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Increasing access and interoperability of cross-border e-payments in Asia

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Contents

1. Introduction

Cross-border digital payments are particularly instrumental for the development of the regional economy and the growth and resilience of micro, small and medium sized enterprises (MSMEs) looking to thrive in a post-Covid pandemic environment.

Digital payments are at the centre of digital trade expansion and serve as a key enabling factor for digital commerce. Firms will not provide goods or services if they cannot be paid. Payment services, therefore, are a critical component of the online services ecosystem that allows consumers to conveniently make purchases for goods and services from merchants globally and for firms to sell around the world far more easily and cheaply than ever before. Cross-border digital payments are particularly instrumental for the development of the regional economy and the growth and resilience of micro, small and medium sized enterprises (MSMEs) looking to thrive in a post-Covid pandemic environment.

New innovations within the e-payments space, like e-wallets and blockchain, and initiatives by governments aimed at fostering increased use of digital payments, will likely improve access and lower the costs of cross-border transactions, especially for MSMEs. However, most of this innovation has taken place in the domestic space, where payments are experiencing improvements in terms of speed and convenience. Conversely, cross-border e-payments remain slow, costly, opaque and difficult to manage. A lack of access as well as regulatory and payment network interoperability, means that payments remain one of the most challenging issues for MSMEs hoping to engage in cross-border e-commerce in the region.

Policymakers often fail to appreciate the challenges of managing cross-border transactions.

Although governments in the region continue to promote initiatives that improve access and use of digital payments, policymakers often fail to appreciate the challenges of managing cross-border transactions. MSME merchants and financial service providers are struggling to develop and sell their products and services across borders. It is not simply that Asia is remarkably diverse with stark differences between economies in technological maturity, regulations, standards, cost, digital access and security considerations. The lack of a regional ecosystem and supportive policy framework to encourage regional payments continues to hamper large and small firms and slow economic growth and development.

Recognising the need to provide practical and concrete information about the challenges of managing cross-border digital payments, this paper explores the key drivers and consequences of a lack of access, competition and interoperability in the regional e-payments ecosystem. Payments are, as the first paper in the *Hinrich Digital Trade Series* noted, a key challenge for policymakers in 2021 and beyond.[1]

Addressing some of the challenges in retail e-payments can contribute to resolving obstacles to creating a more integrated region and also tackle important issues in payments more broadly.

There are many elements involved in making payments function more smoothly, efficiently, and at lowered costs. This paper will focus on just one important aspect of the equation: the retail e-payments sector, which is, in part, the most visible element of the payments ecosystem for most firms and policymakers. Addressing some of the challenges in retail e-payments can

contribute to resolving obstacles to creating a more integrated region while also tackling important issues in payments more broadly.

The cross-border dimension of retail e-payments often involves the national payment systems of at least two jurisdictions, different currencies and specialised processes (including the execution and settlement of foreign exchange transactions).

Retail digital payments are typically defined as electronic transactions between consumers and businesses, between two consumers or between businesses for the purchasing of goods and services.[2] The cross-border dimension of retail e-payments often involves the national payment systems of at least two jurisdictions, different currencies and specialised processes (including the execution and settlement of foreign exchange transactions).[3]

The paper first examines the opportunities and challenges for the growth of the region's cross-border retail payments market, with an emphasis on the MSME sector. Then the paper examines the ways in which data related and market access restrictions on cross-border payment services affect the delivery of efficient, secure and affordable cross-border e-payment services.

As a whole, the paper highlights the opportunities and challenges associated with the management of cross-border retail payments and their relation to the region's institutional and regulatory environment. Without more effective solutions to the challenges of cross-border retail payments, firms will be unable to grow to their full potential and are at high risk of being shut out of opportunities in neighbouring markets.

2. Cross-border e-payments in Asia

Importance of cross-border payments for the regional economy

The use of cross-border digital payment solutions has risen rapidly across the world. Driven by increased cross-border e-commerce and the need for international financial services, cross-border e-payment solutions are allowing firms of all sizes to buy and sell goods and services across borders.

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Asia has the world's fastest-growing e-commerce market which is projected to grow at an average rate of 25 to 35 percent per year over the next five to ten years.[4] The rates of growth have been swiftly accelerated by the spread of the Covid-19 pandemic and associated lockdowns that have pushed firms everywhere to rapidly pivot online.

The Asia-Pacific overtook Europe and North America to become a world leader in volumes of non-cash transactions, which reached US$234.6 billion in 2019 and are expected to reach US$493.2 billion in 2023.[5] The Asian digital payments sector is predicted to achieve an annual revenue over US$1 trillion by 2022 and 2023, even against the backdrop of measures imposed due to the pandemic.[6]

China, India and Southeast Asian economies are leading growth in the digital payments sector, steered by increasing smartphone use, booming e-commerce transactions, adoption of digital wallets, and innovations in mobile/QR-code payments.

The region's cross-border payments landscape is at the centre of several trends likely to drive significant changes to innovation, competitive dynamics and complexity within the international cross-border e-payments ecosystem. China, India and Southeast Asian economies are leading growth in the digital payments sector, steered by increasing smartphone use, booming e-commerce transactions, adoption of digital wallets and innovations in mobile/QR-code payments. In ASEAN alone, the total transaction value of digital payments reached US$73 billion in 2018 and is expected to double by 2023.[7]

Factors which could contribute to the growth of the digital payments sector include:

The digital user base saw a 20 percent increase during the pandemic, motivated by the safety and comfort that digital payments provide.

1. **Covid-19 pandemic:** The digital user base saw a 20 percent increase during the pandemic, motivated by the safety and comfort that digital payments provide.[8] Three-quarters of consumers in Asia have said they will keep using digital payments instead of going back to cash, even after the global pandemic has subsided.[9]

2. **Increased smartphone usage and penetration:** Just more than a decade ago, four out of five citizens in regions like ASEAN had limited or no access to the internet.[10] However, mobile access and connectivity improved, making Asia the region with the highest number of engaged mobile internet users in the world with more than 360 million internet users connected primarily through their mobile phones.[11]

As of the first quarter of 2018, almost 43 percent of fintech company investments have been in the digital payments sector.

3. **Rising investment in e-payments:** Southeast Asia has witnessed increasing interest among investors like Alibaba, Tencent and Softbank to focus on e-payment platforms. As of the first quarter of 2018, almost 43 percent of fintech company investments have been in the digital payments sector.[12]

4. **Buoyant digital platforms:** The Asia-Pacific is home to some of the most successful digital platforms. In China, Alibaba and Tencent each deliver digital retail payments to more than a billion consumers across the globe. Ride-sharing platforms like Grab and DiDi nurture customers' digital payment habits with steep discounts. The fact that these digital platforms cover more lifestyle needs and enable related transactions is also a massive growth driver.[13]

Governments in emerging markets are encouraging non-bank players to become cashless as smartphone usage increases.

5. **Governments pushing for e-payments:** Governments across the region have put in place initiatives to increase the adoption of digital payments. For instance, governments in emerging markets are encouraging non-bank players to become cashless as smartphone usage increases.[14] Singapore, as an example, has rolled out a "Hawkers Go Digital" plan to encourage 18,000 small food and beverage vendors, called "hawkers" to move to online payments by June 2021.[15]

E-payments: not just for big firms

Many have recognised that digital payments can also be a tool to combat the grey economy and increase market transparency.

As Singapore's hawker scheme illustrates, moving payments to the digital space can be aimed at the smallest firms. The cost reductions and efficiencies that come with the increased use of online payments can help governments address many of their policy priorities. Many have recognised that digital payments can also be a tool to combat the grey economy and increase market transparency.[16]

Cross-border e-payments are incredibly important for their potential to enable the growth of a key stakeholder group within APAC's economy: MSMEs. The digital economy allows even the smallest firms to become, effectively, a "micro-multinational" with global sales.

MSMEs are now a significant part of Asia's economies, constituting more than 90 percent of enterprises and contributing up to 50 percent of GDP and employment across the markets.[17] Their development, through the adoption of technology and participation in global trade, has been recognised as a key contributor to inclusive growth and recovery efforts from the Covid-19 virus.[18]

Digitisation has boosted overall revenues for MSMEs by up to 80 percent. Research has found that once businesses begin accepting digital payments, their revenues increase an average of 17 percent year on year.

Digitisation has boosted overall revenues for MSMEs by up to 80 percent.[19] Research has found that once businesses begin accepting digital payments, their revenues increase an average of 17 percent year on year.[20] A survey conducted by VISA found that 54 percent of smaller firms surveyed found that sales increased after adopting digital payment methods.[21]

Cross-border digital payments open-up opportunities for MSMEs to enter markets abroad. Within the cross-border payments market, MSME usage has been growing at two or even three times the rate of large corporates.[22] By

Within the cross-border payments market, MSME usage has been growing at two or even three times the rate of large corporates.

lowering the barriers of entry to global markets, digitalisation has allowed MSMEs to internationalise at a lower cost by making it easier for them to find new customers by accessing new regional and global markets and managing their payments. The MSME segment particularly stands to benefit the most from cross-border payments' convergence, accessibility and simplification.[23]

An inability to easily, effectively and efficiently manage different digital payments systems is an often-overlooked challenge.

Despite potentially large benefits, MSMEs in the region still face a host of challenges that include logistics, language barriers and standards that make it difficult for MSMEs to sell their goods internationally.[24] An inability to easily, effectively and efficiently manage different digital payments systems is an often-overlooked challenge.

The following section will outline the opportunities and challenges in the management of cross-border payments based on the priorities and common needs of MSMEs.

3. Opportunities and challenges in the management of cross-border digital payments

The use and management of cross-border digital payments is a challenging and complex task. This section assesses the shortcomings and potential methods employed by firms to complete cross-border retail e-payments and the most common challenges of their management. As a methodology, the section will reference available literature on cross-border payments and interviews conducted with trading MSMEs in Myanmar, Indonesia, the Philippines, New Zealand and Cambodia. These smaller firms are part of the Asia-Pacific MSME Trade Coalition (AMTC).[25]

Cross-border retail payments are more complicated than purely domestic payments. They involve numerous players, currencies, time zones, jurisdictions and regulations.

Cross-border retail payments are more complicated than purely domestic payments. They involve numerous players, currencies, time zones, jurisdictions and regulations. The payer and payee are typically located in different countries and rely on multiple intermediaries, arrangements and processes that need to be in place for the payment to be made and received. Figure 2 outlines key actors — on both the supply and demand side — and functions associated with the management and provisions of cross-border retail digital payments.

Even what appears to be a purely "domestic" payments transaction can involve the movement of information across borders as firms, as an example, check for fraud using data located offshore. Clearly, improved cross-border retail transactions shown in Figure 1 require data to flow.

No country can benefit from this digital transformation by excluding itself from multinational companies and the rest of the world.

Data localisation requirements limit services available to data subjects by increasing costs and barriers to entry for service providers, which may in turn impede business innovation as domestic MSMEs are cut off from innovations in other countries.

Data localisation requirements limit services available to data subjects by increasing costs and barriers to entry for service providers, which may in turn impede business innovation as domestic MSMEs are cut off from innovations in other countries. As a result, MSMEs face higher costs, slower innovation, and isolation from customers in other markets. Improving data protection and security depends on the technical, operational and managerial practices implemented to secure data, and not on where data is stored. Thus there is no incentive to implement data localization measures as a shortcut to improving security.

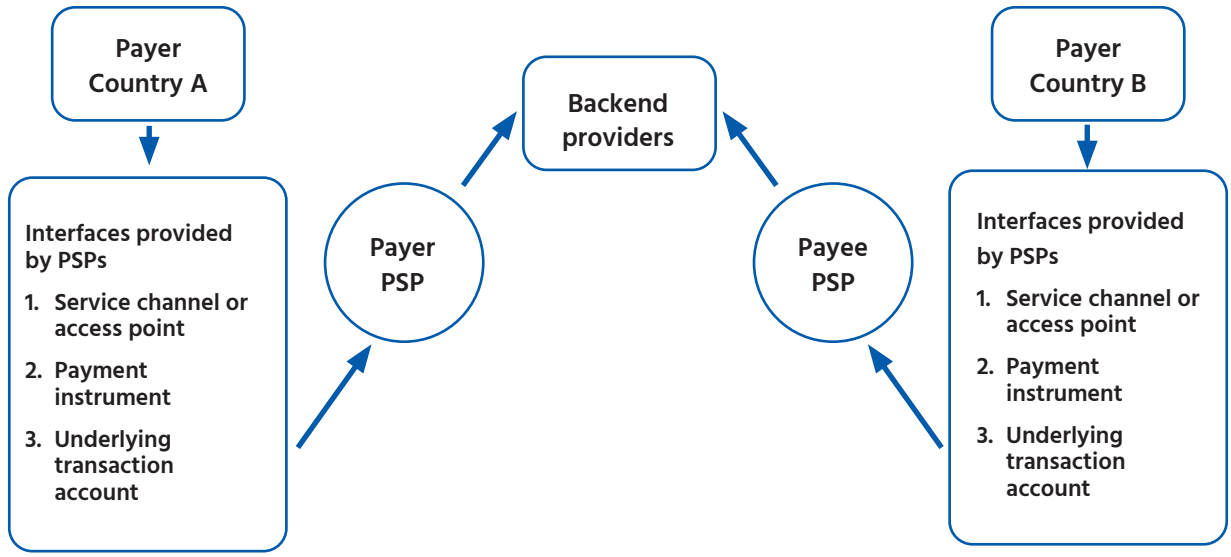
Principle-based data protection laws and regulation should not seek to include data localisation requirements for the public and private sectors, as localisation measures do not improve personal data security outcomes.

Principle-based data protection laws and regulation should therefore facilitate the free flow of data by establishing mechanisms for cross-border data transfer, such as requiring that data transferred out of the jurisdiction is protected to a standard comparable to that within the jurisdiction. Principle-based data protection laws and regulation should not seek to include data localisation requirements for the public and private sectors, as localisation measures do not improve personal data security outcomes.

The following two sections highlight both the opportunities, trade-offs and challenges of managing cross-border retail payments.

Stakeholders and processes on the management of cross-border e-payments[26]

Figure 1 – Stakeholders and processes on the management of cross-border e-payments



Demand side

Payer/Payee – These are end-users of a cross-border payment transaction. They could be a person, business or government agency and/or any combination between them. The payer and payee decide the channel and instrument to be used for the payment transaction.

Supply side

Payment service providers (PSPs) – The PSPs offer an interface for end-users of payment services to interact with other PSPs and back-end providers. Their profile includes receiving funds, transferring information between payer/payee jurisdictions and thereafter transfer of funds.

The front end

Interfaces provided by PSPs – The end-users have a host of interfaces they could choose from as the medium to initiate and receive transactions. These interfaces are provided by their respective PSPs.

- Payment instruments can include cash, electronic funds transfer, payment card, e-money and digital currency.

- Service channel or access points vary based on the choice of payment instrument and these include physical routes like branches, agents, ATM/

kiosks and point-of-sale terminals. Recently digital routes like internet and voice along with analogue text messages are also valid service channels.

– Underlying transaction accounts to the payment could be in the form of bank accounts and e-money accounts like prepaid card, online money and mobile money.

The back end

Backend providers – PSPs link end-users with back-end service providers. End-users rarely interact with them. This role is usually played by transaction banks, aggregators or hub providers, foreign exchange agents, telecommunication network providers or payment market infrastructure operators. These providers offer such services including clearing processes, foreign exchange and liquidity management and mitigate financial crime-related risks.

Common methods for the management of cross-border e-payments

Bank transfers remain the most common way of settling cross-border retail transactions for merchants in the region.

There are multiple methods MSMEs can employ when managing cross-border transactions. By far, bank transfers remain the most common way of settling cross-border retail transactions for merchants in the region. According to available business surveys and the testimonies from MSMEs in New Zealand, Cambodia, Myanmar, Indonesia and the Philippines, bank and wire transfers remain the most common method for making B2B and C2B retail e-payments transactions.[27] For instance, according to interviewees, in countries like Myanmar and Cambodia having a US dollar denominated bank account remains one of the only available methods to complete a cross-border transaction.

Most cross-border bank transfers are processed through a correspondent banking arrangement that involves multiple banks and payment infrastructures across two or more jurisdictions to complete a transaction. Figure 2 provides a detailed description of correspondent banking within the context of cross-border retail payments.

Given the complexity of back-end processes involved in the management of cross-border bank transfers, the method remains limited in its ability to address the cross-border payment needs of small merchants. Given the time and costs associated with the process, the correspondent banking model is mainly designed for high-value, low-volume payments that are not time-critical, instead of large volume/low-value payments.[28]

Firms that can only accept bank transfers struggle or are simply unable to participate in selling direct to consumers as the costs and hassle

Unfortunately, the digital economy for MSMEs ought to be dominated by the latter transactions as firms and consumers are more frequently buying online goods and services through e-commerce platforms of various types. Firms that can only accept bank transfers struggle or are simply unable to

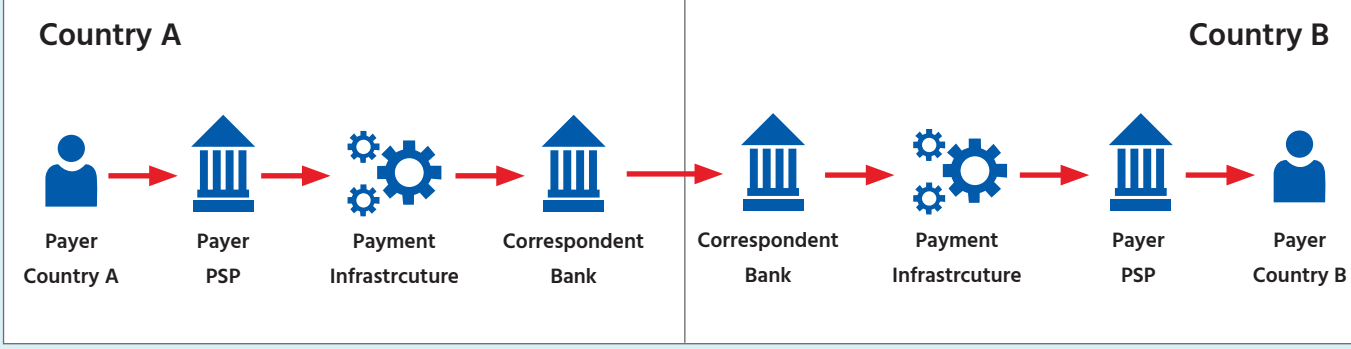
of managing such transactions deter purchases.

participate in selling direct to consumers as the costs and hassle of managing such transactions deter purchases. Even companies that use bank transfers to manage payment relationships with other firms, as vendors or suppliers, end up doing so at often significant cost and delays in processing. For smaller firms, especially, time is also money.

SPOTLIGHT

The correspondent banking model[29]

Figure 2 – The correspondent banking model



Correspondent banking is an authorised bank using bilateral back-end agreements to hold deposits of foreign respondent banks and financial institutions used by correspondent banks for foreign exchange settlements. In addition to foreign exchange services, correspondent banks also provide money transaction and business transaction services. Such back-end agreements enable banks to offer cross-border payment services to their customers while promoting international trade and financial inclusion.

A traditional correspondent banking system involves an agreement between a correspondent bank and either a single or several respondent banks. The latter provides the former with the authority to execute payments on behalf of the respondent banks and its customers.

As seen in the diagram, within the context of a cross-border transaction, a series of correspondent banking relationships might be involved in a single payment transaction. Correspondent banking system requires MSMEs (and other players) to maintain nostro and vostro accounts with regional banks. This leads to a lot of trapped liquidity. This is massive lost opportunity cost for MSMEs who could re-invest this capital to cover operating expenses or drive innovation in the firm.

Challenges in the management of cross-border retail payments

Despite the advances presented in the previous sections, the management of cross-border retail payments remain a key challenge for MSME stakeholders across the region. This section outlines those challenges, based on MSME interviews and evidence from existing business surveys. Key obstacles for MSMEs include:

Access and availability

Lack of access or understanding of new payment solutions and technologies remains a key obstacle for merchants in the region for three key reasons.

MSMEs often operate in environments where credit cards are not available for cross-border transactions or where popular e-wallets do not work across multiple locations.

First, convenient solutions sometimes are not available to certain merchants. MSMEs often operate in environments where credit cards are not available for cross-border transactions or where popular e-wallets do not work across multiple locations. In countries like Cambodia and Myanmar, e-money schemes like PayPal lack the partnerships with domestic financial institutions or are unable to meet local regulatory requirements. (These will be examined in more detail in the next section.)[30]

The costs of "getting it wrong" are simply too high to encourage an easy switch to new models or ways of managing payments.

Second, even when those solutions are available, they lack the proof of concept or reliability to be used by small merchants at scale. MSMEs in New Zealand and the Philippines who are familiar with innovations within the fintech sector have stated that some of the solutions are not trusted or have been verified by the authorities. As a result, most MSME merchants remain reluctant to use new fintech solutions, especially for the management of their cash flow, which is instrumental to their ongoing survival.[31] The costs of "getting it wrong" are simply too high to encourage an easy switch to new models or ways of managing payments. Similarly, PSPs offering or accepting digital currencies as payment instruments remains limited and a niche market.[32] Thus, it remains an evolving technology that has yet to prove it is sufficiently robust to achieve wide-scale operations.

Because many customers are most familiar and trust traditional bank transfers, they often show a level of scepticism and push-back when asked to use other methods that can be perceived as riskier or inconvenient.

Third, even when there are available solutions to merchants, they often face difficulties getting their customers to use new payment methods. MSMEs in Cambodia, Indonesia, the Philippines and New Zealand outlined the difficulties associated with the adoption of new forms of payment when consumers are not demanding it.[33] Because many customers are most familiar and trust traditional bank transfers, they often show a level of scepticism and push-back when asked to use other methods that can be perceived as riskier or inconvenient.[34] Covid-19 appears to be rapidly adjusting consumer behaviours as individuals and firms that were unfamiliar or uncomfortable with digital solutions to a range of financial transactions have moved online. Many of these changes may become permanent.

Costs

Transaction and foreign exchange costs remain a key challenge for the management of cross-border retail e-payments.

Because most MSMEs in the region still use bank transfers as their primary means of managing cross-border transactions, fees can be significant. MSMEs

A limited understanding of the transaction fees associated with correspondent banking arrangements means that most MSMEs cannot calculate or predict transaction costs in advance.

reported a lack of knowledge and transparency in the use and management of bank transfers associated with correspondent banking transactions. Interviewed MSMEs described regular payments of transaction fees as high as US$45 or US$70. Many times, these transaction fees must be covered by the merchant themselves.[35] Furthermore, a limited understanding of the transaction fees associated with correspondent banking arrangements means that most MSMEs cannot calculate or predict transaction costs in advance. Interviewed MSMEs in Cambodia and Indonesia reported multiple cases when they did not receive full payment for goods or services provided from a purchaser as a result of hidden transaction fees.[36]

Most firms in the region use domestic currencies that are not used for international transfers, and as a result incur significant exchange rate fees.

Foreign exchange controls have also added significant costs to MSME transactions. Recent surveys highlight the risk of currency exchange as one of the highest barriers to international e-payments. Most firms in the region use domestic currencies that are not used for international transfers, and as a result incur significant exchange rate fees. In addition, FX rates can be difficult to accurately estimate when making cross-border retail payments.[37] MSMEs in New Zealand reported discrepancies between publicly available bank FX rates and the rate charged to retail payments.[38] As a whole, FX rates have a significant impact on the margins and competitiveness of MSME products, which often have low margins.

Compounded with a lack of access to affordable and efficient cross-border e-payment solutions, transaction and FX related costs can make it incredibly costly for merchants to accept cross-border transactions.

Time

In some countries, the establishment and use of a bank account with a cross-border transfer functionality can be time consuming, increasing the risks of managing cross-border e-payments.

The requirements to open and manage a bank account involves the presentation of paper documentations and the provision of personal information like a household registration number in a process that can take several hours to complete.

MSMEs in the Philippines, for example, report difficulties opening a dollar bank account required to make or receive cross-border payment transactions.[39] The requirements to open and manage a bank account involves the presentation of paper documentations and the provision of personal information like a household registration number in a process that can take several hours to complete.[40]

Second, the time that it takes to make a transaction remains a key challenge for MSMEs. According to MSMEs in New Zealand, Indonesia and Cambodia, bank transfers can take up to five days to process, making it difficult to manage cash-flows.[41] The challenges are expounded when there are differences in time zones between payer and payee. Limited operating hours between payment systems in both countries may cause incoming payments to stall if they reach the beneficiary country during off-hours – the delay is prolonged for payments sent from west to east as they typically stall overnight.[42] For instance, MSMEs in the region reported that on average payments from EU customers took longer. Many of these obstacles are exacerbated by batch clearing times required for many financial firms that do not allow instant payment processing to take place.

Figure 3 – Examples of 24/7 instant payment schemes in Asia Pacific[43]	
Australia	New Payments Platform launched in 2018. Instant Payment Service "Osko" links phone number or e-mail address to bank account.
China	People's Bank of China established the Internet Banking Payment System (IBPS) in 2010. Payments between banks are received in 20 seconds.
India	India's Unified Payments Interface (UPI) was launched in 2016 enabling round-the-clock payments and is interoperable, allowing consumers to link their bank accounts to any UPI app, which may be owned by the same bank or a third party.
Singapore	Customers of 20 major banks can make instant interbank transfers via electronic funds transfer service FAST. Prior to FAST, an interbank transfer took up to 3 business days.

Instant payment approaches are expanding, as Figure 3 shows.[44] Instant payment schemes can help policymakers meet several challenges:

- **Expand access** – Around 1.8 billion people in Asia have a bank account but no credit/debit card. This number is expected to rise as more people are brought into the financial system. Instant payments therefore open an important payment method for individuals as well as a new customer base for businesses.

- **Cashflow management** – A move away from the current system of batch settlements can help reduce late Business-to-Business (B2B) payments, increasing the speed of inter-bank transfers to help businesses get paid more quickly and improve cash conversion cycles.

- **Reduction in use of cash** – Encouraging additional forms of non-cash payments can help reduce costs (particularly in cash-intensive economies), improve transaction transparency and assist governments with revenue collection and efforts to tackle fraud and the grey/black economy.

- **Enhanced security** – Tokenization can replace sensitive account information with alternative identifiers or "tokens," which are used to perform the payment transaction instead of personal financial data. Tokenized payments therefore offer an additional layer of security in an instant payments environment.

SPOTLIGHT

Case study of MSME from Cambodia[45]

This Cambodian social enterprise works with local artisans to produce unique textiles using traditional designs. The firm exports to countries across the world with key customers in the EU, US and Australia. The company faces multiple challenges when managing cross-border payments.

Access: The company uses bank transfers for most of its customer purchases, and has no access to alternatives like credit card payments or interoperable e-wallets like PayPal. The lack of other available payment options has affected the company's ability to sell directly to consumers, as most potential customers are not willing to use bank transfers because of the time required to make such transactions and the associated transaction costs.

Costs: The company reports transaction costs that can be as high as US$10 per transaction in Cambodia and an international bank charge that can be as high as US$50 for its customers. For products that can cost US$70, most potential customers are simply not willing to pay the transaction fee. In addition, the company often finds that there can be on average US$10 "missing" from payments. Even though customers are required to pay bank transaction fees, the company still finds a small amount missing from many of its international transactions.

The transaction time: For new customers the transaction may take up to five days. The time of the transaction can be higher when there are reported errors with customer or transaction information.

New innovations: MoneyGram, an online money transfer service, is used by some of the company's customers in Cambodia. The solution offers more affordable and transparent transaction fees for both the sender and receiver. However, after trying to get some of its current customers to use the MoneyGram application, some customers are reluctant to adopt it.

Innovative methods for the management of cross-border payments

Recently, so-called "fintech" or financial technology firms have been springing up across the Asia-Pacific to more effectively and efficiently manage a range of banking activities, including digital payments. These new technologies have helped automate and streamline processes and enabled faster, cheaper, transparent and more secure and seamless cross-border payment experiences.

To do so, fintech innovations simplify the process of using and managing cross-border e-payments for firms. Recent innovations include:

E-wallets: Electronic wallet services facilitate the initiation of payments and money transfers via the internet. PSPs providing e-wallet services allow their customers to send, receive and hold funds in different currencies worldwide and to make financial transactions online by transferring funds electronically

The frequency of e-wallets transactions rose from an average of 18 percent pre-Covid to 25 percent in 2021 indicating a substantial and sudden shift from one payment method to another.

between individuals and businesses.[46] The use of e-wallets has proliferated across the region. These include companies like PayPal, regional giants like Tencent's WeChat Pay and Alibaba's Alipay, and financial services apps by leading Southeast Asian companies like Grab and GoJek.[47] The frequency of e-wallets transactions rose from an average of 18 percent pre-Covid to 25 percent in 2021 indicating a substantial and sudden shift from one payment method to another.[48]

Most digital currencies allow users to make transactions without such a network, and as a result, eliminate a lot of the intermediary steps and transactions commonly associated with cross-border payments.

Cryptocurrencies: The development of new disruptive payment technologies has focused on the use of Distributed Ledger Technology (DLT) for the development of cryptocurrencies. Digital currencies are inherently global and uniquely positioned to reduce cost and complexity for cross-border money movement of any kind.[49] A lot of e-payment schemes, even some existing e-wallet solutions like Paypal, require a centralised network of trust. Most digital currencies allow users to make transactions without such a network, and as a result, eliminate a lot of the intermediary steps and transactions commonly associated with cross-border payments.[50] These advantages have led to the creation of nearly 2,700 digital coins on the market and initiatives for the development of government-issued digital currencies.[51] Innovations are set to continue, but challenges of scale and cost of settlement may stymie the use of cryptocurrencies in regular use in the payments space. The underlying DLT technology can be seen in a growing number of pilot projects for managing cross-border payments, such as Project Ubin from the Monetary Authority of Singapore (MAS)[52] or the use of APAC stable coins have been used for cross-border payments (Project i2i in Philippines).[53] Finally, it may be worth watching the developments coming from SWIFT's new movement on gpi.[54]

Recent MSMEs surveys conducted by the International Trade Centre found international e-payments to be the largest bottleneck in the process chain for e-services exporters.

Despite the benefits and potential of new financial technologies, MSMEs in the region still face a host of challenges in the management of cross-border payments. MSMEs have long comprised a lower share of cross-border payments than their share of GDP would indicate.[55] They are often saddled with inefficient, slow and expensive mechanisms to be paid for their products. For instance, recent MSMEs surveys conducted by the International Trade Centre found international e-payments to be the largest bottleneck in the process chain for e-services exporters. They identified inadequate "links between third-party e-payment service providers and local banks" as a top e-payment obstacle.[56]

4. The impact of regulations on the management and delivery of cross-border payments

Cross-border retail payments inherently encounter more legal and regulatory requirements than domestic payments, which typically fall under a single legal regime.

Cross-border retail payments are typically processed by PSPs and/or payment infrastructures subject to the legal and regulatory regimes of multiple jurisdictions. As a result, cross-border retail payments inherently encounter more legal and regulatory requirements than domestic payments, which typically fall under a single legal regime. Recent PSP surveys show that when asked to cite the most significant costs and challenges to their business, PSPs noted legal, regulatory and compliance considerations more than any other.[57]

Increased compliance costs and regulatory uncertainty do not only affect the profitability of PSPs, but affect their ability to develop accessible, affordable and interoperable cross-border payments solutions for MSME merchants and consumers. This section outlines the practical implications of regulatory, market access and compliance factors in the development of a more inclusive and interoperable regional e-payments ecosystem.

Challenges to the interoperability of cross-border e-payment systems

Payment networks must connect to multiple systems to facilitate cross-border transactions. In the context of digital payments, interoperability enables all participants of a payment system (e.g. consumers, merchants and governments) to easily send funds between different payment networks and instruments. New technologies such as API, Cloud and blockchain can be used to support interoperability. Many central banks in the region are experimenting with these technologies.

Remaining differences in regulatory frameworks across jurisdictions remain key challenges for the development of affordable and interoperable cross-border payment solutions.

A lack of interoperability between systems remains a point of friction that makes it increasingly difficult to make and receive cross-border retail payments. To date, countries in the region have taken multiple steps to reduce friction and move toward greater harmonisation and interoperability of a complex web of relationships and messaging systems that facilitate connections between payment systems. However, remaining differences in regulatory frameworks across jurisdictions remain key challenges for the development of affordable and interoperable cross-border payment solutions.

For instance, from October 1, 2019 through September 30, 2020, Visa Direct completed more than 3.5 billion transactions involving 16 card-based networks, 65 domestic automated clearing house (ACH) schemes, 7 faster payment schemes, and 5 payment gateways.[58] Inconsistent compliance requirements makes these types of innovations more complicated to develop and adds to costs.

The private sector remains focused on creating products that offer better customer experiences and enable more efficient transfers of money. The public sector can help by reducing the barriers to market entry. Currently, with vastly different license requirements around the globe, companies must spend large amounts of time and money to navigate the different policies and

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requirements. For instance, advisors at the Consultative Group to Assist the Poor highlighted license simplification as key to improvements made in the Malaysia-Philippines remittance corridor.[59]

There are many regulations and standards affecting the delivery of cross-border payments. Three important challenges include:

1. Inconsistent KYC and AML/CFT requirements:
Standards and practices on anti-money laundering (AML), combating the financing of terrorism (CFT), and know-your-customer (KYC) requirements across countries remain inconsistent and increase the compliance costs associated with the delivery of cross-border e-payment services. Spotlight below provides an overview of the importance of requirements associated with the customer due diligence process. Conflict between regulatory KYC requirements across regions has impeded operations by payment providers in international jurisdictions (stakeholder interview, 2018).[60] Similarly, while the codification of AML/CFT rules is often similar across jurisdictions, differences can be observed in their respective implementation and supervision. According to the Financial Action Task Force (FATF), countries have different levels of AML/CFT compliance and effectiveness when it comes to cross-border payments.[61]

SPOTLIGHT

Customer due diligence

Correspondent banks and other PSPs are required to ensure compliance with AML/CTF regulations and conduct due diligence on their customers. Such risks are higher in a cross-border context. This process of compliance requires coordination with domestic government agencies and ensuring compliance with a host of varying anti-money laundering, financing of terrorism and know your customer requirements. Effective AML/CFT frameworks and consistent implementation of those regimes are important for protecting the financial system from abuse, as well as preventing illicit financing and actors from having materially adverse effects on individuals and economies.

2. Messaging challenges:
Messaging can give rise to challenges for cross-border retail payments if the information originated by the payer's PSP does not tally, in content or format, with the information required by the payee's PSP. Such a mismatch may result from a lack of standardisation in messaging formats, or from manual processes that alter the contents or omit to retain specific data elements or differences in an effort to comply with legal and regulatory requirements like AML/CFT provisions.[62] Even cross-border retail payments that are sent using

standardised messages in SWIFT and other communication networks might require additional information beyond that permitted by a standard format, like the investigation of fraud or other customer due diligence requirements.[63]

3. Inconsistent implementation of international standards

Key differences in digital payments infrastructure and regulations between countries in the region means that different countries are at different stages of adopting such standards.

Currently countries are working on the implementation of ISO 20022, a common global standard for financial messaging, providing an approach to unifying multiple existing financial standards and accepted as the de facto standard promoting global interoperability.[64] The efficient use of ISO 20022 across borders requires standardisation of the implementation approach. However, key differences in digital payments infrastructure and regulations between countries in the region means that different countries are at different stages of adopting such standards. For instance, within ASEAN payment services modernisation plans that include the development of implementation of real time retail payment systems do not all use ISO 20022 standards. Singapore has completed implementation of ISO standards. In Malaysia, the Philippines and Vietnam implementation is under review. Thailand has no plan to implement the standards.[65]

Data and market access barriers to payment services

In Asia, out-of-date domestic regulations and traditional trade rules for payment services continue to act as barriers to cross border payments services. Motivated by concerns related to cybersecurity, consumer protection, data privacy or competition, some governments in Asia have data-related restrictions that act as a barrier to market entry and operations for payment service providers. While often implemented based on legitimate risks, these policies often exacerbate the issues they were meant to address and heavily limit the delivery of efficient, secure and affordable cross-border e-payment services.

Rules about data are critical, because the supply of payment services often requires the cross-border flow of data to capturing, processing and authorising a transaction as electronic information between stakeholders.

Rules about data are critical, because the supply of payment services often requires the cross-border flow of data to capturing, processing and authorising a transaction as electronic information between stakeholders. For instance, even in domestic settings where both the merchant and the consumer are in the same market, the processing of the transaction (or parts of it) are often carried out elsewhere.[66] This includes, for example, AML or fraud checks that are frequently conducted from overseas, centralised locations even on what appears to be a purely domestic level transaction.

Existing data and market access related barriers include:

1. **Restrictions on cross-border data flows**: Local data storage requirements — known as data localisation — require financial services firms to set up duplicative data storage facilities in the countries where they operate.[67]

2. **Processing requirements**: Data processing or routing requirements require firms to send transaction data to a designated firm. In recent years, countries have developed legal and regulatory frameworks governing digital payment systems which require businesses to route all their non-cash electronic payments through a single gateway or switch which are usually located domestically. This can be done by designating

a local firm (often state-owned) as the only payment processor or requiring firms to route all payments through a local (often state-owned) firm.[68]

3. **Foreign ownership cap requirements**: Equity regulations requiring that a local entity maintain a majority share of a payment service provider, limits the ability of international service providers to invest locally or their ability to maintain governance over local affiliates.

Most fail to achieve many of their intended goals and instead add significant costs to the local economy, reduce data security and do little to improve consumer privacy.

These regulations have been implemented for a variety of reasons that include privacy and cybersecurity concerns, access to payment data and the protection of domestic payments providers from foreign competitors.[69] However, most fail to achieve many of their intended goals and instead add significant costs to the local economy, reduce data security and do little to improve consumer privacy.

A. Requirements may limit PSP ability to meet existing AML requirements

In many cases, there is real or perceived tension between regulatory requirements, including banking regulation and AML/CFT rules and restrictions on cross-border data flows and data storage.[70] Sharing of information across borders is required for cross-border supervision and oversight as well as more effective risk management within those cross-border PSPs that may be incorporated in multiple jurisdictions.

B. Localisation requirements limit economies of scale for payments providers

Localisation requirements force firms to either set up costly, duplicative data storage facilities, or if the firms are not willing to bear the associated costs, exit the market. By forcing payment service providers, especially startups, to provide local hosting and have a local presence in the market, these barriers prevent economies of scale for payment services, which require large volumes of payment transactions to reduce per unit costs. The Global Payments Innovation Jury Report of 2017 — a survey of 70 industry executives — cites the inability to scale as the biggest reason payments startups fail.[71]

C. Effects the competitiveness of local merchants

Many of the costs of data localisation are not passed along to foreign service providers, but instead passed along to local startups, financial institutions, and, ultimately, consumers.

Many of the costs of data localisation are not passed along to foreign service providers, but instead passed along to local startups, financial institutions, and, ultimately, consumers. First, a lack of platforms can prevent local firms from using their preferred payment provider to process transactions to easily and cheaply access customers around the world.[72] These additional costs are either borne by the customer or the firm, which undermines the firm's competitiveness by cutting into profit margins.[73] In addition, requirements to use domestic level getaways might mean that local MSMEs may be internally configured to only accept payments through the gateway mechanisms, leaving them struggling with managing payments outside the local system. Payments gateways, which are typically set up to help facilitate local firms, can end up restricting domestic companies by making it much more challenging or impossible to connect with customers and markets outside their homes. Even in large, vibrant domestic economies, it may be the case

that MSME offerings can be more attractive to overseas buyers than to local purchasers.

D. Reduces robustness of financial services

Routing all transactions through a single switch raises the risk of a single point of failure.

Barriers that make it costlier, more complex, and/or illegal for payment service firms to export and use data as part of centralised data analytics platforms limit the ability of payment services firms to use data from the broadest range of sources to provide secure, innovative and standardised services to customers around the world. Additionally, routing all transactions through a single switch raises the risk of a single point of failure. For instance, requirements to route transactions through a single switch or store all data on a single location, increases the risk of a single point of failure and may prevent firms from using modern data protection techniques to stay ahead of hackers and cybercriminals.[74]

As a whole, restrictions on cross-border flows of financial data, requirements to localise computing facilities or ensure all domestic-level transactions are routed through a single getaway or switch, act as barriers to market entry and can limit operations for payment service providers. Such rules inhibit the development of more competitive, innovative and international payment services and reduce the accessibility, effectiveness and security of payment services.

5. Government initiatives

Given the need to enable better interoperability between payment systems and reduce market access barriers, some governments have taken steps to reduce frictions. Both MSMEs and consumers must adopt digital payments to achieve ubiquity. Governments must focus on both sides and provide appropriate incentives to both. The following section will identify and categorise different approaches taken by governments in the region.

Commitments to increase interoperability of payments systems

In Asia governments across the region are leveraging domestic, bilateral and regional policy frameworks to increase the efficiency and interoperability of cross-border e-payment systems.

In Asia governments across the region are leveraging domestic, bilateral and regional policy frameworks to increase the efficiency and interoperability of cross-border e-payment systems. Initiatives to increase network interoperability have been aimed at enabling cross-border payments for PSPs and their customers, often between countries within a region. In most cases, these initiatives integrate different national payment systems under a set of defined rules and business practices to enable faster and more efficient cross-border payments. In Asia, such initiatives include the ASEAN Cross-Border Payments Interoperability Network (XBPIN) initiative, which aims to promote bilateral payment linkages between ASEAN Member States (AMS).[75]

Research has noted that the majority of these schemes have failed to meet expectations, and account for a small amount of cross border retail payments made between the jurisdictions they link.

However, there are key challenges to the implementation of such initiatives. First, such efforts require the harmonisation of legal, technical and operational aspects, a complex undertaking that requires political will and involves substantial commitments from participants in both (or all) payment systems included in the scheme.[76] Second, research has noted that the majority of these schemes have failed to meet expectations, and account for a small amount of cross-border retail payments made between the jurisdictions they link.[77]

Recognising the need to overcome barriers to the development of a coordinated payment standards development and encourage cross-border interoperability in a region, countries in the region are leveraging economic integration initiatives and trade agreements. For example, the newly implemented Digital Economy Agreement (DEA) and Digital Economic Partnership (DEPA) agreements have a dedicated chapter or section on digital payments, with a focus on the adoption of international standards.[78] Relevant commitments under both agreements, which align with the outlined initiatives include: (i) the adoption of open banking, (ii) the facilitation of innovation, and (iii) the adoption of international standards like the ISO 20022 or electronic data exchange between financial institutions and services suppliers.[79]

By committing to adopt internationally accepted standards and encourage data sharing between payment providers, both the DEPA and DEA seek to increase interoperability and promote a more seamlessly integrated network of networks for digital payments.

By committing to adopt internationally accepted standards and encourage data sharing between payment providers, both the DEPA and DEA seek to increase interoperability and promote a more seamlessly integrated network of networks for digital payments. Thus, both agreements are platforms to encourage increased dialogue and initiatives for the promotion of interoperability of cross-border e-payment.

Commitments to reduce market access barriers

There are dozens of trade arrangements in the region and many already include various elements that may be applicable to resolving existing market access challenges for cross-border e-payments.

Since the General Agreement on Trade in Services (GATS) came into force at the World Trade Organization (WTO) in 1995, world markets have seen little progress on payment services. In Asia some governments have tried to tackle many of these issues by embedding specific commitments expanding market access or limiting data related barriers within free trade agreements (FTAs). There are dozens of trade arrangements in the region and many already include various elements that may be applicable to resolving existing market access challenges for cross-border e-payments. Such agreements include the Comprehensive and Progressive Trans-Pacific Partnership (CPTPP), European Union Singapore/Vietnam/Japan FTAs, the Regional Comprehensive Economic Partnership (RCEP) and the aforementioned DEA and DEPA.

While these agreements vary in terms of both depth and scope, they all contain provisions that:

- Ensure member countries provide (or reinforce) the basic WTO principle that they treat domestic and foreign payment services and service suppliers the same — known as national treatment — and ensure that this applies to the various modes of supply in their payment services commitments in trade agreements.
- Limit members from restricting cross-border transfers of information.
- Limit members from requiring service providers to locate their computing facilities in their territory as a condition to conduct business.

Payments are not often explicitly included for coverage and most FTAs have limited rules in place to provide greater consistency between FTA members on the topic.

Many FTAs, like the WTO, have separate rules and country-specific commitments for financial services in addition to broader chapters covering trade in services. Payments are not often explicitly included for coverage and most FTAs have limited rules in place to provide greater consistency between FTA members on the topic. The more recent digital-only agreements often include a cooperation commitment to work closely together in future developments related to payments.

Payments depend on movement of data, as noted earlier. Effective, interoperable frameworks to manage data flows, protect personal information and encourage the use of cloud will promote more innovation in cross-border payments and thus encourage more financial inclusion by reducing costs and making payments more real-time.

Governments are also looking to a variety of venues and institutions to help address challenges of digital trade, including payments. This includes specific work in the WTO under the Joint Sector Initiative on payments,[80] and in the G20, which has released a roadmap for addressing cross-border payments.[81]

As a whole, trade agreements and organizations that tackle trade can provide good blueprints for the development of provisions for market access and rules governing data flows as well as strengthen transparency and regulatory oversight in the delivery of cross-border e-payment services.

6. Conclusions

Payments are a key enabler of cross-border digital commerce and a driver of access, productivity, transparency and competition in the payment markets. The cross-border dimension of digital payments can enable the digitisation and internationalisation of MSMEs, a key pillar of the region's socio-economic health and post-Covid recovery. However, MSMEs in the region still face key access, cost and time barriers that prevent them from effectively managing cross-border payments. Despite the growth of financial technologies like digital wallets and digital currencies, many MSMEs lack the access to those technologies and, as a result, must endure the costs and difficulties of using traditional bank transfers for cross-border transactions.

Facilitating e-payments in a safe, effective manner would help unlock the ability of smaller firms, especially, to view the region as their own marketplace.

Facilitating e-payments in a safe, effective manner would help unlock the ability of smaller firms, especially, to view the region as their own marketplace. Absent a sustained focus to continuously update existing commitments and focus on practical steps that domestic governments should take, it will be difficult to create a more safe, innovative, open and inclusive regional e-payments ecosystem.

Governments in the region can leverage FTA commitments which are playing an increasingly important role in the reduction of market access and data barriers to the delivery of cross-border e-payments and the interoperability of increasingly complex and divergent domestic e-payment systems. By promoting the negotiation and effective implementation of such agreements, governments can reduce barriers to the cross-border delivery of e-payment services, work more closely in promoting the simplification and interoperability of platforms and solutions, adopt international payment standards, facilitate coordination among multiple stakeholders and drive strategies to promote adoption.

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ASIAN TRADE CENTRE

The Asian Trade Centre (ATC) is the regional thought leader, advocate and educator for trade in the Asia Pacific region and serves as the resource for trade-related activities in Asia. They are a team of trade policy and supply chain subject matter experts positioned to meet the trade related needs of businesses — small and large — and governments — regional and foreign — operating in the Asia-Pacific.

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- They design and conduct training and capacity building programs for government officials and companies throughout Asia on key aspects of trade policy.

ATC is also the Secretariat to the Asia Business Trade Association (ABTA) and the Asia Pacific MSME Trade Coalition (AMTC).

Endnotes

1. See the first paper in the series at: https://www.hinrichfoundation.com/research/wp/digital digital-trade-asia-pacific/
2. FFIEC handbook: https://ithandbook.ffiec.gov/it-booklets/retail-payment-systems/retail-payment-systems-overview.aspx
3. BIS, "*Cross-border Retail Payment*", Committee on Payments and Market Infrastructures (February 2018) https://www.bis.org/cpmi/publ/d173.pdf.
4. Lurong Chen and Fukunari Kimura, *E-Commerce Connectivity in ASEAN* (Economic Research Institute for ASEAN and East Asia, 2020).
5. Capgemini Research Institute, "World Payments Report 2020," 2020, https://worldpaymentsreport.com/wp-content/uploads/sites/5/2020/10/World-Payments-Report-2020.pdf.
6. Reet Chaudhuri, Bharath Sattanathan, Joydeep Sengupta, Jacob Dahl, "Global Banking Practice: The Future of Payments in Asia" https://www.mckinsey.com/~/media/McKinsey/Industries/Financial%20Services/Our%20Insights/The%20next%20frontier%20in%20Asia%20payments/The-future-of-payments-in-Asia-vF.pdf
7. Lurong Chen, "Improving Digital Connectivity For E-Commerce: A Policy Framework and Empirical Note for ASEAN," 2020, https://www.eria.org/uploads/media/discussion-papers Improving-Digital-Connectivity-for-E-commerce.pdf.
8. Reet Chaudhuri, Bharath Sattanathan, Joydeep Sengupta, Jacob Dahl, "Global Banking Practice: The Future of Payments in Asia" https://www.mckinsey.com/~/media/McKinsey/Industries/Financial%20Services/Our%20Insights/The%20next%20frontier%20in%20Asia%20payments/The-future-of-payments-in-Asia-vF.pdf
9. Finextra. "Visa Targets 10 million APAC businesses with COVID- recovery programme." (23 June 2020). https://www.finextra.com/pressarticle/83009/visa-targets-10-million-apac-businesses-with-covid-recovery-programme. Accessed 16 September 2020.
10. Bain and Company, Google, and Temasek. e-Conomy SEA Report 2019: Southeast Asia's $100 billion Internet economy.
11. Google & Temasek / Bain, "E-Conomy SEA 2019," 2019. GSMA, "The Mobile Economy," 2020, https://www.gsma.com/mobileeconomy/wp-content/uploads/2020/03/GSMA_MobileEconomy2020_Global.pdf
12. Diego de Sartiges, Aparna Bharadwaj, Imran Khan, Justine Tasiaux, and Patrick Witschi. *Southeast Asian Consumers Are Driving a Digital Payment Revolution*. BCG. (20 May 2020) https://www.bcg.com/publications/2020/southeast-asian-consumers-digital-payment-revolutions.
13. Rapyd. "Asia Pacific ECommerce and Payments Guide 2020," 2020.
14. Khan, A., M. Gandhi, A. Jain, and N. Kacholia. "Emerging Markets Driving the payments transformation." PWC network (2016).
15. See details at: https://www.imda.gov.sg/news-and-events/Media-Room/Media-Releases/2020/Good-Progress-for-Hawkers-Go-Digital-Programme
16. Schneider, Friedrich. Rep. *Digital Payments and the Global Informal Economy*. A.T. Kearney Inc., 2018. https://navigate.visa.com/$/v/2/m/x/Digital_payments_and_the_global-informal-economy-report.pdf.
17. Wood, Duncan. "5 Things You Need to Know About SME Banking in Asia-Pacific." (2018). Oliver Wyman.
18. Asian Development Bank. "MSMEs Key to Southeast Asia's Post-COVID-19 Recovery ." Asian

Development Bank, October 22, 2020. https://www.adb.org/news/msmes-key-southeast-asias-post-covid-19-recovery-adb.
19. GSMA. *Regional Privacy Frameworks and Cross Border Data Flows: How ASEAN and APEC can protect data and drive innovation*. (September 2018).
20. Roubini ThoughtLab, and Visa. Rep. *Cashless Cities: Realizing the Benefits of Digital Payments*, 2017. https://usa.visa.com/dam/VCOM/global/visa-everywhere/documents/visa-cashless-cities-report.pdf.
21. VISA, "Digital Transformation of SMEs: The Future of Commerce," 2020, https://www.visa.com.au/dam/VCOM/regional/ap/australia/global-elements/Documents/digital-transformation-of-smes.pdf.
22. McKinsey and Company. Global payments report. 2019: Amid sustained growth, accelerating challenges demand bold actions. (September 2019).
23. McKinsey and Company. Global payments report. 2019: Amid sustained growth, accelerating challenges demand bold actions. (September 2019).
24. Schaap, Famke. Rep. *Whitepaper on Enhancing MSME Participation in Trade: Considerations for the WTO Informal Work Programme for MSMEs*. CUTS International, 2018. http://www.cuts-geneva.org/pdf/KP2018-Study-MSME_Trade_Participation_Whitepaper.pdf.
25. For more information on AMTC, see https://www.amtctrade.org/resources/#links
26. BIS, "Cross-border Retail Payment", Committee on Payments and Market Infrastructures (February 2018) https://www.bis.org/cpmi/publ/d173.pdf.
27. BIS, "*Cross-border Retail Payment*", Committee on Payments and Market Infrastructures (February 2018) https://www.bis.org/cpmi/publ/d173.pdf. Payoneer. "Navigating the World of Cross-Border E-Payments: Top Challenges Facing Businesses Initiating Global Mass Payments," 2015.
28. BIS, "*Cross-border Retail Payment*", Committee on Payments and Market Infrastructures (February 2018) https://www.bis.org/cpmi/publ/d173.pdf.
29. BIS, "*Correspondent Banking*", Committee on Payments and Market Infrastructures (July 2016) https://www.bis.org/cpmi/publ/d147.pdf;
30. Analysis based on the authors' interviews with MSMEs in the region through the AMTC network of companies.
31. Analysis based on the authors' interviews with MSMEs in the region through the AMTC network of companies.
32. BIS, "*Cross-border Retail Payment*", Committee on Payments and Market Infrastructures (February 2018) https://www.bis.org/cpmi/publ/d173.pdf.
33. Analysis based on the authors' interviews with MSMEs in the region through the AMTC network of companies.
34. Analysis based on the authors' interviews with MSMEs in the region through the AMTC network of companies.
35. Analysis based on the authors' interviews with MSMEs in the region through the AMTC network of companies.
36. Analysis based on the authors' interviews with MSMEs in the region through the AMTC network of companies.
37. Analysis based on the authors' interviews with MSMEs in the region through the AMTC network of companies.
38. Analysis based on the authors' interviews with MSMEs in the region through the AMTC network of companies.
39. Analysis based on the authors' interviews with MSMEs in the region through the AMTC network of companies.
40. Analysis based on the authors' interviews with MSMEs in the region through the AMTC network of companies.

41. Analysis based on the authors' interviews with MSMEs in the region through the AMTC network of companies.
42. BIS. "Enhancing Cross-Border Payments: Building Blocks of a Global Roadmap - Technical Background Note," 2020. www.bis.org.
43. Drawn from the Asia Business Trade Association (ABTA) Issue Paper on *Trade Facilitation: Payments* available at https://asiabusiness.trade/news
44. For more details on instant payments, see the ABTA paper at: https://asiabusiness.trade/news
45. Analysis based on the authors' interviews with MSMEs in the region through the AMTC network of companies.
46. Payoneer. "Navigating the World of Cross-Border E-Payments: Top Challenges Facing Businesses Initiating Global Mass Payments," 2015.
47. Law, Valerie. "Asian E-Wallets Plant Their Flags: An In-Depth Analysis of the Top-10 Players," 2020.
48. Google, Temasek, and Bain & Company, "E-Conomy SEA 2020."
49. Alex Rolfe, "Future of Digital Commerce and Payment in a Digital Society," 2020, https://www.paymentscardsandmobile.com/research-note-the-future-of-digital-commerce-and-payments-in-a-digital-society/.
50. BIS, "*Cross-border Retail Payment*", Committee on Payments and Market Infrastructures (February 2018) https://www.bis.org/cpmi/publ/d173.pdf.
51. Alex Rolfe, "Future of Digital Commerce and Payment in a Digital Society," 2020, https://www.paymentscardsandmobile.com/research-note-the-future-of-digital-commerce-and-payments-in-a-digital-society/.
52. For more details, see https://www.mas.gov.sg/schemes-and-initiatives/project-ubin
53. For further information, see https://consensys.net/blockchain-use-cases/finance/project-i2i/
54. For more details, see https://www.swift.com/our-solutions/swift-gpi
55. McKinsey and Company. Global payments report. 2019: Amid sustained growth, accelerating challenges demand bold actions. (September 2019).
56. ITC. Rep. *SME Competitiveness Outlook 2017 - The Region: A Door to Global Trade*. International Trade Centre, 2017. https://www.intracen.org/uploadedFiles/intracenorg/Content/Publications/smeco17.pdf.
57. BIS. "Enhancing Cross-Border Payments: Building Blocks of a Global Roadmap - Technical Background Note," 2020. www.bis.org.
58. Correspondence with Visa.
59. See "Cheaper Remittances: How Malaysia and Philippines Paved the Way," https://www.cgap.org/blog/cheaper-remittances-how-malaysia-and-philippines-paved-way
60. https://www.afi-global.org/sites/default/files/publications/2019-03/KYC-Innovations-Financial-Inclusion-Integrity-Selected-AFI-Member-Countries.pdf
61. WEF. Rep. *Addressing E-Payment Challenges in Global E-Commerce*. World Economic Forum, 2018. http://www3.weforum.org/docs/WEF_Addressing_E-Payment_Challenges_in_Global_E-Commerce_clean.pdf.
62. BIS. "Enhancing Cross-Border Payments: Building Blocks of a Global Roadmap - Technical Background Note," 2020. www.bis.org.
63. BIS. "Enhancing Cross-Border Payments: Building Blocks of a Global Roadmap - Technical Background Note," 2020. www.bis.org.
64. SWIFT. "Achieving Financial Integration in the ASEAN Region." *SWIFT Discussion Paper*, 2017.
65. KPMG. "Cross-Border Payments Interoperability Network Feasibility Study," 2018.
66. WEF. Rep. *Addressing E-Payment Challenges in Global E-Commerce*. World Economic Forum, 2018.
67. WEF. Rep. *Addressing E-Payment Challenges in Global E-Commerce*. World Economic Forum, 2018.

68. WEF. Rep. *Addressing E-Payment Challenges in Global E-Commerce*. World Economic Forum, 2018.
69. WEF. Rep. Exploring International Data Flow Governance Platform for Shaping the Future of Trade and Global Economic Interdependence . World Economic Forum, 2019. http://www3.weforum.org/docs/WEF_Trade_Policy_Data_Flows_Report.pdf.
70. BIS. "Enhancing Cross-Border Payments: Building Blocks of a Global Roadmap - Technical Background Note," 2020. www.bis.org.
71. Asia-Pacific Economic Cooperation (APEC), Fostering an Enabling Policy and Regulatory Environment in APEC for Data-Utilizing Businesses, Chapter 4: Payment Services, 2019, https://www.apec.org/-/media/APEC/Publications/2019/7/Fostering-an-Enabling-Policy-and-Regulatory-Environment-in-APEC-for-Data-Utilizing-Businesses/TOC/Chapter-4.pdf.
72. Asia-Pacific Economic Cooperation (APEC), Fostering an Enabling Policy and Regulatory Environment in APEC for Data-Utilizing Businesses, Chapter 4: Payment Services, 2019.
73. Asia-Pacific Economic Cooperation (APEC), Fostering an Enabling Policy and Regulatory Environment in APEC for Data-Utilizing Businesses, Chapter 4: Payment Services, 2019.
74. Meltzer, Joshua, and Peter Lovelock. Rep. *Regulating for a Digital Economy: Understanding the Importance of Cross-Border Data Flows in Asia*, March 2018. https://www.brookings.edu/wp-content/uploads/2018/03/digital-economy_meltzer_lovelock_working-paper.pdf.
75. KPMG. "Cross-Border Payments Interoperability Network Feasibility Study," 2018.
76. BIS, "*Cross-border Retail Payment*", Committee on Payments and Market Infrastructures (February 2018) https://www.bis.org/cpmi/publ/d173.pdf.
77. BIS, "*Cross-border Retail Payment*", Committee on Payments and Market Infrastructures (February 2018) https://www.bis.org/cpmi/publ/d173.pdf.
78. Digital Economic Partnership Agreement (DEPA) is an agreement between CPTPP members Singapore, New Zealand and Chile that established new approaches and collaborations on digital trade issues. DEPA is a stand-alone modular agreement open to future accessions comprised by multiple sections crafted as independent "modules" that could be added to, expanded, or stripped down by other parties in different agreements. The Singapore-Australia Digital Economy Agreement (DEA) updates digital trade arrangements under the Australia-Singapore FTA. Singapore has also launched DEA negations with the Republic of Korea.
79. For DEPA text visit https://www.mfat.govt.nz/en/trade/free-trade-agreements/free-trade-agreements-concluded-but-not-in-force/digital-economy-partnership-agr. For DEA text visit https://www.dfat.gov.au/sites/default/files/australia-singapore-digital-economy-agreement.pdf
80. See, for example, icc-issues-brief-4-electronic-payment-services-and-ecommerce.pdf (iccwbo.org)
81. Enhancing Cross-border Payments: Stage 3 roadmap, Financial Stability Board, 13 October 2020 (fsb.org)

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