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Policy Brief

Integrating Digital Payments in ASEAN: Harmonising Regulations and Strengthening Security for Inclusive Growth

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Key Messages:

- Ensuring interoperability for cross-border digital payments remains a key challenge, necessitating standardisation and collaboration to achieve seamless and affordable transactions.
- Diverse regulations and the need for robust data protection measures pose significant challenges, requiring a balance amongst security, innovation, and financial inclusion.
- Initiatives, like a regional payment connectivity and local currency transaction framework, are crucial for addressing cross-border payment issues and promoting the use of local currencies.
- Harmonised regulations, cross-sectoral collaboration, unified technical frameworks, engagement with the digital financial services industry, and unified security protocols are essential to support the efficient and secure growth of digital payments in ASEAN.

The growth of digital payment use in ASEAN has been significant, with digital payments accounting for over 50% of transactions and projected to reach US$416.60 billion by 2028. This expansion supports financial inclusion, enhances e-commerce, and bolsters micro, small, and medium-sized enterprises. However, challenges – such as interoperability, regulatory fragmentation, and data security – persist. ASEAN's initiatives, including the Declaration on Advancing Regional Payment Connectivity and Promoting Local Currency Transaction, aim to address these issues. This policy brief emphasises the need for harmonised regulations, enhanced cross-sectoral collaboration, and robust security measures to ensure the seamless integration and sustainable growth of digital payments in the region.

In 2021, digital payments[1] comprised 82% of ASEAN's digital financial services (DFS) revenue. By 2023, digital payments accounted over 50% of transactions, and the value is expected to reach US$286.90 billion by 2024 and US$416.60 billion by 2028.[2] E-wallets have enhanced e-commerce transactions, notably in Viet Nam (25% of transaction value) and Indonesia (39%). In the Philippines, the Maya app integrates digital payments with Maya Bank's services and PayMaya's offerings in cryptocurrency, micro-investment, and insurance (Chaudhuri et al., 2022). This is aiding financial resilience by improving access to financial services, reducing transaction costs, and fostering social networks for resources when shocks hit (Kass-Hanna, Lyons, and Liu, 2022). Moreover, DFS supports micro, small, and medium-sized enterprises, although sustained adoption varies (ASEAN, 2024). The United Nations Principles for Responsible Digital Payments is illustrated in the figure below and underpins existing ASEAN policy toolkits.

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[1] Digital payments include all transactions using digital channels like online and mobile payments. Electronic payments comprise a wider definition and include use of physical cards and electronic funds transfers (EFT). All digital payments are electronic, but not all electronic payments use digital channels (OPC, 2016). Examples of digital payments include e-wallets, mobile banking, and QR-code based payments. See Office of the Privacy Commissioner of Canada, Electronic and Digital Payments and Privacy, https://www.priv.gc.ca/en/privacy-topics/technology/mobile-and-digital-devices/02_05_d_68_dp/

[2] Statista, Digital Payments – ASEAN, https://www.statista.com/outlook/fmo/digital-payments/asean [accessed March 2024]

Figure 1: United Nations Principles for Responsible Digital Payments

Source: Better than Cash Alliance (2024).

The Committee on Payment and Settlement Systems leads cross-border payment connectivity initiatives and finalised the *ASEAN Payments Policy Framework for Cross-border Real Time Retail Payments within the ASEAN Region* in 2019 (ASEAN, 2021). Good progress is also being made under the Regional Payments Connectivity initiative through a memorandum of understanding signed by eight ASEAN Member States (AMS) (Bank Indonesia, 2024). Significant developments include cross-border QR code payments within some AMS (i.e. Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Singapore, and Thailand) and ongoing payment integration efforts with Hong Kong, India, and Japan – with the potential to expand region-wide.

Parallel to these efforts, ASEAN has established a local currency transaction framework to support the broader adoption of local currencies within ASEAN. The framework supports local currency transactions and addresses challenges, including reliance on the US dollar for trade invoicing, thin liquidity, costly hedging tools, lack of standardisation, and regulatory harmonisation. These challenges necessitate improvements in infrastructure, regulatory harmonisation, and the leveraging of technology (AMRO, 2023). The Digital Economy Framework Agreement (DEFA) should build upon these initiatives to promote efficient digital payments that support financial inclusion and regional economic integration, aiming for AMS participation and extension to other dialogue partners.

However, despite these initiatives, significant challenges persist in achieving seamless digital payment connectivity across ASEAN. The first major challenge is interoperability. As of April 2024, nine AMS have adopted ISO 20022 for retail payment systems,[3] and eight AMS have established national QR payment channels as technological prerequisites for interoperable cross-border digital payments. However, the remaining AMS are still in the process of adopting ISO 20022 and national QR codes, limiting their integration into the *ASEAN Interoperable QR Code Framework*. While current ASEAN interoperable QR code payments facilitate person-to-merchant transactions, expanding to merchant-to-merchant interoperability has potential. This would require standardised protocols and provider collaboration to ensure seamless cross-border transactions, however (Sinay, Tumengkol, Zendra, 2021).

Second, ensuring safe and secure digital payments is crucial to their deployment and use. For instance, personal data must be protected, as consumers' data shared through digital payment transactions raise

[3] Payment systems are of two types: retail payment systems and large-value payment systems. Retail payment systems handle high-volume, low-value transactions, such as everyday consumer purchases and transfers, through e-wallets and QR code payments. Large-value payment systems manage high-value, low-volume transactions, such as interbank transfers and large corporate payments, using systems like real-time gross settlement and centralised securities depository (Toronto Centre, 2023).

risks of unauthorised disclosure, data misuse, and discrimination – as highlighted in the *ASEAN Payments Policy Framework for Cross-border Real Time Retail Payments within the ASEAN Region*. Additionally, to prevent fraud and to ensure security, DFS providers must implement advance encryption, multifactor authentication, and consumer education. Adhering to data privacy laws, ensuring transparent terms, and establishing efficient complaint resolution mechanisms are also essential for the service providers (GPFI, 2023).

Third, regulators face common constraints in developing a digital payment ecosystem, including limited organisational capacity, geography, and poor infrastructure – often resulting in short-term interventions. The digital payment landscape is further fragmented by diverse regulations, such as foreign ownership limits, e-wallet spending and balance caps, and minimum capital requirements (Chen and Ruddy, 2020). Moreover, increasing big data use by FinTech has yet to be fully addressed, as governments and central banks are still exploring its regulatory implications. While these regulations protect the public interest and financial stability, they should be transparent and accessible to DFS providers to balance security with innovation and to advance financial inclusion.

Finally, regulatory responses to digital payments vary around the world and across the region. A rules-based model, like that of the Reserve Bank of India, ensures uniformity but lacks flexibility, while a principles-based model, used by the European Union and Monetary Authority of Singapore, allows adaptable implementation but can create inconsistencies (PwC, 2020). The United Kingdom's principles-based response to the 2008 global financial crisis included the renewal of its real-time gross settlement service and development of the New Payments Architecture initiative for enhanced global payment interoperability using ISO 20022. It also comprised other innovations like the SWIFT global payment innovation that improved international payment control and transparency, reducing processing times for transactions (UK Finance et al., 2022).

In ASEAN, the applicability of a rules-based versus principles-based approach depends on diverse economic structures, legal systems, and development levels. A rules-based approach would offer clear guidelines, reducing misinterpretation and benefiting AMS with less regulatory capacity by establishing security, consumer protection, and interoperability standards. Conversely, a principles-based approach would encourage innovation and adapt to changing circumstances, suiting more developed AMS with robust regulatory institutions, thus supporting FinTech innovation and the integration of emerging digital payment solutions. A hybrid model – combining both approaches – is ideal, ensuring uniformity and preventing violations while allowing flexibility. This balance creates a cohesive and adaptable regulatory environment, harmonising high-level principles with specific rules tailored to local contexts. For digital payments, this entails setting common standards for cross-border payments and data protection alongside national regulations addressing local needs, facilitating seamless digital payments, and promoting financial inclusion and digital literacy.

Policy Recommendations

DEFA provisions on electronic payments, including digital payments, should aim to address regulatory fragmentation that can impede seamless integration and cross-border interoperability. Cross-sectoral alignment between financial regulations and digital trade policies can further support collaborative efforts and enhance regional digital connectivity and economic integration during and post-DEFA negotiations. The following policy recommendations are proposed to address those issues:

- Ensure that DEFA commitments accommodate the diverse regulatory landscapes, align with AMS regulations, and promote interoperability. Under the electronic payments article in the DEFA, include a best-endeavour provision to adhere to the *ASEAN Payments Policy Framework for Cross-border Real Time Retail Payments within the ASEAN Region*, expand the Regional Payments Connectivity initiative, and foster an innovative and competitive environment that aligns with practices in the United Nations Principles for Responsible Digital Payments.
- Institutionalise a cross-sectoral coordination and collaboration platform amongst relevant sectoral bodies (e.g. finance, trade, and competition) to better implement cross-sectoral priorities for enhanced regional digital connectivity as part of DEFA implementation.
- Implement a unified technical framework for interoperable payment infrastructure, such as common protocols for QR code payments and cross-border real-time settlement systems, to ensure seamless cross-border digital transactions.
- Engage with the DFS industry to develop automated systems (e.g. chatbots) to resolve small-value disputes, and promote the use of application programming interfaces for interoperability and innovation.
- Make available domestic regulations on electronic payments, including approval processes, licensing requirements, procedures, and technical standards.
- Develop unified security protocols and best practices for digital payments, and mandate that AMS cooperate in implementing advanced encryption technologies, regular security audits, and incident response strategies to safeguard digital payment systems.

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