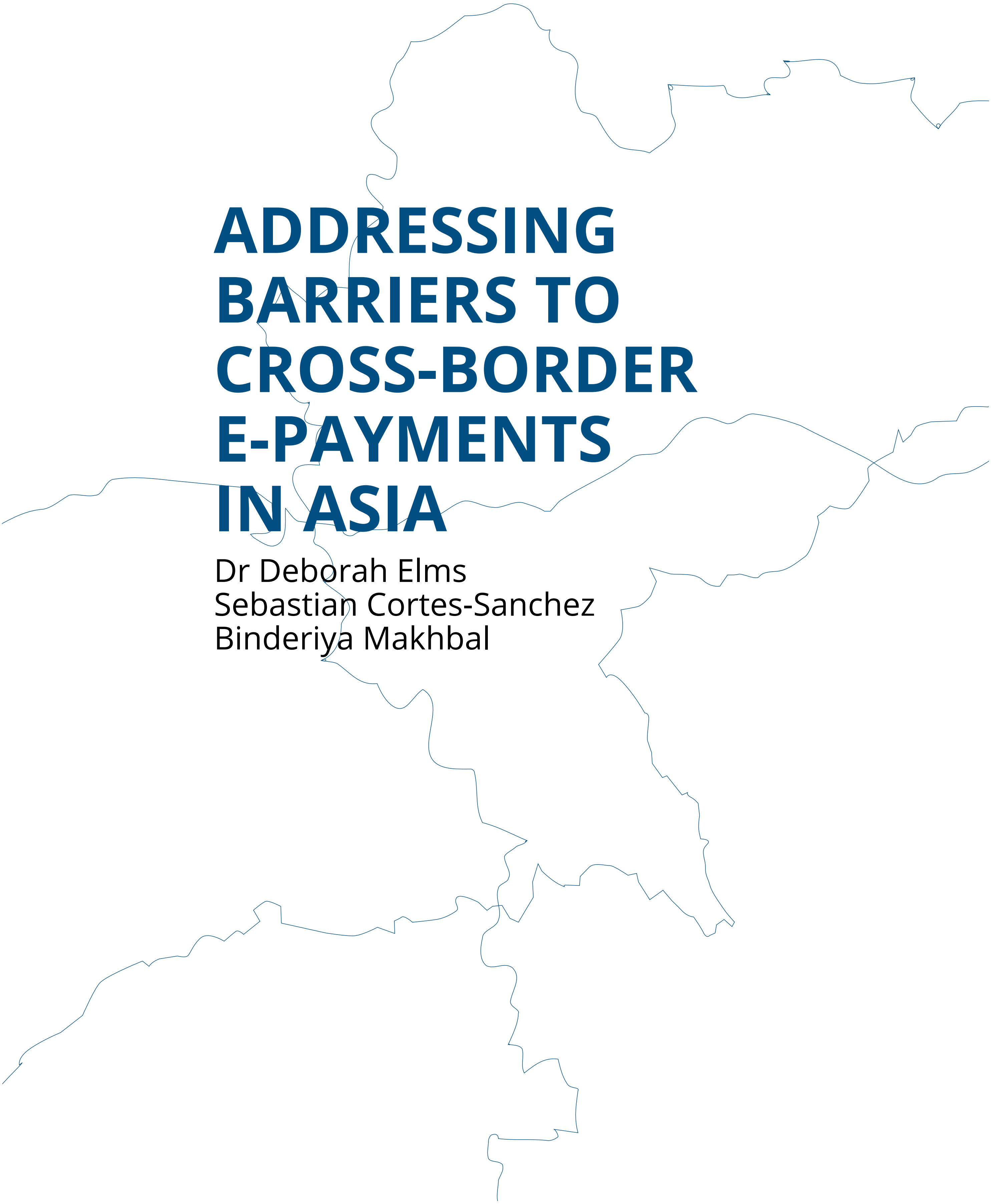

ADDRESSING BARRIERS TO CROSS-BORDER E-PAYMENTS IN ASIA

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KEY TAKEAWAYS

- **The Opportunity:** Cross-border digital payments are a critical component of the online services ecosystem that allow firms to sell around the world far more easily and cheaply than ever before.

- **The Challenge:** Despite the opportunities created by a more inclusive and efficient regional e-payments ecosystem, there remain key regulatory challenges to the development of more integrated and interoperable e-payments regional ecosystems.

- **Data Related Barriers:** Motivated by concerns related to cybersecurity, consumer protection, data privacy and competition, some governments in Asia are putting in place financial data-related restrictions that act as a barrier to market entry and operations for payment service providers.

- **Lack of Interoperability:** The proliferation of new payment technologies has led to an increasingly complex set of systems and technical standards with significant variation by country and region. A lack of interoperability between those standards has created additional friction in the management of cross-border digital payments.

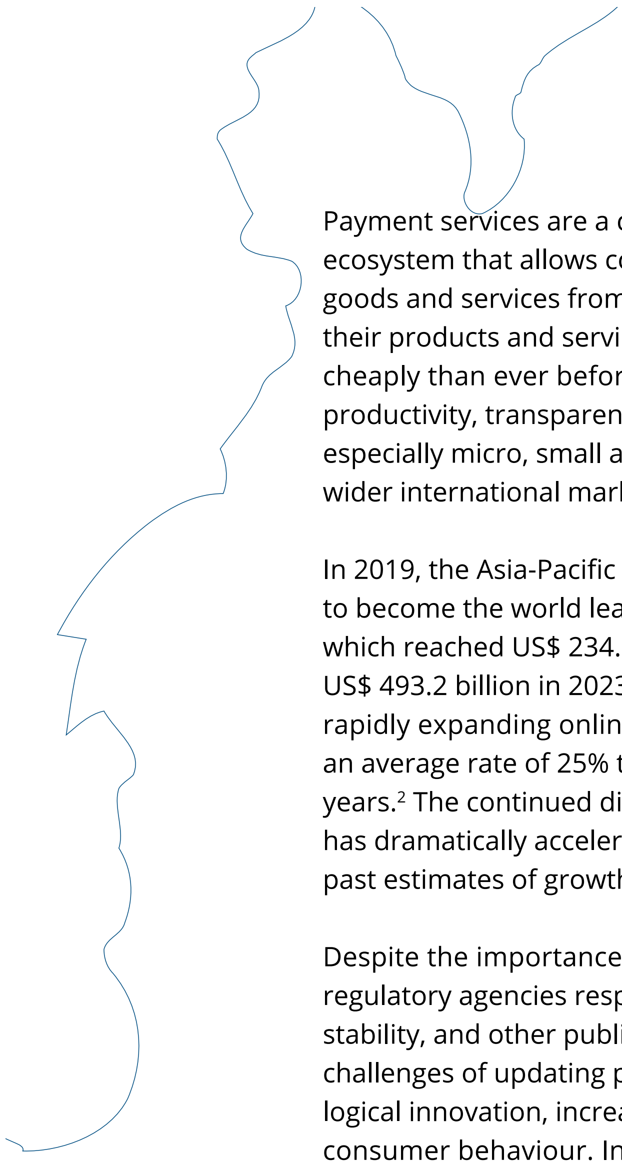
- **A Potential Solution:** Countries in the region are increasingly using Free Trade Agreements (FTAs) as a mechanism to lower barriers to the delivery of cross-border e-payment services and encourage the interoperability of e-payment systems.

- **Key Approach:** An assessment of the scope and depth of FTA provisions finds that commitments under most of these agreements can be non-binding and may include exceptions and carve-outs on provisions of cross-border financial services. Therefore, the authors recommend:

- **Recommendation 1: Limit or eliminate discriminatory measures and data related restrictions by acknowledging and addressing government policy priorities:** Ensure future FTA commitments on the localisation of computing facilities for financial services and the movement of financial data across borders; minimise or eliminate market access restrictions while strengthening transparency and regulatory oversight in the delivery of cross-border e-payment services.

- **Recommendation 2: Encourage and operationalise cross-border interoperability** by supporting FTA commitments that stress increased interoperability and use of internationally accepted standards and best practices.

INTRODUCTION



Payment services are a critical component of the online services ecosystem that allows consumers the convenience of purchasing goods and services from merchants globally; and for firms to sell their products and services around the world far more easily and cheaply than ever before. Digital payments solutions increase productivity, transparency, competition and give firms of all sizes, especially micro, small and medium-sized enterprises (MSMEs), a wider international market.

In 2019, the Asia-Pacific region overtook Europe and North America to become the 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.[1] This is, in part, a result of the region's rapidly expanding online market, which is projected to grow at an average rate of 25% to 35% per year over the next five to ten years.[2] The continued disruption caused by the Covid-19 pandemic has dramatically accelerated the migration of firms online, making past estimates of growth quickly outdated.

Despite the importance of digital payments for trade in Asia, regulatory agencies responsible for consumer protection, financial stability, and other public interests are grappling with the legitimate challenges of updating policy frameworks to account for technological innovation, increased cross-border trade, and changes in consumer behaviour. In a region as diverse as the Asia-Pacific, differences between economies in technological maturity, regulations, standards, cost, digital access, and security add to the costs and complexity of developing regional ecosystems of support for cross-border e-payments. Such differences are already complex at the domestic levels within the region and, when payments are being made and settled across borders, the challenges of efficient and seamless operations are compounded.

Governments in the region are increasingly making it their priority to update the governance of payment systems and encourage greater access, efficiency, and interoperability in the systems. However, new payment innovations have increased the number of geographies, stakeholders, transactions, intermediaries and

1 *Capgemini Research Institute. 2020."World Payments Report 2020." (https://worldpaymentsreport.com/wp-content/uploads/sites/5/2020/10/World-Payments-Report-2020.pdf).*

2 *Chen, Lurong and Fukunari Kimura. 2020.E-Commerce Connectivity in ASEAN.*

standards required to settle cross-border payments. Ensuring secure, reliable and transparent cross-border e-payments, reducing barriers to market access and data in the provision of cross-border e-payment services, increasing the interoperability of domestic approaches to the regulation of e-payment standards and promoting innovation enabling regulatory oversight are all policy challenges that regulators in the region are trying to address.

One way that officials in the Asia-Pacific are attempting to tackle coordination challenges is through provisions embedded in Free Trade Agreements (FTAs). Although payments are not explicitly mentioned in most FTAs, some of the underlying issues are tackled, such as through commitments towards allowing data to flow across borders, through specific elements of a financial services chapter, or country-specific commitments for market access.

Payments pose an issue that often falls between the jurisdictions of multiple actors at the domestic level. In cross-border settings, the challenge of managing payments also sits between and across ministries. Payments fit within the broader category of financial services, originally managed by banks alone. Banks are typically regulated by finance ministries and central banks. But as demand has grown for payment services, other vendors have become involved. Governments that have created digital economy ministries, for example, have started to become active in electronic payments policy making. Trade officials clearly see the need for efficient and effective cross-border payments solutions to help facilitate the movement of goods and services across borders.

This paper highlights the role that trade agreements and other types of governance mechanisms can play in enabling the use and development of more effective, secure and efficient regional e-payments ecosystems. First, the paper assesses the scope, depth and relevance of recent FTAs in addressing restrictions on market access. Second, the paper provides a stocktake of existing regulatory initiatives promoting the interoperability and adoption of international payments-related standards in the Asia Pacific region. Finally, the paper outlines key takeaways for policymakers, adding value and offering new insights into the policy challenges and opportunities for cross-border e-payments and related services in the Asia-Pacific region and beyond. ■

RESTRICTIONS ON CROSS-BORDER PAYMENTS

Motivated by concerns like cybersecurity, consumer protection, data privacy or competition, some governments in the Asia-Pacific region are changing regulations for data. While many worries are legitimate, restrictions on data can also act as barriers to market entry or operations for payment service providers. Such obstacles can come in the form of domestic processing mandates, discriminatory licensing, foreign equity caps, or data localisation requirements.

In some instances, policy outcomes can be particularly perverse. For instance, some restrictions like the use of onshore data processing or the use of a national payment gateway have been imposed partly to ensure more secure data flows, but these solutions can actually create greater risk of cyber breaches or data hacks.

Traditionally, financial regulators prioritise different regulatory objectives. These may include financial stability, financial inclusion, consumer protection, cybersecurity and competition. With the proliferation of digital payments technologies and services, financial regulators are grappling with updating old policy frameworks or developing new ones that will better address their concerns and still account for technological innovation, changes in consumer behaviour, and the potential for increased risks.

In some cases, regulators have chosen to enact policies restricting the cross-border flow of financial-related data. These 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.[3] Restrictions on cross-border data flows and local data storage requirements – known as data localisation – often require financial services firms to set up duplicative data storage facilities in each of the countries where they operate.[4] Data processing or routing requirements may require firms to send transaction data to a designated firm.[5]

3 *WEF. 2019. "Exploring International Data Flow Governance Platform for Shaping the Future of Trade and Global Economic Interdependence." World Economic Forum Report.(http://www3.weforum.org/docs/WEF_Trade_Policy_Data_Flows_Report.pdf).*

4 *WEF. 2018. "Addressing E-Payment Challenges in Global E-Commerce." World Economic Forum Report. (http://www3.weforum.org/docs/WEF_Addressing_E-Payment_Challenges_in_Global_E-Commerce_clean.pdf).*

5 *WEF. 2018. "Addressing E-Payment Challenges in Global E-Commerce."*

However, a growing body of research suggests that these types of restrictions often fail to achieve many of their intended goals. Instead, they add significant costs to the local economy, reduce data security, and do little to improve consumer privacy.[6] The reasons are manifold:

A/ Cross-Border Data Transfers are Required to Settle Digital Payments

Data transfers are critical for electronic information exchanges which are required to capture, process and authorise payment transactions between multiple stakeholders within a payments network. This process requires cross-border flow of data, when settling *both* domestic and cross-border transactions, since even in cases where consumer and merchant are located in the same market, the processing of the transactions is often carried out elsewhere.[7] As an example, the need to check transactions for fraud may require use of databases located outside the country. Thus, restrictions on the movement of data might make what appear to be purely domestic online or cashless transactions impossible.

B/ Localisation Requirements Limit Economies of Scale for Payments Providers

Localisation requirements force firms to set up costly, often duplicative data storage facilities, or exit the market. Payment service providers have to invest up-front in processing infrastructures, highly secure telecommunication facilities and data storage.[8] By forcing such entities, especially if they are start-ups, duplicate their full service in each domestic market, these rules prevent economies of scale for payment services, as large volumes of payment transactions reduce per unit costs.[9]

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6 *WEF. 2018."Addressing E-Payment Challenges in Global E-Commerce." Asia-Pacific Economic Cooperation (APEC). 2019., Fostering an Enabling Policy and Regulatory Environment in APEC for Data-Utilizing Businesses.*

7 *WEF. 2018."Addressing E-Payment Challenges in Global E-Commerce."*

8 *WEF. 2018."Addressing E-Payment Challenges in Global E-Commerce."*

9 *Asia-Pacific Economic Cooperation (APEC). 2019. Fostering an Enabling Policy and Regulatory Environment in APEC for Data-Utilizing Businesses. Chapter 4: Payment Services.(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).*

C/ Data Localisation Costs Can Affect the Competitiveness of Local Merchants

Many of the costs of data localisation are not passed along to foreign service providers, but are instead imposed on local start-ups, financial institutions, and, ultimately, consumers, which can undermine a firm's competitiveness by cutting into profit margins.[10] A lack of platforms can prevent local firms from using their preferred payment provider to process transactions easily and cheaply access customers around the world.[11] This is especially important for developing countries and other markets with a nascent fintech sector, as localisation can hurt start-ups dependent on international network connections and cloud computing services.[12]

D/ Barriers to Data Exports Reduce Robustness of Financial Services

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. For instance, requirements to route transactions through a single switch or store all data on a single location increase the risk of a single point of failure and may stop firms from using modern data protection techniques to stay ahead of hackers and cybercriminals.[13] ■

10 *Asia-Pacific Economic Cooperation (APEC). 2019. Fostering an Enabling Policy and Regulatory Environment in APEC for Data-Utilizing Businesses.*

11 *Asia-Pacific Economic Cooperation (APEC). 2019. Fostering an Enabling Policy and Regulatory Environment in APEC for Data-Utilizing Businesses.*

12 *Thaker, Aria. 2018. "India's Data Localisation Plans Could Hurt Its Own Startups the Most." Quartz India. (https://qz.com/india/1422014/rbis-data-localisation-could-hurt-indias-own-startups/).*

13 *Meltzer, Joshua, and Peter Lovelock. 2018. "Regulating for a Digital Economy: Understanding the Importance of Cross-Border Data Flows in Asia." Brookings.(https://www.brookings.edu/wp-content/uploads/2018/03/digital-economy_meltzer_lovelock_working-paper.pdf).*

1. Trade Agreement Commitments

The first global rules on trade in services, including financial services like payments, were made at the World Trade Organization as part of the General Agreement on Trade in Services (GATS). These new services rules came into force in 1995 and have not been comprehensively updated since. Many governments were nervous about creating new rules and market access conditions for services, and particularly for financial services at that time, since this was a new subject in trade agreement regulation. As a result, most commitments actually made by governments under the GATS are relatively thin.

In 1995, of course, the internet was just reaching the general public for the first time. While officials and governments created a broad category for trading services across borders, they were primarily concerned with delivery of services by mail or via fax. Over the decades since then, the explosion of digitally-delivered services has meant that many activities that might have once been impossible or unthinkable are now regularly undertaken – including the use of online or electronic payments for the purchase of goods and services.

Governments can, and have, tried to update the global rulebook in a variety of settings, including through various FTA commitments. By 2020, there were no binding obligations in any Asian FTA that explicitly include payments, although the term and topic has begun to show up as part of cooperation pledges or provisions in some agreements (noted further below).

There are dozens of trade arrangements in the region and many already include various elements that may be applicable to resolving many of the challenges to market access for cross-border e-payments. While not exhaustive, the list below provides an overview of recent agreements with a broad geographic scope and with relevant provisions tackling payments-related issues.

- **Comprehensive and Progressive Trans-Pacific Partnership (CPTPP)** is a comprehensive FTA that covers 11 countries across the Asia-Pacific region including Australia, Canada, Japan, Mexico, New Zealand, Singapore, and Vietnam, and that came into force in December 2018.[14]
- **European FTAs in Asia.** The EU has four active agreements in the region, including with South Korea and Japan. The most recent agreements, with Singapore and Vietnam, entered into force in late 2019 and 2020.[15]
- **Digital Economic Partnership Agreement (DEPA)** is an agreement between CPTPP members Chile, New Zealand and Singapore that established new approaches and collaborations on digital trade issues. DEPA is a stand-alone modular agreement, open to future accessions comprised of multiple sections crafted as independent "modules" that could be added to, expanded, or stripped down by other parties in different agreements.[16] DEPA Article 2.7 encourages parties to work together on the creation of consistent regulatory frameworks for payments.
- **Singapore-Australia Digital Economy Agreement (DEA)** updates digital trade arrangements under the Australia-Singapore FTA.[17] Singapore has similar initiatives underway in 2021 with South Korea and the UK. The DEA contains cooperation commitments specifically on payments that go a bit farther in committing members to coordination than the DEPA (Article 11).

Not all of these agreements contain explicit references to payments or facilitate movement across borders. However, they all include other provisions in related areas that reduce market access barriers to the delivery of cross-border payments. While the scope of this paper does not allow for a detailed assessment of all FTA provisions relevant for the delivery of cross-border e-payment services, key market access and data provisions include:

14 *Technically, Vietnam started in January 2019. The complete texts and schedules of CPTPP can be found at: https://www.mfat.govt.nz/en/trade/free-trade-agreements/free-trade-agreements-in-force/cptpp/comprehensive-and-progressive-agreement-for-trans-pacific-partnership-text-and-resources/*

15 *For details on EU FTAs, see: https://ec.europa.eu/trade/policy/countries-and-regions/negotiations-and-agreements/*

16 *For DEPA text visit https://www.mti.gov.sg/-/media/MTI/Newsroom/Press-Releases/2020/06/Joint-Press-Release--Electronic-Signing-of-Digital-Economy-Partnership-Agreement-12-June-Updated-URL.pdf*

17 *The Agreement can be found at: https://www.dfat.gov.au/sites/default/files/australia-singapore-digital-economy-agreement.pdf*

- **National Treatment & Market Access for Financial Electronic Services:** This commitment ensures that countries provide (or reinforce) the basic WTO principle that domestic and foreign payment services and service suppliers are treated the same – known as national treatment – and ensure that this applies to the various modes of supply of their payment services commitments in trade agreements.
- **Cross Border Transfer of Information:** This provision prohibits members from restricting cross-border transfer of information.[18]
- **Location of Computing Facilities:** These provisions restrict FTA members from requiring service providers to locate their computing facilities in their territory as a condition to conduct business. In some agreements there are provisions that explicitly prohibit members from requiring a financial institution to locate computing facilities in their territory.[19]

2. Analysis of FTA Provisions

The non-discriminatory treatment of foreign payment service providers has limited coverage in agreements like the CPTPP. Annex 11-B in Financial Services includes a section explicitly allowing for the supply of electronic services for payment card transactions into a member's territory. However, the agreement also includes exceptions that exclude digital payments from commitments on national treatment for countries like Malaysia. The CPTPP further contains side letters between its members that authorise existing measures that discriminate against foreign payment providers, such as via local presence requirements. For example, a side letter between Vietnam and all members allows Vietnam to require electronic service providers to be processed through a national switch.[20]

Conversely, the Singapore-Australia DEA and the EU-SG FTA go further than CPTPP in providing explicit national treatment to

18 *It should be noted that under the selected agreements members are able to adopt measures inconsistent with the provisions to achieve a legitimate public policy objective provided that the measure "is not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on trade" as per the DEA.*

19 *As with any agreement, government retains the right to regulate in the public interest, which means that most data flow and data localisation measures contain exceptions clauses.*

20 *CPTPP – Annex 11-B in Financial Services includes Section D explicitly*

payments and market access to firms from other parties, including digital payments.[21]

While all selected agreements acknowledge the importance of cross-border data transfers, their ability to limit restrictions on those transfers and localisation requirements varies considerably.

First, some agreements do not have any provisions limiting members' ability to impose data localisation requirements. For instance, the EU-Singapore FTA contains provisions that allow cross-border information transfers for payments services but does not contain explicit references to data localisation requirements.[22]

Second, some agreements refer to the importance of cross-border transfers of information and limiting restrictions on the location of computer facilities but do so through non-binding commitments. For instance, the DEPA includes provisions where parties "affirm their level of commitments relating to computing facilities" including localisation requirements.[23] While this type of provision shows a commitment and willingness from participating countries, it does not make those measures mandatory or subject to the agreement's dispute settlement mechanism.

Third, some agreements do prohibit restrictions on cross-border data transfers and data localisation requirements but exclude financial services. For instance, the CPTPP includes commitments prohibiting the restrictions on cross-border data transfers in its financial services chapter but excludes financial services from its broad prohibition of data localisation requirements.[24]

Last, agreements like the DEA go further than the other agreements by providing explicit, detailed protections for the free flow of data and prohibitions on

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21 *Sections 17.3.3 and 17.5.1. the parties agree not to cap the number of electronic payment service suppliers, limit the value of transactions or assets, apply economic needs tests, restrict the number of employees, or limit the types of legal entities through which firms can offer their electronic payment services*

22 *For EU-Singapore FTA texts visit https://trade.ec.europa.eu/doclib/press/index.cfm?id=961*

23 *For DEPA text visit https://www.mti.gov.sg/-/media/MTI/Newsroom/Press-Releases/2020/06/Joint-Press-Release--Electronic-Signing-of-Digital-Economy-Partnership-Agreement-12-June-Updated-URL.pdf*

24 *For CPTPP texts visit https://www.enterprisesg.gov.sg/non-financial-assistance/for-singapore-companies/free-trade-agreements/ftas/singapore-ftas/-/media/esg/files/non-financial-assistance/for-companies/free-trade-agreements/cptpp/cptpp-legal-text.pdf*

data localisation in the financial services chapter.[25] Unlike other agreements, the DEA does not include “public policy objective” exceptions for the imposition of data localisation measures. Instead, the DEA is paired with a condition that ensures that regulatory authorities of the covered financial person have immediate, direct, complete and ongoing access to information processed or stored on computing facilities located outside of the party’s territory.[26] The DEA approach provides a clear framework that allows for the free flow of data while ensuring parties to the agreement have regulatory access to data. This may be considered a “model approach” that limits data restrictive measures while also addressing government concerns on the provision of cross-border financial services.

As a whole, agreements like the DEA provide a good blueprint for the development of provisions that limit market access and data restrictions and strengthen transparency and regulatory oversight in the delivery of cross-border e-payment services. Therefore, it is important that the agreements with a broader geographical scope like the CPTPP, and potentially the DEPA, limit the use of exceptions and carve-outs and instead focus on the development of financial services and payment-specific provisions that address regulatory concerns, while limiting the use of discriminatory measures and data-related restrictions. ■

25 *Articles 17.17 and 17.18*

26 *The DEA does not make it explicit what type of information financial service providers need to make available to regulatory authorities to be able to locate computing facilities outside a party’s territory.*

Beyond regulatory challenges that restrict the operation of cross-border payment services, the evolution of the e-payments ecosystem has also led to a significant variation of standards across countries. A growing lack of interoperability between systems makes cross-border e-payments more difficult.

In the context of digital payments, interoperability enables all participants of a payment system (for example, consumers, merchants and governments) to easily send funds between different payment networks and instruments, facilitating the making and receiving of cross-border retail payments.

1. The Challenge of Creating Interoperable Cross-Border e-Payment Networks

There are multiple steps countries in the region have taken to reduce friction and move toward greater harmonisation and interoperability of the complex web of relationships and messaging systems that facilitate connections between payment systems. For instance, international standards governing messaging play an important role in facilitating cross-border payments. Many payment card networks connect banks using a common messaging standard, the International Organization for Standardization (ISO) 8583.

Despite the availability of mechanisms for making connections between payment networks, some challenges still exist. The appearance of new payment services providers has led to new innovations, increased competition and improved access and value for consumers. However, the proliferation of new payment technologies has also led to an increasingly complex set of systems and technical standards with significant variation by country and region. A lack of interoperability between those standards in Asia's regulatorily fragmented environment has created additional friction in the management of cross-border digital payments.

For instance, there are standards and practices on encryption, authentication, anti-money laundering (AML), combating the financing of terrorism (CFT) and know your customer (KYC) requirements that need to be coordinated for payment systems to connect.[27] However, countries can have domestic standards on these issues that conflict with international standards or they can have a lack the infrastructural and institutional capabilities to fully implement such standards.[28] Many financial institutions are still operating on older messaging systems which do not easily connect with newer systems, nor are able to pass along sufficient information to facilitate cross-border transactions.[29] Similarly, although there are global AML and CFT standards that multiple countries are working to meet, levels of implementation, compliance and effectiveness vary significantly in the management of cross-border payments.[30]

Differences in standards and implementation of those standards create conflict and additional costs for businesses engaging in cross-border trade, especially MSMEs, which need to comply with several sets of rules and regulations. Multiple surveys in the region have noted that legal, regulatory and compliance considerations associated with AML, KYC, risk mitigation, and consumer protection are the most significant costs for cross-border payments.[31]

Given the need to enable better interoperability between payment systems in the region, some governments have taken steps to reduce the existent friction. The following section will identify and categorise some of these different approaches.

2. Stocktake of Initiatives to Promote Interoperable Cross-Border e-Payment Networks

In order to address the main challenges related to cross-border payments and to promote interoperability for e-payment platforms in Asia, policies and regulation frameworks have been formulated at national and regional levels. Based on growing literature outlining different approaches towards improving interoperability and country specific reports, *Table 1* outlines a regulatory matrix of different initiatives outlining different initiatives in the region. While the list is not exhaustive, it outlines and categorises multiple

27 *WEF. 2018."Addressing E-Payment Challenges in Global E-Commerce."*

28 *Verdugo Yepes, Concha. 2011. "Compliance with the AML/CFT International Standard: Lessons from a Cross-Country Analysis." IMF Working Papers.*

29 *WEF. 2018."Addressing E-Payment Challenges in Global E-Commerce."*

30 *WEF. 2018."Addressing E-Payment Challenges in Global E-Commerce."*

31 *Asia-Pacific Economic Cooperation (APEC). 2019., Fostering an Enabling Policy and Regulatory Environment in APEC for Data-Utilizing Businesses.*

initiatives with the potential to enable cross-border payments. These initiatives can be classified under the following categories:

A/ Domestic and Cross-Border Financial Data Exchange
Countries in the region have put in place initiatives to promote information sharing and data exchange within and across borders. Improved financial data exchange and integration will generate an increased cross-border capital flow.

B/ Reliable Digitised Identification Systems
The interoperability of e-payments can be slowed by the prevalence of fake identities and lack of basic identification for certain populations, especially in rural regions. Some countries, shown in *Table 1*, have designed initiatives that allow parties to make transactions online in a convenient and secure manner.

C/ Protection of Data Privacy
The successful implementation of cross-border payments often depends on government initiatives to develop and implement data privacy frameworks that can effectively protect the data of citizens, while also allowing information to flow across borders in ways that support trade and innovation.

D/ Encouraging Financial Services Innovation
When promoting interoperability of e-payments, regulators typically take a cautious approach to disruptions in cross-border payment services and systems to protect consumers. Some countries have implemented initiatives that allow companies to "test" new innovations while remaining under careful regulatory supervision.

E/ Developing Guidelines for International Standards
In order to increase data sharing and encourage interconnectivity and competition among payment providers, many countries are supporting initiatives that encourage more open exchanges of financial information. The most popular is open banking, which refers to the sharing of consumer banking data with third-party applications and firms in order to provide new and existing financial services.[32]

32 WEF. 2018. "Addressing E-Payment Challenges in Global E-Commerce."

F/ Digital Currencies

Cryptocurrencies have the potential to reduce the number of intermediaries and processes to settle a payment. Within the cross-border space, cryptocurrencies can reduce transactional fees and exchange rate fee charges, facilitating international retail payments. Some governments in the region have implemented initiatives that explore the use of block chain and distributive ledger technology (DLT) to clear and settle payments.

G/ Digital-only Trade Agreements

As with other service industries, an effective way to encourage interoperability and international harmonisation is through trade agreements. Provisions included in digital trade agreements like the DEA and DEPA encourage members to recognise common standards and the utility of interoperability among multiple payments systems.

H/ Regional Cross-border Financial Services Integration Frameworks

A growing number of regional forums are coordinating standards development and mutual recognition. Multilateral associations, such as ASEAN, have identified steps that can be taken to support the evolution and convergence of regulatory frameworks to facilitate cross border e-payments.

Within ASEAN, members involved in the Working Committee on Payment and Settlement Systems (WC-PSS) have been tasked with creating an ASEAN-wide payments framework. This framework is meant to improve user payment experiences, promote regional integration, increase trust and security and improve the livelihoods of the underbanked.[33] In terms of payment infrastructure readiness and maturity, eight of the ten ASEAN[34] countries are preparing to implement the Cross-Border Payments Interoperability Network (XBPIN) system by 2021, with Singapore, Thailand, and Malaysia taking the lead.[35]

33 *World Economic Forum. Digital ASEAN. https://www.weforum.org/projects/digital-asean, Accessed 14 August 2020.*

34 *The Association of Southeast Asian Nations (ASEAN) includes ten members: Brunei, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam.*

35 *Bain and Company, Google, and Temasek. e-Conomy SEA Report 2019: Southeast Asia's $100 billion Internet economy. (2019).*

Table 1: Range of Initiatives that Promote e-Payment Interoperability

#	Category	Policy/ Regulation	Description	Implementing Countries Include
1	Domestic and cross-border financial data exchange	e-Payment Initiatives and codes of conduct	The e-Payment initiatives support an open, accessible, and interoperable national e-Payment infrastructure.	Singapore, India, Australia, New Zealand
		Cross-border Interbank Payment System (CIPS)	CIPS provides clearing and payment services for financial institutions in the cross-border RMB and offshore RMB business.	China
2	Digital Identification Systems	Centralised online identification system	A centralised online identification system allows citizens to store, view and manage personal data that has been provided to the government.	Singapore, Australia
		Unique biometric National ID "Aadhar"	Permitting electronic Know Your Customer (KYC) by using unique biometric National ID for financial services.	India
3	Protection of Data Privacy	Privacy Act	The Privacy Act applies to the handling of all personal information collected or held by businesses and stipulates rules on how to gather, utilise and disclose personal information.	New Zealand, Philippines, Japan, Singapore
		National Payment Gateway Card (GPN)	The GPN card creates an interconnected ecosystem of payment systems that has interoperability and protects consumer data.	Indonesia

#	Category	Policy/ Regulation	Description	Implement-ing Countries Include
4	Encourag-ing Inno-vation	Regulatory Sandbox	The regulatory sandbox allows companies to test innovations under regulators' supervision and controlled environments to improve upon cross-bor-der payment systems.	Singapore, Thailand
5	Guidelines for Inter-national Standards	Open Banking Guidelines	Worked in the develop-ment of guidelines on API and security standards.	Singapore
			Establishing standards guidelines for QR code payments.	India
6	Crypto and Digital Curren-cies.	Crypto Regu-lation	Explore the use of block chain and distributive ledger technology (DLT) to clear and settler cross-bor-der payments in different currencies on the same network.	Singapore, Malaysia
7	Digital-on-ly Trade Agree-ments	Australia-Sin-gapore Digital Economy Agreement (DEA)	The DEA upgraded the digital trade arrangement between Australia and Singapore in the CPTPP. It establishes new com-mitments on compatible e-invoicing and e-payment frameworks promoting better interoperability.	Australia, Singapore
		Digital Economic Partnership Agreement (DEPA)	Specific article on digital payments (2.7), signing parties agree to support the development of cross-border e-payments by fostering interoperabil-ity and the interlinking of payment infrastructures.	Chile, New Zealand and Singapore

#	Category	Policy/ Regulation	Description	Implementing Countries Include
8	Regional Financial Services Integration Frameworks	ASEAN Digital Data Governance Framework	In December 2018, ASEAN adopted the framework and is developing the Data Management Framework and the mechanisms required to facilitate cross border data flows (CBDF).	ASEAN
		ASEAN Framework on Personal Data Protection	It was adopted in 2016 by the ASEAN Ministers as one of two multilateral data protection and privacy frameworks.	ASEAN
		Collaborative framework facilitating cross-border digital payments	Working Committee on Payment and Settlement Systems (WC-PSS) develops a framework for financial integration, which includes principles on the "standardization of innovative retail payment instruments in ASEAN.	ASEAN

Source: Compiled by authors using regional reports and domestic sources [36]

36 *Information contained in the table was taken from: Bain and Company, Google, and Temasek. 2019. "Fulfilling its promise: The Future of Southeast Asia's digital financial services."; World Economic Forum. 2020. "Digital ASEAN Workshop Report."; Govtech Singapore. "E-Payments." ; PayPal. 2013. "Payments Regulations for Asia Pacific."; OpenGovAsia. 2018. "National Payment Gateway is the future of bank transactions in Indonesia."; GSMA. 2018. "Regional Privacy Frameworks and Cross Border Data Flows: How ASEAN and APEC can protect data and drive innovation."; and Khan, A., M. Gandhi, A. Jain, and N. Kacholia. 2016. "Emerging Markets Driving the payments transformation." PWC network.*

The stock-take's findings show that governments across the region are leveraging domestic, bilateral and regional policy frameworks to increase the efficiency and interoperability of cross-border e-payment systems. The following section will provide an assessment of the ways in which the recent digital-only trade agreements can enable the adoption and implementation of international standards across existing initiatives.

3. Trade Agreements as Enablers for International Standards

While initiatives related to cross-border financial services integration and the adoption of open banking standards can improve interoperability between national e-payment systems, domestic-level efforts can potentially introduce new frictions into cross-border digital commerce in the future, as countries adopt other, non-conforming standards. The alignment necessary to develop a single common regulatory market for e-payments across a region as diverse as Asia is unlikely to be realised in the near future.

This section will provide a more detailed assessment of the ways in which existing digital trade agreements can facilitate the development and adoption of common standards. Both the DEA and DEPA agreements have dedicated sections on digital payments, with a focus on application of international standards. Relevant commitments under both agreements, which align with the outlined initiatives include:[37]

- **Open Banking:** Both agreements are the first of their kind to promote the adoption of open banking. The agreements promote the use of open APIs and encourage third-party players to "facilitate greater interoperability and innovation in the electronic payments ecosystem."

37 *For DEPA text visit https://www.mti.gov.sg/-/media/MTI/Newsroom/Press-Releases/2020/06/Joint-Press-Release--Electronic-Signing-of-Digital-Economy-Partnership-Agreement-12-June-Updated-URL.pdf*

- **Facilitating Innovation**: Both agreements require members to facilitate innovation and competition and the introduction of new financial and electronic payment products and services in a timely manner through the adoption of regulatory and industry sandboxes.
- **Adoption of Specific International Standards:** Only the DEA, for relevant electronic payment systems, obliges members to adhere to international standards for electronic payment messaging, such as the International Organization for Standardization Standard ISO 20022 Universal Financial Industry Message Scheme for electronic data exchange between financial institutions and services suppliers.

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 for digital payments. However, as it is the case with most agreements, ensuring the swift implementation of non-binding commitments can be challenging. At the moment, both DEPA and DEA are platforms to encourage increased dialogue and initiatives for the promotion of interoperability of cross-border e-payments. As first-of-their-kind platforms endorsing open banking and encouraging common payment standards, both agreements can serve as templates for boosting interoperability in WTO discussions on digital trade, or in new agreements like the Regional Comprehensive Economic Partnership (RCEP). ■

TAKE-AWAYS FOR POLICYMAKERS

Payments are a key enabler of cross-border digital commerce and drive access, productivity, transparency and competition in the market. The cross-border dimension of digital payments can enable the digitisation and internationalisation of MSMEs, who form a key pillar of the region's socio-economic health and post-COVID recovery. The analysis in this paper has shown that commitments under trade agreements play an increasingly important role in the reduction of barriers to market access and data in the delivery of cross-border e-payments and the interoperability of increasingly complex and divergent domestic e-payment systems.

However, the coverage and depth of commitments under existing agreements, while providing a good set of foundational principles, may lack the geographical scope and the binding force to perform this task. Therefore, it is essential that policymakers continue to develop and upgrade trade commitments that facilitate the use and delivery of cross-border e-payment services by:

1/ **Limiting or eliminating discriminatory measures and data-related restrictions by acknowledging and addressing government policy priorities:** Ensuring that future FTA commitments on the localisation of computing facilities for financial services, and the movement of financial data across borders work to minimise or eliminate market access restrictions, while strengthening transparency and regulatory oversight in the delivery of cross-border e-payment services. Such an approach will ensure that FTAs address key government concerns for the delivery of cross-border e-payment services and limit the use of exceptions and carve outs for the provision of cross-border financial services.

2/ **Encouraging and operationalising cross-border interoperability through commitments on international standards:** Commitments to adopt internationally accepted standards within trading agreements can provide incentives for domestic industries to adopt international standards, and therefore promote a more seamlessly integrated network for digital payments.

3/ Encouraging the increased dialogue, use and interoperability of international best practices like open banking, regulatory sandboxes, digital identification systems, cryptocurrencies and financial systems integration can increase incentives for domestic industries to adopt those standards and shape discussions at broader settings like the WTO.

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. A sustained focus on continuously updating existing commitments and on practical steps that domestic governments should take has the potential to create a safer, more innovative, open and inclusive regional e-payments ecosystem. This paper contributes to the burgeoning literature highlighting the value of cross-border e-payments by pointing out the ways in which trade agreements can enable governments to 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. ■

AUTHORS AND REFERENCES

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References

Asia-Pacific Economic Cooperation (APEC). 2019. Fostering an Enabling Policy and Regulatory Environment in APEC for Data-Utilizing Businesses. Chapter 4: Payment Services. *(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).*

Capgemini Research Institute. 2020."World Payments Report 2020." *(https://worldpaymentsreport.com/wp-content/uploads/sites/5/2020/10/World-Payments-Report-2020.pdf).*

Chen, Lurong and Fukunari Kimura. 2020.E-Commerce Connectivity in ASEAN.

GSMA. 2018. "Regional Privacy Frameworks and Cross Border Data Flows: How ASEAN and APEC can protect data and drive innovation." *(https://www.gsma.com/publicpolicy/wp-content/uploads/2018/09/GSMA-Regional-Privacy-Frameworks-and-Cross-Border-Data-Flows_Full-Report_Sept-2018.pdf)*

Khan, A., M. Gandhi, A. Jain, and N. Kacholia. 2016. "Emerging Markets Driving the payments transformation." PWC network.

Meltzer, Joshua, and Peter Lovelock. 2018."Regulating for a Digital Economy: Understanding the Importance of Cross-Border Data Flows in Asia." Brookings. *(https://www.brookings.edu/wp-content/uploads/2018/03/digital-economy_meltzer_lovelock_working-paper.pdf).*

OpenGovAsia. 2018. "National Payment Gateway is the future of bank transactions in Indonesia." *(https://opengovasia.com/national-payment-gateway-is-the-future-of-bank-transactions-in-indonesia/)*

PayPal. 2013. "Payments Regulations for Asia Pacific." *(https://www.ebaymainstreet.com/sites/default/files/PayPal-Payment-Regulations-Booklet-APAC.pdf*

Thaker, Aria. 2018."India's Data Localisation Plans Could Hurt Its Own Startups the Most." Quartz India. *(https://qz.com/india/1422014/rbis-data-localisation-could-hurt-indias-own-startups/).*

Verdugo Yepes, Concha. 2011. “Compliance with the AML/CFT International Standard: Lessons from a Cross-Country Analysis.” IMF Working Papers.

WEF. 2018.“Addressing E-Payment Challenges in Global E-Commerce.” World Economic Forum Report. *(http://www3.weforum.org/docs/WEF_Addressing_E-Payment_Challenges_in_Global_E-Commerce_clean.pdf).*

WEF. 2019.“Exploring International Data Flow Governance Platform for Shaping the Future of Trade and Global Economic Interdependence.”World Economic Forum Report. *(http://www3.weforum.org/docs/WEF_Trade_Policy_Data_Flows_Report.pdf).*

World Economic Forum. 2020. “Digital ASEAN Workshop Report.”; Govtech Singapore. “E-Payments.” *(https://www.tech.gov.sg/scewc2019/epayments);*