the credit facilities themselves or through partnerships, in a bid to offer even more options to Japanese customers.

# COUNTRY PROFILE: MALAYSIA

Malaysia economically straddles the space between the developed and emerging world, and its payment trends reflect this situation. Whilst credit and debit card payments are lower than developed markets in Asia, they are not as small compared to other Southeast Asian markets, such as Indonesia or the Philippines which have much lower banked populations. Once popular for ecommerce payments, COD is now rarely used, displaced by other more modern payment methods.

## QUICK FACTS (2019 Figure or Latest)

Population	:	32 million
Banked Population	:	85%
Credit and Debit Cards per Capita	:	1.7
Total Cash vs Noncash Transactions	:	58% vs 42%
Credit Card Spend per Capita	:	US\$3,988
Debit Card Spend per Capita	:	US\$404
Mobile Wallet Spend per Capita	:	US\$48
eCommerce Spend per Capita	:	US\$116



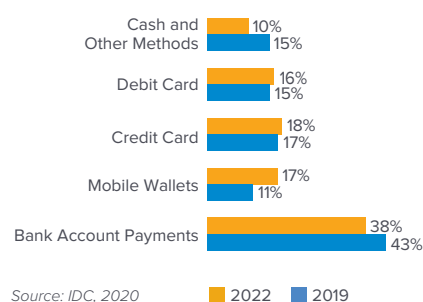
Source: IDC, 2020 and World Bank

## KEY DEVELOPMENTS

- Malaysia's overall payments landscape has been one of gradual development, with small but meaningful gains in electronic payments.
- Many tech players have released mobile wallets to cater for both online and offline needs. Major wallet players include GrabPay, Boost (Celcom Axiata owned) and Touch 'n' Go Wallet (CIMB and Ant Financial joint venture) have recently emerged as the leaders after a highly competitive period prior to 2020.
- Credit and debit card payments have also risen, attributed to fierce promotional efforts from banks and the introduction of NFC card payments in retail stores. The total percentage of POS terminals with NFC capability stands at 75% in 2019, one of the highest in the Asia region.

## HOW ONLINE PAYMENTS ARE MADE

- Payments via banks accounts continue to take the lion's share, with a slight fall expected by 2022 as mobile wallets gain traction.
- Backed by a huge range of promotions and joint tie-ups with other platforms, the use cases for mobile wallets in ecommerce continues to grow. By 2022, mobile wallets usage is estimated to be the third most popular payment behind bank account payments and credit cards.





# COUNTRY PROFILE: **MALAYSIA** (cont'd)



## — **ROLE OF THE GOVERNMENT** —

- In 2020, the Malaysian government offered RM30 (US\$7) for all qualified citizens to be deposited in either GrabPay, Boost or Touch 'n' Go mobile wallet to encourage mobile wallet adoption.
- Payments have been identified as a key pillar in enhancing the digital transformation of the retail and financial services sectors.

## — **REGULATORY ISSUES** —

- Bank Negara Malaysia (BNM) handles payment functionality and operations, issues the relevant licences and updates payment frameworks, such as the Interoperable Credit Transfer Framework (ICTF), to drive cooperation in the industry.
- Payment licences, such as emoney, are regulated by BNM and are obtained after inspection of the technology and working premises of the systems subjected for examination.
- Foreign players can gain entry in Malaysia's payment ecosystem upon certain conditions, usually a joint venture entity. Relevant regulations regarding data in payment systems include risk management in technology that states financial institutions should not rely on public cloud computing services to manage, operate or host confidential information.
- BNM takes a prudent view to fintech developments; payments are clear cut as they fit into existing emoney and electronic payments definitions, which makes it easier to predict which services will and will not be allowed.

## — **FUTURE DEVELOPMENTS** —

- In 2020, mobile wallets will see the largest increases compared to other payments, and this gain comes primarily at the expense of cash-based payments.
- Other electronic payments such as cards will also grow as offerings continue to diversify and POS machines become widespread, especially in smaller shops.
- Current POS marketing inertia is highly focused on equipping SMBs and more informal businesses with mobile POS, Tap on Glass, or PIN on glass devices which require little more than a smartphone to accept payments and are highly targeted at first-time card acceptance from merchants.

# COUNTRY PROFILE: PHILIPPINES

An estimated 90% of transactions in the Philippines are still conducted through cash, one of the highest in the region. Card penetration in the form of credit and debit cards is extremely low due to the high numbers of unbanked citizens, and POS devices for card acceptance are rare except for at the largest outlets. Being a large country spread out amongst many islands has made it difficult for financial services to operate due to the costs and lack of business feasibility in operating using the traditional bank branch model. The significant unbanked segment of the Philippines population (64%) is a huge driver for mobile wallet adoption. Despite the rapid rise in ecommerce, most transactions online are still conducted with COD methods, which are deemed essential for doing online business in the Philippines.

The lack of formal financial services availability has proven to be an issue that many digital players have tried to address through various means, mostly focused around offering payment through digital wallets.

## QUICK FACTS (2019 Figure or Latest)

Population	:	106 million
Banked Population	:	36%
Credit and Debit Cards per Capita	:	0.5
Total Cash vs Noncash Transactions	:	90% vs 10%
Credit Card Spend per Capita	:	US\$45
Debit Card Spend per Capita	:	US\$115
Mobile Wallet Spend per Capita	:	US\$23
eCommerce Spend per Capita	:	US\$44



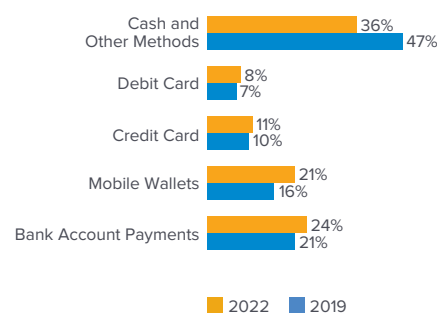
Source: IDC, 2020 and World Bank

## KEY DEVELOPMENTS

- Significant upside for reducing cash usage as both the private and public sectors work towards common goals in boosting electronic payments.
- Future developments in technology via mobile platforms will further drive innovation and adoption for financial services.
- Advancements of joint collaborations between banks and fintechs, such as banks offering the needed capital for loans and relying on fintech's technology platforms and customers outreach to fulfil the acquisition process, will likely penetrate rural areas and more remote islands where financial services are most needed and traditional banking has not been able to set roots in.

## HOW ONLINE PAYMENTS ARE MADE

- Almost half of online payments are still made using COD and other cash-based methods.
- By 2022, IDC predicts that COD will fall in popularity driven by the surge in other payment types, particularly mobile wallets due to aggressive marketing and promotional strategies from the tech giants (Grab, GoJek [local entity named Coins.ph], Shopee) and telcos.
- Bank account payments will also drop slightly as consumers opt to use wallets or cards, which are easier and can potentially offer more benefits.



Source: IDC, 2020

# COUNTRY PROFILE: **PHILIPPINES** *(cont'd)*



## — **ROLE OF THE GOVERNMENT** —

- A focus has been to simplify the regulation and governance of fintech players, as well as traditional banks. This has allowed mobile wallets to be able to issue emoney and use eKYC for account opening and verification.
- In late 2019, the Philippines Central Bank announced an online payment facility for government transactions named eGov Pay to be used by all government agencies. There are plans to work with all related mobile wallet players to introduce a national QR code system to simplify the payment mechanisms for mobile wallets currently being used in the country.

## — **REGULATORY ISSUES** —

- Laws regarding the regulation of payment systems in the Philippines are governed by Bangko Sentral ng Pilipinas (BSP). It recently issued a new National Payment Systems Act which served to further clarify matters regarding next-generation digital payments and simplified many of the existing laws for businesses to obtain the correct licences and documentation needed to operate a payments system within the country.
- Foreign participation is welcomed and allowed to operate payments businesses as long as pre-set conditions are met. In comparison to some other markets in the region, BSP has issued statements regarding technology which are very positive for its development.
- BSP has stated that cloud computing is not only allowed but is in fact encouraged, especially for smaller institutions as a means to leverage technology for rapid scaling of business. Rules regarding customer data in the Philippines being held in-country are therefore open to more leeway, so long as security and data privacy standards are being met.

## — **FUTURE DEVELOPMENTS** —

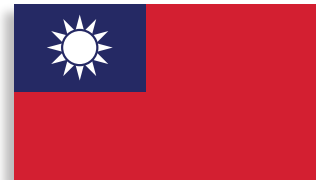
- New payments involving digital financial services, either through banks or fintechs, have started to develop credible models aimed at addressing the unbanked.
- The private sector of technology firms and banks will continue to drive adoption of their digital services, such as wallets and cards, to different customer segments. The government plans to play an increased role in payments development.

# COUNTRY PROFILE: TAIWAN

The payments landscape is a mix of both developed and emerging market features. Usage of credit has been limited, largely due to cultural and historical factors that continue to this day. Credit and debit cards see penetration levels above emerging markets but at levels far below other markets with similar economic markers such as Korea. Overall spend on cards is also low, particularly for debit cards. Taiwan has been a cash-reliant economy and most daily transactions are still conducted using cash. It is also worth noting that the number of POS devices for card acceptance is exceptionally low for its relative economic stature.

## QUICK FACTS (2019 Figure or Latest)

Population	:	24 million
Banked Population	:	92%
Credit and Debit Cards per Capita	:	2.4
Total Cash vs Noncash Transactions	:	64% vs 36%
Credit Card Spend per Capita	:	US\$4,414
Debit Card Spend per Capita	:	US\$1,405
Mobile Wallet Spend per Capita	:	US\$140
eCommerce Spend per Capita	:	US\$588



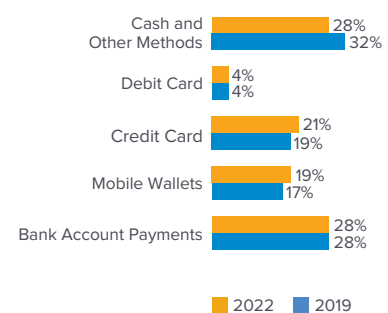
Source: IDC, 2020 and World Bank

## KEY DEVELOPMENTS

- Taiwan has 120,000 POS terminals, the same as the Philippines but lower than Vietnam which reported 290,000 terminals in 2019 (source: government statistics). POS terminals are mainly found only in larger businesses.
- The SMB segment is crucial in Taiwan's economy, making up 97% of the economy (source: Taiwan, Ministry of Economic Affairs). In terms of POS devices per SMB, Taiwan ranks lower than the Philippines (Taiwan: 0.09, Philippines 0.11). With many SMBs not supporting electronic payments, this has led to overall low usage of cards in both offline and online transactions, despite high card penetration rates.
- The recent growth in mobile wallet payments, however, offers SMBs the capability to accept electronic payments for the first time without high merchant fees.

## HOW ONLINE PAYMENTS ARE MADE

- Payments for online commerce are driven by a mix of both online and offline methods.
- Cash payments for ecommerce purchases via convenience store counters, online bank transfers and COD are popular.
- Fully online and digital payment methods for commerce purchases are gaining popularity as more people realise the convenience of online transactions. Convenience store payments will see some impact as mobile wallets providers flex their promotion and marketing muscle.



Source: IDC, 2020



# COUNTRY PROFILE: TAIWAN (cont'd)



## ROLE OF THE GOVERNMENT

- In the move towards a more cashless future, the government has relaxed relevant regulation on third-party payments to encourage new mobile wallet players.
- More awareness is being done to achieve its goal of 90% of mobile payments usage by 2025.

## REGULATORY ISSUES

- The Financial Supervisory Commission (FSC) of Taiwan classifies emoney and mobile wallets as electronic payment institutions (EPI) under its governing act. EPIs include collecting and making payments for real transactions as an agent, accepting deposits of funds as stored value, and transferring funds between electronic payment accounts as well as other businesses approved by the authorities.
- Foreign participation in the sector is allowed upon the setting up of a local entity within the Republic of China (Taiwan). These include details about the business, such as internal controls and risk management framework.
- Previous regulation for mobile wallets stated that users could not transfer funds between different EPI SPs without first channelling those funds through a bank of some sort. This previously brought potential issues for mobile wallets that dealt in peer-to-peer (P2P) payments as they had to first find some method to incorporate the bank section into their process flow. Newer regulations for payments, however, have streamlined this requirement and have made such P2P payments easier, in a bid to hasten the uptake of mobile payments.
- The FSC is now playing an active role in promoting mobile wallet usage within Taiwan through education and in seeing how regulation can be further improved to account for the needs of mobile wallet players to increase usage.

## FUTURE DEVELOPMENTS

- Future developments in payments will be within the online sector to equip consumers with wallets and to drive both online and offline usage.
- Whilst card usage is somewhat stagnant, the increase of NFC-ready card terminals will be a contributing factor to the growth of card payments. POS device operators within Taiwan are also experimenting with different form factors, such as mobile POS which can potentially be more attractive to SMBs.
- Considering the important role of convenience stores in Taiwan's payments, mobile wallets will need to seek tie-ups with at least one of the major franchises if they hope to gain ground in the market. Convenience store platforms present huge data collection opportunities for payments providers and merchants.

# COUNTRY PROFILE: THAILAND

The second-largest ecommerce market in Southeast Asia, Thailand's sizeable population and economy makes it a target for new payments opportunities. Thailand's payment scene can still be classified as emerging. Credit and debit card penetration is moderate for the region. Debit card usage is particularly low, with many still unaware of the payment functions which are available through their cards. This low usage of debit cards, despite the high number in circulation, is a focus for industry regulator Bank of Thailand. POS penetration rates also remain relatively low. The digital payments scene has a large upside with Alibaba's investments into TrueMoney, one of the largest mobile wallets in Thailand. Mobile payments have not only been the sole domain of fintechs, but also of banks who have aggressively pushed their own QR code solutions. This comes as a result of Thailand's high-banked population in contrast to other markets, such as Indonesia or Philippines, where banks do not have enough foothold within the population to reach critical mass with payments.

## QUICK FACTS (2019 Figure or Latest)

Population	:	70 million
Banked Population	:	86%
Credit and Debit Cards per Capita	:	1.5
Total Cash vs Noncash Transactions	:	60% vs 40%
Credit Card Spend per Capita	:	US\$890
Debit Card Spend per Capita	:	US\$96
Mobile Wallet Spend per Capita	:	US\$80
eCommerce Spend per Capita	:	US\$75



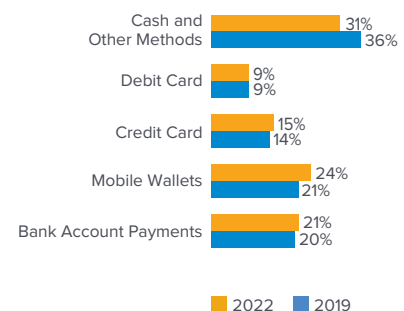
Source: IDC, 2020 and World Bank

## KEY DEVELOPMENTS

- Mobile wallets from both local names (e.g., TrueMoney) and international players (e.g., Grab) are a common sight in Thailand.
- Common use cases for mobile wallets include mobile phone credit top-ups and gaming related activities.
- The drive for mobile wallets is for both online and offline acceptance and this is where promotional and marketing funds of the tech players are targeted.
- The huge number of Chinese tourist arrivals has pushed merchants in the tourism industry to upgrade their payment systems to accept Alipay and WeChat Pay.

## HOW ONLINE PAYMENTS ARE MADE

- COD is still the most popular method for online payments, not because of the lack of cards issuance but security features or lack of knowledge in using cards for payments.
- Mobile wallets are already the second most popular method of transacting online, bolstered by the large number of mobile wallets active in Thailand and their associations with the various digital platforms. Mobile wallets will also see the strongest growth up to 2022, accounting for nearly a quarter of online transactions by then.
- Cards will see small but notable growth, whilst COD and bank account payments fall, as customers seek more convenient and lifestyle-based methods of transacting.



Source: IDC, 2020

# COUNTRY PROFILE: THAILAND (cont'd)



## ROLE OF THE GOVERNMENT

- New initiatives aim to promote infrastructure development in conformity to its National e-Payment Master Plan, which includes the launch of PromptPay, a centralised payments system that uses national ID cards as identifiers for all Thai citizens.
- Various government-backed promotions are aimed at encouraging cashless payments, especially for smaller hotels and other tourism-facing establishments, which are a major point of expansion for payments vendors to drive POS devices penetration.

## REGULATORY ISSUES

- Bank of Thailand (BoT) has issued licences regarding emoney providers. eMoney providers are counted separately from the segment of electronic payment providers and include both network- and card-based systems, such as smart cards. Licences are issued by the BoT to those that have met their requirements regarding operational and capital stability as well as the provision of adequate technological and risk framework management capabilities to ensure their systems can operate with the minimum of issues.
- Providers of credit and debit cards are required to submit their technology for study before they can be issued with the relevant paperwork to begin operations.
- Foreign participation in payments is allowed. Working with local partners to assist with the necessary documentation is a preferred way to enter the Thai payments sphere.

## FUTURE DEVELOPMENTS

- Tighter integration with digital ecosystems, such as ride hailing and food delivery, will help spur mobile wallets usage in online and offline transactions.
- The tourism industry is expected to drive the adoption of new payments as merchants consider payments methods that their tourist customers are familiar with, such as Chinese mobile wallets and international credit and debit cards. Thailand will continue to see growth in a variety of electronic payments, slowly reducing the usage of cash over the next few years.

# COUNTRY PROFILE: SOUTH KOREA

South Korea stands globally as a market with the highest usage of both credit and debit cards. Credit card spend per capita is the highest in Asia and continues to grow at a steady rate. The shift to cashless payment has largely been due to the efforts of banks and, more recently, by technology companies. Electronic payments usage is highly tied to the nation's impressive ICT infrastructure, which has close to 100% of the population plugged into the Internet and average broadband speeds being the highest in the world at close to 30 Mbps (source: IDC). The availability and stability of networks have made it easy for online and brick-and-mortar stores to provide a range of payment methods to support secure transactions.

## QUICK FACTS (2019 Figure or Latest)

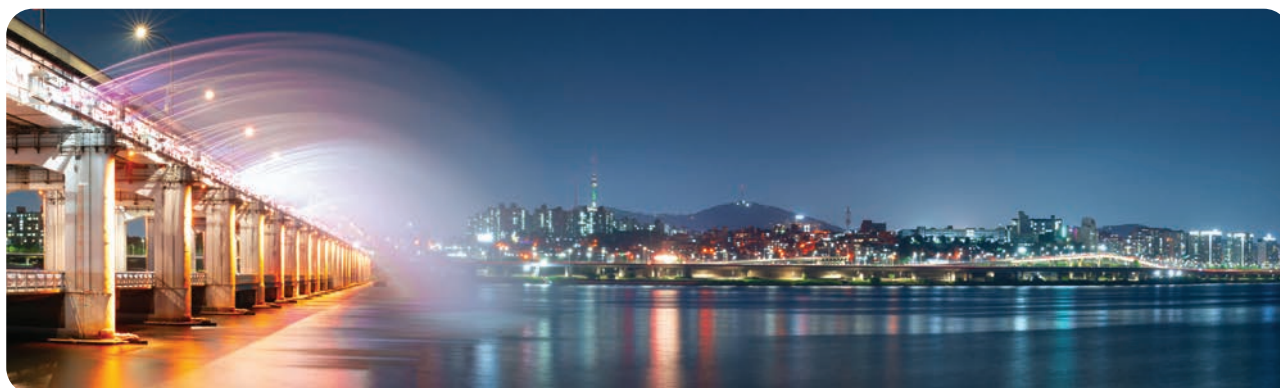
Population	:	52 million
Banked Population	:	95%
Credit and Debit Cards per Capita	:	3.4
Total Cash vs Noncash Transactions	:	36% vs 64%
Credit Card Spend per Capita	:	US\$13,096
Debit Card Spend per Capita	:	US\$3,062
Mobile Wallet Spend per Capita	:	US\$571
eCommerce Spend per Capita	:	US\$1,378



Source: IDC, 2020 and World Bank

## KEY DEVELOPMENTS

- South Korea's electronic payments are driven by smart devices, such as SamsungPay and KaKao Pay, which allow for the tokenisation of credit cards on phones. Samsung has over 60% market share of smartphones (source: IDC, 2019) in its home market. Samsung's proprietary payment system, along with other similar systems, has become a popular way for consumers to use their credit cards due to its seamless nature and the high number of compatible NFC terminals available in the country.
- Banks are highly in-tune with the needs of their customers, and there is huge diversification in their card products available, which include joint-cards with travel and airlines, retail and ecommerce sites, to drive customers to use cards rather than cash for their payments.
- Korea's enviable technology infrastructure has allowed for rapid update in electronic payments, such as NFC cards and mobile wallets, which require stable Internet connections to function best.
- Whilst cards are in an incredibly strong position that is unlikely to be displaced, mobile wallets offer functionality tied into digital services that appeal to customer segments who are unable to access cards due to age or income requirements. Mobile wallets will likely play a role in further displacing the remaining cash usage, further driving up electronic payments in the nation.

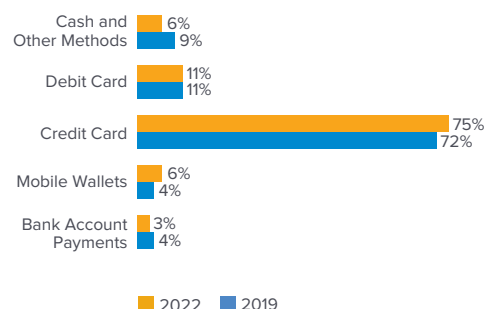




# COUNTRY PROFILE: SOUTH KOREA (cont'd)

## HOW ONLINE PAYMENTS ARE MADE

- Online payments are driven by credit card usage by a significant margin, a lead that is predicted to increase by 2022.
- In 2022, mobile wallets usage, although still low compared to card payments, will see growth. More use cases will encourage customers who have either been unable to or unwilling to try this payment method. Incentives and promotional tie-ups will give mobile wallets a boost.
- Other payment methods, such as bank account payments and cash, will drop to near negligible levels over the next few years as other electronic payments grow.



Source: IDC, 2020

## ROLE OF THE GOVERNMENT

- The government is encouraging development of the payments and fintech industry, with plans to phase out coins in 2020.
- Korea's Financial Services Commission has set a framework for Open Banking, where incumbent banks have been mandated to share their data with third parties. Payments providers have had their licences reclassified into a new category to make it easier for them to do business.

## REGULATORY ISSUES

- In 2015, the Financial Services Commission announced that they would give permission to Internet banks to provide services through digital channels without the need for face-to-face KYC.
- This resulted in K Bank and Kakao bank receiving the required licences and beginning operations in 2017 as Korea's first fully digital banks.
- The Financial Services Commission also removed the requirements for authorised certificates for payments companies that led to corporations such as Naver (Line) and Lotte launching their own payment applications.
- The city-level governance has sought to move consumers and merchants to cashless systems. For example, Seoul Metropolitan Government introduced its own QR code platform called zero pay, which offers free payments and tax relief for users.

## FUTURE DEVELOPMENTS

- The opening of payment systems to third-party usage is a true milestone, encouraging new entrants into the payments space and the development of innovative and more personalised services.
- No longer the exclusive domain of banks, payment services will focus on service differentiation through the bundling of value-added services as well as joint-promotions and ecosystem partnerships.
- Payments and other customer data are expected to be a key proposition that payments providers will offer merchants.



# COUNTRY PROFILE: VIETNAM

Vietnam boasts a large population and a rising middle class with similar conditions to Indonesia. Vietnam only recently joined the international financial community, and its payments mechanisms reflect that youth. For years, it has had an informal dual currency system in place where US dollars are widely accepted and even preferred for certain transactions due to the Vietnamese Dong's history of hyper-inflation which has left deep marks on local citizens' opinion on the stability and value of their own currency. The rapid growth of ecommerce is fuelling a need for customers to pay with more convenient means instead of COD and bank account payments. Whilst the availability of POS terminals is still low on a per capita basis, payment service providers are looking to increase the number of devices and to replace older devices with NFC-compatible terminals for credit and debit card usage.

## QUICK FACTS (2019 Figure or Latest)

Population	:	96 million
Banked Population	:	45%
Credit and Debit Cards per Capita	:	0.5
Total Cash vs Noncash Transactions	:	80% vs 20%
Credit Card Spend per Capita	:	US\$176
Debit Card Spend per Capita	:	US\$103
Mobile Wallet Spend per Capita	:	US\$36
eCommerce Spend per Capita	:	US\$60



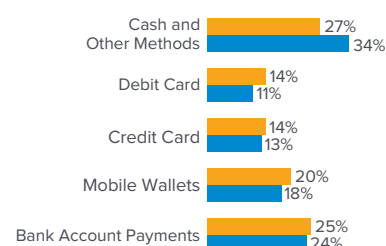
Source: IDC, 2020 and World Bank

## KEY DEVELOPMENTS

- Banks are rapidly introducing new cards in the form of both debit and credit cards and fintechs/digital players are promoting their new mobile wallet solutions, many of which, such as Grab, are also seen elsewhere in the Southeast Asia region.
- Overall financial system participation, including access to electronic payments has been hugely hindered by the low-banked population. Credit in general has not yet become commonplace due to the risk-adverse cultural factors at play.
- The growth of new payments options, which do not require a formal bank account, have sought to solve many of the country's unbanked and under-banked problems. Wallets, which offer payment and banking facilities to those who either do not need or do not have access to banks, are offering viable technology-based solutions to Vietnam's long-standing problems.
- Local players MoMo and ZaloPay are seen as the two current leaders within the mobile wallets space. ZaloPay, part of a large digital ecosystem in Vietnam which includes ecommerce and gaming, has also received funding from Tencent.

## HOW ONLINE PAYMENTS ARE MADE

- Vietnam's online payments are driven by bank account payments and COD, which are still considered essential payment options for ecommerce. IDC research indicates a slowdown in COD payments by 2022, falling in favour of newer more seamless payments such as mobile wallets as well as credit and debit cards. However, Vietnam will still be a cash-reliant market for ecommerce by 2022.



Source: IDC, 2020

■ 2022 ■ 2019

# COUNTRY PROFILE: VIETNAM (cont'd)



## ROLE OF THE GOVERNMENT

- The government aims to reduce its cash usage in the financial system through a variety of monetary mechanisms, including launching a mobile wallet to process government payments.

## REGULATORY ISSUES

- In 2014, the State Bank of Vietnam issued Circular 39, which stipulated the regulations for intermediate payment services in a move to develop the economy regarding electronic payments and to clear up much of the confusion regarding its standing. In this circular, ewallets were recognised as a payment service — banks and nonbanks can apply to obtain the relevant licences.
- The new decrees also set regulations regarding service providers, requiring them to open accounts that carried funds that could issue payments and refunds to their customers in cases of unforeseen events. Other stipulations include not providing a single bank account holder with more than one wallet from the same service providers.
- Service providers for ewallets are also critically not allowed to offer interest to their customers on their balances in the wallet. The same prohibition is applied to credit facilities. These regulations have been positive developments for the industry in Vietnam and have set the foundation for further developments in online payments and wallets in the country to proceed smoothly.

## FUTURE DEVELOPMENTS

- Many banks have introduced zero interest credit cards in an aggressive move to increase ownership and usage of cards — a tactical effort to battle some of the existing misunderstandings regarding interest accrual properties.
- Mobile wallets continue to show continued strong growth and will undoubtedly be a popular payment option, particularly with the younger generations paying with smartphones.
- Cash will be here to stay for some time. A combination of efforts from both the private and public sector using both strategic and tactical methods to increase electronic payments usage will be needed to truly bring down the use of cash in Vietnam.

# FUTURE OUTLOOK

To extrapolate the growth rates of the payments market, IDC created a 10-country model based on various information sources. The outlook builds on a detailed model of several key factors, including current usage of payment types, online payments growth rates, current and future scenarios within the payments industry, consumer uptake of various payments, and developments in the public and private sectors.

IDC assigned each parameter with a score from 1-5, with 1 being the lowest score and 5 being the highest. The scores were assigned according to relative positions and values of the data points in comparison to the other markets in the same data set. This allows for a comparative assessment to be made of the markets and to identify where the similarities and differences lie. The total score is grouped into the following classifications: slow growth (less than 13), steady growth (13-19) and fast growth (20-30). See Appendix for details.

Credit Card/Debit Card/Mobile Wallet	Definition
Total spend of payment method per capita 2019	The total spend of credit card/debit card/mobile wallet transactions per capita for 2019
Total spend of payment method per capita growth rate 2017-2022	The compound annual growth rate (CAGR) of credit card/debit card/mobile wallet transactions per capita for 2017-2022
Payment method penetration in population 2019	Number of cards/accounts as a percentage of the population for 2019
Payment method penetration growth rate 2017-2022	Number of cards/accounts growth rate for 2017-2022
Government drive to push the growth of payment method	IDC's assessment of government initiatives to push credit card/debit card/mobile wallet payments
Private sector drive to push the growth of payment method	IDC's assessment of private sector initiatives to push credit card/debit card/mobile wallet payments

Source: IDC, 2020

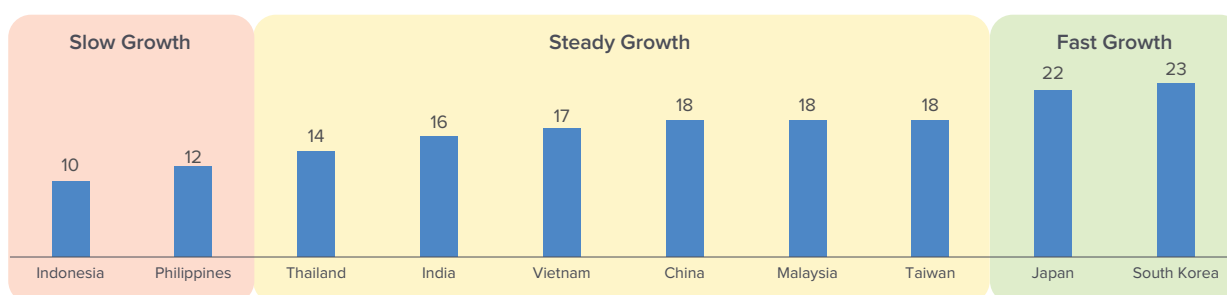
## Credit cards

Japan and South Korea have the highest potential for long-term growth in credit card usage, as shown in Figure 9. South Korea, already a leader in card payments, will continue to grow and maintain its lead. Low card usage in Japan is expected to pick up from its current low levels, spurred by a new growth

in credit card activities emerging in 2020. Taiwan, Malaysia, China, Vietnam, India and Thailand will also experience long-term steady growth in credit card usage. Philippines and Indonesia are amongst the laggards due to a lack of sufficiently banked populations and customer credit records which help drive the high rates of adoption and usage.

Figure 9

### Long-Term Credit Card Growth Predictions for All Markets (Total Score by Country)



Note: Slow growth = less than 13, steady growth = 13-19 and fast growth = 20-30 Source: IDC, 2020

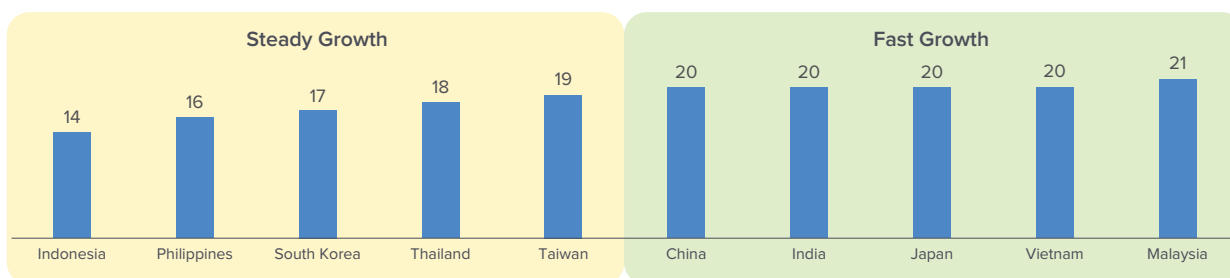
## Debit cards

Debit card growth in the long term paints a different picture compared to credit cards. As shown in Figure 10, **Malaysia, Vietnam, Japan, India** and **China** will see strong growth, thanks to the governments' proactive push towards cashless

societies. China, the leader for debit card payments in the region, has room to grow further, a testament to the ecommerce and digital services scene that is fuelling the growth in electronic payments. **Taiwan, Thailand, South Korea, Philippines** and **Indonesia** will also see steady growth up until 2030.

Figure 10

### Long-Term Debit Card Growth Predictions for All Markets (Total Score by Country)



Note: Slow growth = less than 13, steady growth = 13-19 and fast growth = 20-30 Source: IDC, 2020

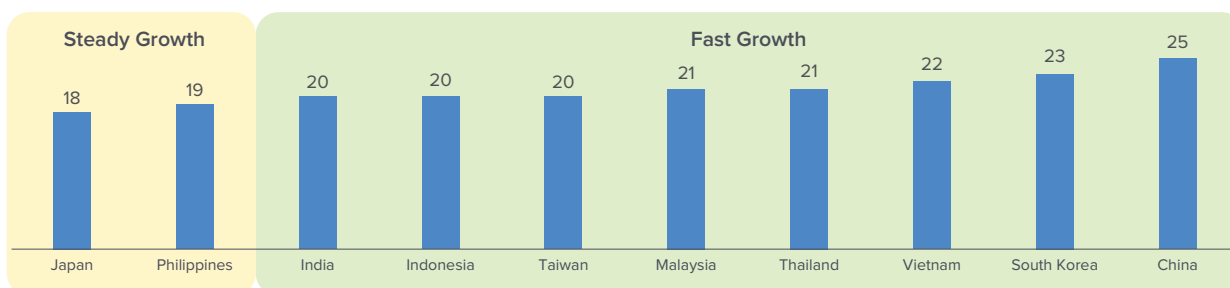
### Mobile wallets

**South Korea, Malaysia and Thailand** have many of the right ingredients to drive fast, long-term growth, as shown in Figure 11. These include developmental government policies, aggressive marketing from the mobile wallet companies and high growth in user adoption. Mobile wallets in Asia have become the focal points of payments development due to their

low cost to both merchants and customers as well as the accessibility to electronic payments they offer. Even in markets like South Korea, where other payments such as cards are highly dominant, wallets are a strong contender to challenge the status quo with their diversified use cases and roles in enabling seamless payments within larger digital ecosystems.

Figure 11

### Long-Term Mobile Wallet Growth Predictions for All Markets (Total Score by Country)



Note: Slow growth = less than 13, steady growth = 13-19 and fast growth = 20-30 Source: IDC, 2020

## FUTURE GROWTH AREAS

The payments discussion goes beyond cards and mobile wallets, as it is impossible to discuss the future without considering how other developments in and around the current landscape will play out.

### Digital currencies for digital economies

Blockchain payments projects are poised to bring huge benefits and transformation beyond payments and into systems in the government and commerce. In theory, such technologies can link all payments and transactions together in one master immutable data record that cannot be altered. These emerging applications serve as an ultimate point of reference, bringing transparency and security to payment systems in ways never seen.

The closest to this concept is China's digital yuan project. With trials beginning in 2020 in Shenzhen, all eyes will be on this pilot as an indicator for other

real-world situations and its potential in challenging the US dollar for supremacy as the world standard for tradeable currency and as a store of value. China's rise to prominence as the leader in digital payments looks set to enter a new stage of development.

### The digitalisation of legacy payment methods

The shift away from the legacy analogue credit card processes and to the digital realm has begun. Whilst credit cards and debit cards will stay in wide usage, it is highly possible that the form factor of a physical card may start to become fully digitalised. This is already seen in the tokenisation of physical cards for security purposes and used in major payment systems such as ApplePay and SamsungPay. In some markets, however, the actual card may no longer be useful as these systems from Apple and Samsung gain ground. Digitalised versions of cards within mobile wallets may be the only cards which are issued.

## Shifting role of payment providers to data providers

Competitive differentiation will be grounded on how payments providers use data to provide value-add to their customers. Behavioural trends analysis, consumer trends analysis and footfall data will be part of any merchant's arsenal of tools to introduce new products and services and find new customer growth areas.











## Online payments in 2030

Markets like China will see no change in payment methods most used, although the underlying

technology for mobile payments could be very different from the present day. South Korea may see higher use of tokenisation through SamsungPay-type digital payments. As shown in Figure 12, mobile wallets will be the overall big winner by 2030, predicted to be the most popular payment method in 7 of the 10 markets, compared to today where it is only the most used in 2 of the 10. The significant drop will be seen in cash for online payments, driven by both government policy and corporate initiatives over the next decade.

Figure 12

### Online Payment Changes in Asia: 2022 to 2030

										
	China	India	Indonesia	Japan	Malaysia	Philippines	Taiwan	Thailand	South Korea	Vietnam
Payments in 2022	1. Mobile wallets	1. Mobile wallets 2. Bank account 3. Credit card 4. Debit card	1. Bank account 2. Mobile wallet 3. Debit card	1. Credit card 2. Bank account 3. Other payments (Convenience store payments, cash)	1. Bank account 2. Credit card 3. Mobile wallets 4. Debit card	1. Cash 2. Bank account 3. Mobile wallets 4. Debit card	1. Cash 2. Bank account 3. Credit card 4. Mobile wallet	1. Cash 2. Mobile wallet 3. Bank account 4. Credit card	1. Credit card	1. Cash 2. Bank account 3. Mobile wallet
Payments in 2030	1. Mobile wallets (Possibly using digital yuan or new mobile platform)	1. Mobile wallets 2. Debit card 3. Credit card 4. Bank account (UPI)	1. Mobile wallets 2. Debit card 3. Bank account	1. Credit cards 2. Mobile wallets 3. Other payments (Pay Later, convenience store payments)	1. Mobile wallets 2. Credit card 3. Debit card	1. Mobile wallets 2. Bank account 3. Cash	1. Bank account 2. Credit card 3. Mobile wallet	1. Mobile wallet 2. Bank account 3. Credit card	1. Credit cards (Possibly through tokenised/wallet means)	1. Mobile wallet 2. Debit card 3. Bank account

Source: IDC, 2020

## CONCLUSION

To stay ahead of the competition, online merchants will have to look at how best to utilise newer, cheaper and more seamless payments, such as mobile wallets, as an integral part of their business strategy. Whether it is the Open Banking movement in South Korea that seeks massive widescale change in how payments are both accepted by merchants and used by consumers or more conservative Japan, there is no turning back to cash. Consumers today want and hold the power. Finding payments partners who understand the complexity and range within each country's payment scene is every merchant's first step to making their transformational move towards a cashless business.

IDC offers a checklist to stay ahead of the needs of customers and the fast-changing payments landscape:

### • Expand reach by engaging in ecosystems

Partnerships with mobile wallets go beyond just support for payments, but also through engaging with them to use their shared services, from delivery to financial services such as loans. Becoming a partner of the current generation of payments can bring huge gains in visibility and allows participation in greater ecosystems that offer new business opportunities. Look at the digital platform's marketing and

promotional muscle, technology capabilities and industry-specific solutions.

### • Set the foundations for data

Find ways to leverage payments data from cards which hold a significant amount of usable customer data, such as name, purchase type and purchase value. These act as highly functional data sets for later analysis. Enabling the value of payment data, however, requires the right provider to be able to furnish complete data and actionable data sets and consolidation of payments through a single or as few as possible payment providers will allow for standardisation of the data which makes for much more efficient analysis later on.

### • Find the right partner

One that can help uncomplicate the payments process in cross-border commerce. Look for a partner that understands the various payments options and Asia's complex regulatory landscape. The partner should also have a roadmap for future developments and a platform that can quickly accommodate and incorporate changes without the complexities that come with having multiple payment partners and systems. An integrated modern platform that offers support for current and future payments helps future-proof the business.



# APPENDIX

The following is the full data set and scoring used to assess the long-term future growth of credit card/debit card and mobile payments under the section Future Outlook section.

	IDC Assigned Score	Description	China		India		Indonesia		Japan		Malaysia		Philippines		Taiwan		Thailand		South Korea		Vietnam	
			Data	Score	Data	Score	Data	Score	Data	Score	Data	Score	Data	Score	Data	Score	Data	Score	Data	Score	Data	Score
Credit Card Data																						
Current credit card spending per capita 2019	Maximum Score 5	Higher spending indicates a higher score benchmarked against other markets	\$4,770	4	\$75	1	\$92	1	\$5,475	4	\$3,988	4	\$45	1	\$4,414	4	\$890	3	\$13,096	5	\$176	1
Credit card spending per capita growth rate until 2022	Maximum Score 5	Higher growth indicates a higher score benchmarked against other markets	28%	5	26%	5	8%	2	15%	4	13%	4	2%	4	9%	2	5%	2	8%	2	22%	5
Cards penetration of population	Maximum Score 5	Higher percentage indicates a better score benchmarked against other markets	37%	2	3%	1	8%	1	220%	5	11%	2	2%	1	190%	5	35%	2	200%	5	5%	1
Penetration growth rate until 2022	Maximum Score 5	Higher growth indicates a better score benchmarked against other markets	3%	2	6%	3	2%	2	1%	1	3%	2	4%	2	2%	2	2%	2	1%	1	12%	4
Government drive to push growth	Maximum Score 5	IDC's own assessment of weight of government drives	Low	2	Fair	3	Low	2	High	4	Low	2	Low	2	Low	2	Low	2	Very High	5	Low	2
Private sector drive to push growth	Maximum Score 5	IDC's own assessment of weight of private sector drives	Fair	3	Fair	3	Low	2	High	4	High	4	Low	2	Fair	3	Fair	3	Very High	5	High	4
Credit Card Score	Total of above		18		16		10		22		18		12		18		14		23		17	
Debit Card Data																						
Current debit card spending per capita 2019	Maximum Score 5	Higher spending indicates a higher score benchmarked against other markets	\$10,793	5	\$70	1	\$90	1	\$174	2	\$405	2	\$115	2	\$1,405	3	\$96	1	\$3,062	4	\$103	1
Debit card spending per capita growth rate until 2022	Maximum Score 5	Higher growth indicates a higher score benchmarked against other markets	17%	3	21%	4	8%	2	36%	4	27%	4	24%	4	24%	4	12%	3	3%	1	26%	4
Cards as penetration of population	Maximum Score 5	Higher percentage indicates a better score benchmarked against other markets	420%	5	77%	3	57%	2	360%	5	148%	4	48%	-	220%	5	93%	4	140%	4	45%	2
Penetration growth rate until 2022	Maximum Score 5	Higher growth indicates a better score benchmarked against other markets	2%	1	8%	4	5%	3	1%	1	3%	2	4%	2	1%	1	3%	2	2%	1	8%	4
Government drive to push growth	Maximum Score 5	IDC's own assessment of weight of government drives	Fair	3	Very High	5	Fair	3	High	4	High	5	High	4	Fair	3	High	4	High	4	High	4
Private sector drive to push growth	Maximum Score 5	IDC's own assessment of weight of private sector drives	Fair	3	Fair	3	Fair	3	High	4	High	4	High	4	Fair	3	High	4	High	3	High	5
Debit Card Data	Total of above		20		20		14		20		21		16		19		18		17		20	
Mobile Wallet Score																						
Current mobile wallet spending per capita 2019	Maximum Score 5	Higher spending indicates a higher score benchmarked against other markets	\$35,995	5	\$54	1	\$60	1	\$1,363	3	\$48	1	\$23	1	\$140	2	\$80	1	\$571	3	\$36	1
Mobile wallet spending per capita growth rate until 2022	Maximum Score 5	Higher growth indicates a higher score benchmarked against other markets	23%	3	38%	4	72%	5	8%	1	60%	5	74%	5	85%	5	41%	4	82%	5	67%	5
Wallets as penetration of population	Maximum Score 5	Higher percentage indicates a better score benchmarked against other markets	153%	5	32%	2	43%	2	156%	5	48%	2	19%	1	36%	2	61%	3	36%	2	33%	2
Penetration growth rate until 2022	Maximum Score 5	Higher growth indicates a better score benchmarked against other markets	4%	2	7%	3	9%	3	3%	1	10%	3	7%	3	6%	3	8%	3	6%	3	11%	4
Government drive to push growth	Maximum Score 5	IDC's own assessment of weight of government drives	Very High	5	High	5	High	4	High	4	Very High	5	High	4	Very High	4	Very High	5	Very High	5	Very High	5
Private sector drive to push growth	Maximum Score 5	IDC's own assessment of weight of private sector drives	Very High	5	Very High	5	High	5	High	4	Very High	5	High	5	High	4	Very High	5	Very High	5	Very High	5
Mobile Wallet Score	Total of above		25		20		20		18		21		19		20		21		23		22	

Source: IDC, 2020; World Bank data; central bank data and vendor data

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## UNIFY PAYMENTS FOR BETTER BUSINESS

As the number of digital marketplaces rise across the world, a more complex payment ecosystem has emerged - driven by rapidly changing customer expectations, advancing trends in fintech, regulatory changes, and a continual increase in the number of payment options.

Today, customers have the choice of using not only credit cards, but e-wallets, P2P, direct bank transfers, convenience store and other alternative payment methods emerging in different countries. Businesses looking to tap into new markets are challenged to keep up with the explosion in payment options and customer preferences, exposing them to greater complexity as well as higher operational and maintenance costs.

That's why, at NTT DATA, our mission is to make payments in the digital economy simpler - by unifying and integrating payments operations seamlessly into your business.

If you want to enter new markets and are looking to accommodate all the different ways your customers can choose to pay, count on NTT DATA as your partner of choice. We can help you to unify payments acceptance, enhance your customers' experience, integrate payment management and operations into your processes, and grow your presence across Asia and the world.

NTT DATA has set the standard for payments services and platforms in Asia for over 30 years; we bring unmatched capabilities, scale and experience backed by a deep pool of global expertise, world-class IT infrastructure, and robust financial strength.

### Make payments simpler for your business

Whatever the payment method, we'll take care of all the complex channel management, authentication, refunds and settlement requirements and simplify the payments process for you. We work with financial institutions, domestic regulators, payment networks and consumer wallets across different countries so you don't have to. Focus on your business; we'll make it simpler and faster for you to get paid through more ways.

### Enter new markets and go local instantly

Wherever your business goes, get up and running quickly with a seamless, optimised and secure payments platform used by some of the world's biggest brands. With support for over 150 transaction currencies and 25 settlement currencies across different payment options, our solution offers a single integrated platform for all your payment needs as you grow. For complex, multi-country, multi-currency deployments, our team of payments specialists can help design an optimised payments approach that's just right for you.

### Integrate payments management and operations into your business

Payments acceptance is only the beginning: we provide you with options to integrate end-to-end capabilities to manage your cash, remittances, cross-border payouts and chargeback management - if you need them. Let us handle the most time-consuming aspects of payment management and operations so you can run your business better.

In Asia Pacific, we offer a variety of international and domestic payment services by leveraging capabilities via a network of NTT DATA Group companies that include: NTT DATA Hong Kong, NTT DATA China, NTT DATA Thailand, VietUnion Online Services Corporation (Vietnam), iPay88 (Malaysia), Aino (Indonesia) and Atom Technologies (India).



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