

# Promoting Safe and Efficient Payment and Remittance Services

Making and receiving payments through digital channels have become much easier and more accessible. With greater advancements in technology, digital payments are now more secure, simple and swift.

The Bank's priority in 2022 was to ensure that payment and money services business (MSB)<sup>1</sup> services remain safe, efficient and reliable. We actively collaborated with the industry to reduce barriers to e-payment adoption and increase public confidence in payment systems. These efforts have sustained the strong growth in digital payment adoption among households and businesses. We have also devoted significant resources towards ensuring the regulatory and supervisory framework, as well as key payment infrastructures, are fit for purpose and well aligned with current and future needs of the economy.

## Sustaining Greater Digitalisation of Payment and MSB Services

### Key payments and MSB trends

In 2022, e-payment transactions grew by 31.5% (2022: 9.5 billion; 2021: 7.2 billion). This is in line with the continued expansion in private consumption following the recovery in business and tourism activities. On average, each Malaysian made 291 e-payment transactions in 2022 (Diagram 1).

Two-thirds of total card-present transactions are now contactless, while various industry-led initiatives to actively promote adoption of QR code payments as a cost-effective payment method have led to a higher number of merchants, particularly MSMEs, accepting DuitNow QR (2022: 1.6 million merchants; 2021: 1.1 million merchants). With greater convenience provided to users, these developments continue to pave the way for further progress in the adoption of e-payments going forward.

The use of cheques continued to decline during the year (2022: 46.1 million; 2021: 48.3 million). Meanwhile, cash withdrawals from Automated Teller Machines (ATMs), typically used as a proxy for the level of cash usage, grew moderately to 798.5 million transactions valued at RM404.7 billion (2021: 779.6 million; RM386.3 billion). Nevertheless, the annual growth rate of ATM cash withdrawals remained below its pre-pandemic levels<sup>2</sup>, suggesting some gradual shift away from cash.

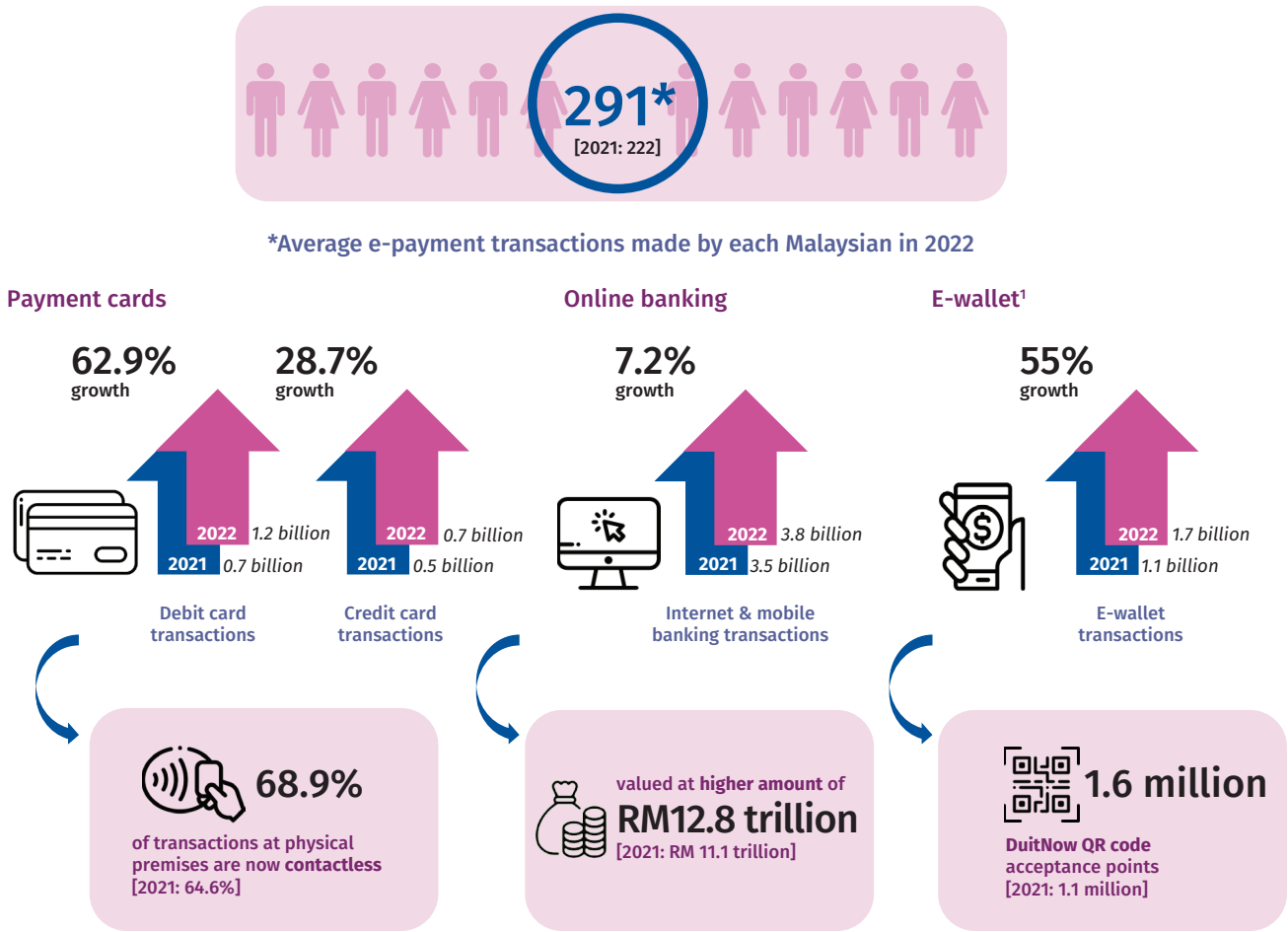
E-remittance services offered by licensed non-bank remittance service providers (RSPs) continued to gain traction among consumers (Diagram 2). They now account for 44.9% of total outward remittances by non-bank RSPs as customers look for ways to send money abroad quickly, conveniently, and at a lower cost. Meanwhile, total outward remittances<sup>3</sup> grew by 10.5% to RM28.5 billion (2021: RM25.8 billion), attributed to higher remittance transactions by foreign workers as the economy began to pick up in 2022. The reopening of the economy also saw the gradual return of international tourists, leading to a significant rebound in the money changing and wholesale currency businesses.

<sup>1</sup> Namely remittance, money changing and wholesale currency.

<sup>2</sup> Between 2015 and 2019, the average annual growth rate for ATM cash withdrawal volume and value were at 4.4% and 4.9%, respectively as compared to 2022 (volume: 2.4%, value: 4.7%).

<sup>3</sup> Offered by non-bank RSPs only.

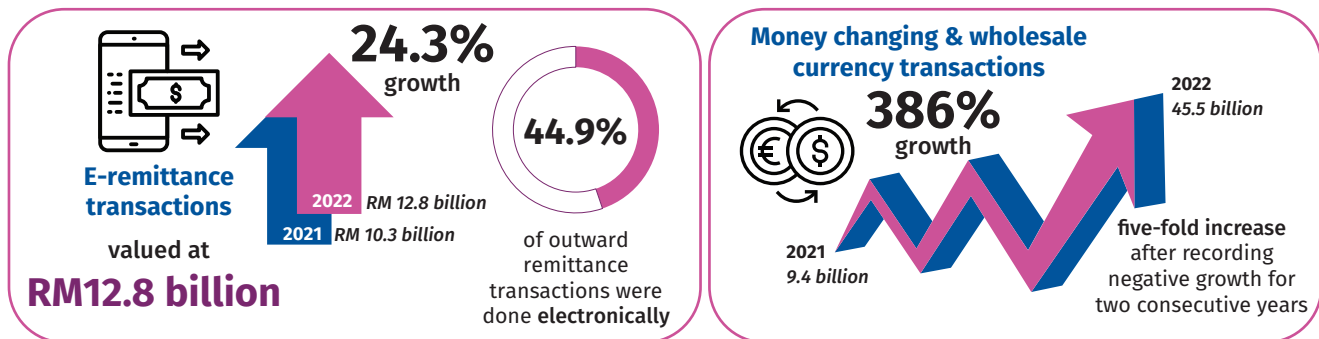
Diagram 1: Snapshot of Digital Payments



<sup>1</sup> Network based e-money which allows users to make transactions via the Internet, mobile phones or other electronic devices

Source: Bank Negara Malaysia

Diagram 2: Snapshot of Money Services Business



Source: Bank Negara Malaysia

## Promoting Safe and Efficient Payment and Remittance Services

### **Fostering a more vibrant payment ecosystem**

The Bank took steps to ensure the regulatory framework supports the development of a vibrant payment ecosystem that is reliable, efficient and innovative.

During the year, we enhanced requirements under the Payment Cards Framework Policy Document<sup>4</sup>. These changes were introduced to encourage wider acceptance of card payments among businesses/merchants:

- (i) The interchange fee<sup>5</sup> ceiling was revised to reflect current processing costs incurred by payment service providers. The maximum interchange fees that may be charged by card issuers aim to ensure that card acceptance remains affordable for merchants, while reasonably covering the direct costs incurred by payment service providers in providing card payment facilities.
- (ii) Merchants can now choose the types of payment card they wish to accept. Payment service providers can no longer require merchants to accept all cards issued by them. This will enable merchants to better manage their costs as

each payment card is subject to different cost structures.

- (iii) Cardholders will benefit from greater transparency on surcharging<sup>6</sup> practices and the minimum transaction amount that may be applied to card payments. As these practices are set by the industry<sup>7</sup>, scheme operators, issuers and acquirers are required to improve their respective disclosures, as well as channels provided for cardholders to address complaints over any unfair practices by merchants. In response, the industry has taken steps to increase public awareness and to educate cardholders on their respective rights and the appropriate complaint channels.

With growing innovation in the card space, cardholders can now also authenticate payment card transactions securely via personal devices (such as their mobile phone or smartwatch). This allows for a speedier alternative to entering the customer's Personal Identification Number (PIN) on a payment terminal whilst ensuring appropriate safeguards are in place in line with prudential requirements set by the Bank.



*Contactless payment allows customers to pay by scanning their smartwatch with passcode verification on a payment terminal.*

<sup>4</sup> Applicable for payment cards, which include debit, credit and prepaid cards.

<sup>5</sup> Interchange fee is the fee payable between the merchant's bank and the cardholder's bank to compensate the cardholder's bank for costs incurred in facilitating a payment card transaction.

<sup>6</sup> A fee imposed by a merchant on a cardholder in addition to the purchase amount for a transaction made using a payment card.

<sup>7</sup> Surcharging and minimum transaction amount are subject to the rules of the scheme operators.

For mobile payments, we observed increased collaborations between e-money issuers (EMIs)<sup>8</sup> and other financial service providers. Customers can now access more financial products on e-wallet applications or platforms – such as remittance, microinsurance, microfinancing and micro-investments. These strategic partnerships are expected to enhance the value proposition of EMIs, and provide broader access to financial solutions for the public, including currently unserved and underserved customer segments.

Since 2020, the Bank has enabled non-bank RSPs to conduct Know-Your-Customer verifications electronically (e-KYC). This has helped overcome a key barrier to the use of formal remittance channels as customers do not need to physically visit the premises of RSPs. It has also enabled RSPs to enhance their digital services offerings. Since then, various new products and business-to-business (B2B) value-added services have been introduced by non-bank RSPs in response to increasing competition (Diagram 3) - benefitting consumers through greater choice, more customised services and competitive costs.

## Ensuring Safe and Resilient Payment Services

### **Policy responses to emerging risks and market development**

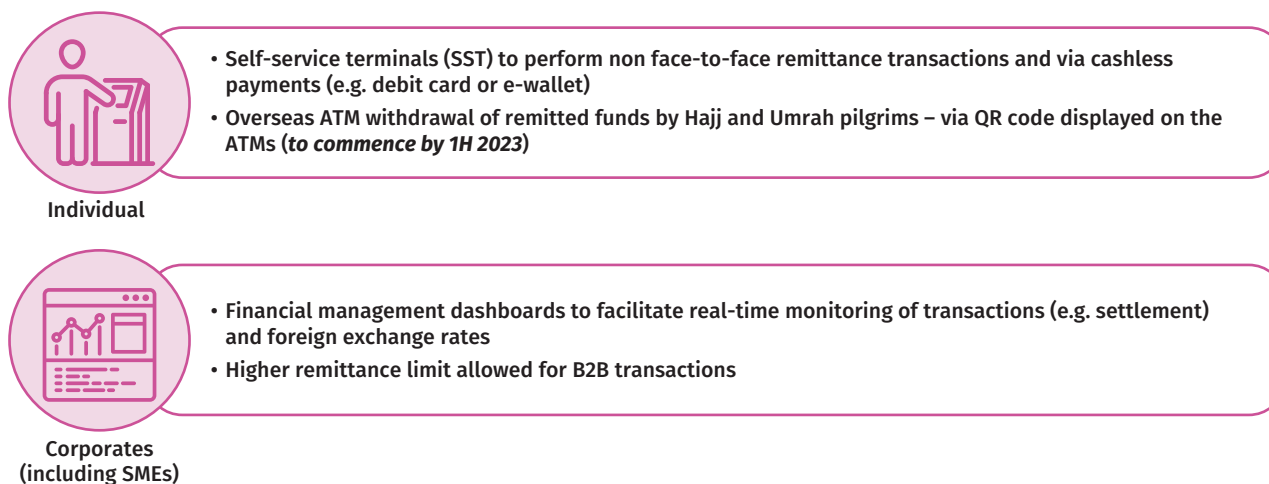
The Bank issued four policy documents in 2022 to strengthen the payment and MSB ecosystem. These policies served to further enhance the safety and efficiency of payment services, strengthen user protection and preserve public confidence. Highlights from these policy issuances are summarised in Diagram 4.

### **Enhancing oversight on payment services**

Both RENTAS<sup>9</sup> (Malaysia’s wholesale payment systems) and the major retail payment systems operated by Payments Network Malaysia Sdn. Bhd. (PayNet) remained resilient and recorded a high level of system availability throughout 2022. As part of on-going efforts to ensure resiliency, we undertook several key initiatives to further strengthen our supervisory arrangements. This included-

- Streamlining expectations on RENTAS with risk management standards<sup>10</sup> applicable to other financial market infrastructures (FMI).<sup>11</sup>

**Diagram 3: New Digital Products Offered in the Remittance Space**



Source: Bank Negara Malaysia

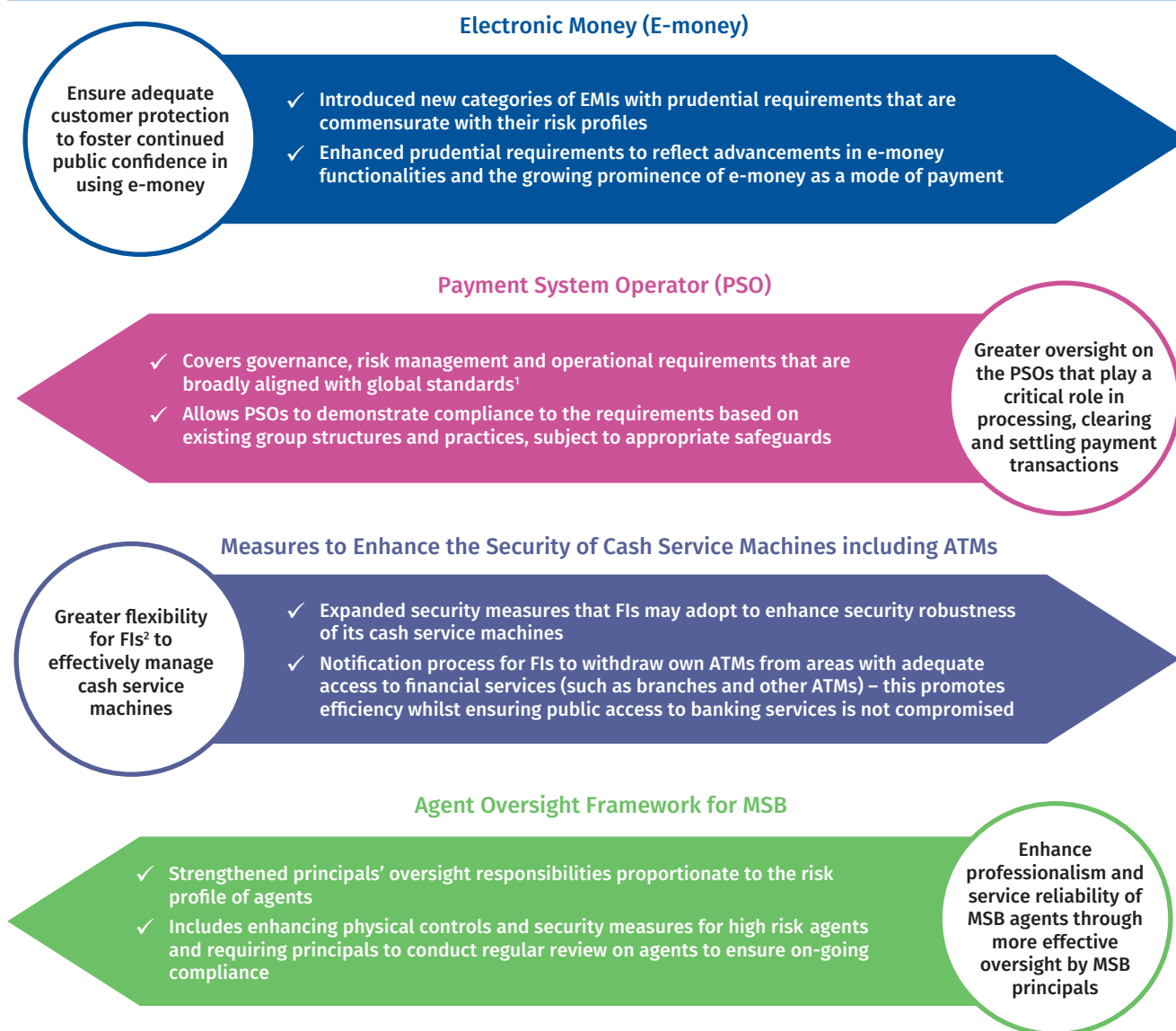
<sup>8</sup> To date, more than 30% EMIs were approved to cross-sell financial products.

<sup>9</sup> Real-time Electronic Transfer of Funds and Securities System.

<sup>10</sup> These include policy documents on Risk Management in Technology, Business Continuity Management and Payment System Operator.

<sup>11</sup> The Bank owns, operates and provides the infrastructure and technology support for RENTAS since 1 July 2021. Under the Principles for Financial Market Infrastructures (PFMI) issued by the Committee on Payments and Market Infrastructures (CPMI) and the International Organization of Securities Commissions (IOSCO), these principles may be applied differently in exceptional cases where the FMIs are operated by the central bank due to requirements specified in relevant laws, regulations, or policy.

Diagram 4: Policy Documents Issued in 2022



<sup>1</sup> Principles for Financial Market Infrastructures (PFMI) by the Committee on Payments and Market Infrastructures (CPMI) and the International Organization of Securities Commissions (IOSCO)

<sup>2</sup> Financial institutions

Source: Bank Negara Malaysia

- Prescribing the Real-time Retail Payments Platform (RPP)<sup>12</sup> as a designated payment system effective from 10 February 2023 in view of its market share and systemic importance. The designation provides the Bank with the necessary legislative powers under the Financial Services Act 2013 and Islamic Financial Services Act 2013 to take actions where necessary to strengthen the RPP’s resilience to financial shocks and operational disruptions. This may include issuing directives to RPP participants

- and assuming control over the operations of the RPP under exceptional circumstances.
- Enhancing collaborative efforts with Perbadanan Insurans Deposit Malaysia (PIDM) and PayNet. Joint efforts were undertaken to establish coordination arrangements that would preserve continued access to key FMIs in order to enable the orderly resolution of troubled financial institutions.

Our supervisory oversight and thematic reviews were focused on three key areas, namely, the adequacy of cybersecurity controls, effective management of critical service providers (CSPs) and effectiveness of business continuity management (BCM). Control

<sup>12</sup> RPP is a shared payment infrastructure operated by PayNet that facilitates instant and seamless payments between participating bank and e-money accounts.

measures by major PSOs were observed to be adequate to ensure high system availability. Major PSOs also continued to strengthen their internal controls, with various initiatives completed as part of a broader roadmap to enhance FMIs' cyber resilience. Such PSOs also continue to enhance their policies and procedures for stronger management of CSPs, in line with recommendations by the CPMI.<sup>13</sup>

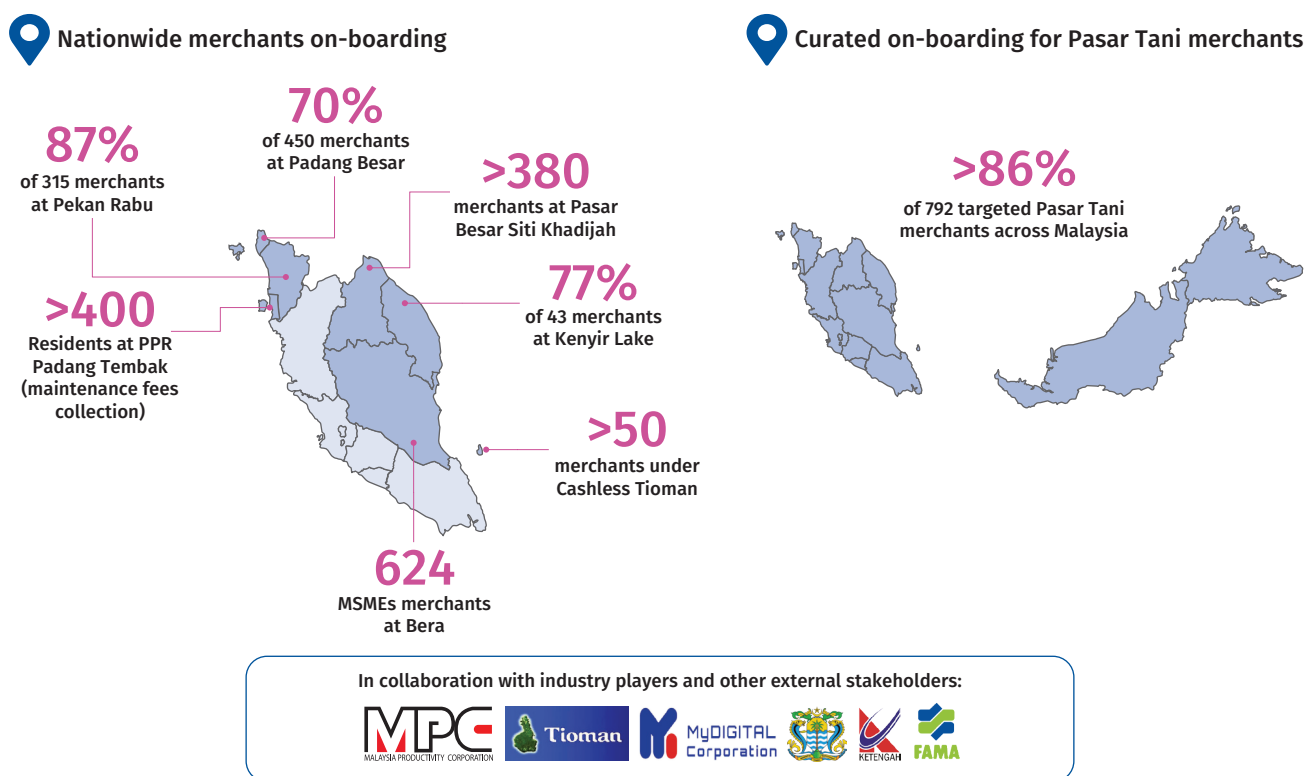
The risk and complexities of the payment services landscape have grown with the rapid expansion of retail and cross-border payments. This warranted greater focus on efforts to preserve the safety and integrity of the payment and MSB industries. For instance, product offerings by EMIs, merchant acquirers and MSB licensees may be a conduit for illegal activities including fraud, money laundering and terrorism financing (ML/TF).<sup>14</sup> In 2022, we issued 48 supervisory letters to licensed MSB and approved payment entities. We also closely engaged with

the industry to strengthen their compliance level to address gaps in supervisory expectations. For serious contraventions, we took more punitive actions which resulted in nine entities having their authorisations to conduct business revoked by the Bank during the year.

## Fostering Greater Public Awareness and Confidence in Payment Services

The Bank remains focused on initiatives to increase digital payment acceptance in Malaysia by preserving confidence in the safety and convenience of making digital payments. These were undertaken in collaboration with payment service providers, federal and local authorities, and stakeholders across various economic sectors – such as retail, education and tourism sectors (Diagram 5).

Diagram 5: Expanded e-Payment Adoption through On-Boarding of New Merchants



Source: Bank Negara Malaysia

<sup>13</sup> Annex F of the Principles for Financial Market Infrastructures published by CPMI outlines five oversight expectations for CSPs i.e., risk identification and management, information security, reliability and resilience, technology planning and communication with users.  
<sup>14</sup> Further details on the sectoral assessment can be found in the BNM Annual Report 2022, Chapter 1.7 Maintaining Financial Integrity.

## Promoting Safe and Efficient Payment and Remittance Services

To complement our existing on-the-ground outreach programmes for targeted communities, the Bank also intensified the use of social media to reach out to the masses to promote the safe use of e-payments. Six awareness videos in local dialects were produced to promote the safe use of

e-payments in daily activities. With the reopening of borders and return of international tourism, the public was reminded to only transact with authorised money changers when exchanging currencies and how to identify authorised money changers (Diagram 6).



Videos titled 'Pasar Pagi pun dah Guna QR', 'Mudahnya dengan Kad Debit', and 'Transfer kan Senang' are some of the examples of videos that were uploaded on the Bank's YouTube channel and Sahabat Pantai Timur's Facebook page.

### Diagram 6: Ways to Identify Authorised Money Changers

**Exchanging money for overseas travel?**

BANK NEGARA MALAYSIA  
CENTRAL BANK OF MALAYSIA

**Only exchange money at authorised money changers!**

Authorised money changers must display:

- Licence issued by Bank Negara Malaysia, **or**
- Certificate of appointment issued by the licensed principal provider; **and**
- Malaysian Association of Money Services Business (MAMSB) membership logo

Licensees

Agents

**Don't fall victim to illegal money changers!**

BANK NEGARA MALAYSIA  
CENTRAL BANK OF MALAYSIA

Source: Bank Negara Malaysia

In conjunction with the Financial Literacy Month (FLM) in October 2022, the Bank launched the e-Duit campaign<sup>15</sup> in collaboration with the industry to encourage greater use of e-payments by increasing

awareness and educating the public on safe use. This is done through outreach programmes and educational campaigns that highlight the benefits and responsible use of digital payments – secure, simple and swift.



*e-Duit campaign launch by Deputy Governor Datuk Abdul Rasheed Ghaffour at exhibition held at IPC Shopping Centre Mutiara Damansara, in conjunction with the closing of FLM 2022*

<sup>15</sup> Further details on the campaign can be found in the Bank's website: <https://www.bnm.gov.my/eduit>

## Empowering Communities with Digital Financial Services



The rain has been pouring since last week. Cikgu Har feels restless. She is running out of cash to pay for necessities. She is thinking whether to take the boat ride to Kuala Terengganu in this weather to withdraw cash or accept an offer for someone to withdraw money for her, a practice by some other residents in Pulau Redang.

But she has heard complaints. Hiring someone to withdraw money would cost a lot and sometimes the person withdraws more than what is requested. Cikgu Har also knows that she should not give her ATM card or share her personal identification number (PIN) with anyone. Doing so allows them to access her account.



In another part of Pulau Redang, Kak Zura, an owner of a small grocery store, is also worried. She has been receiving torn and spoiled notes that are not fit for use. She must pay her supplier later in the evening, but she does not have enough cash in hand. She is also afraid of losing her cash given the long walk from her store to the jetty, especially under the watchful gaze of strangers.

### Redang: A Cash-less Island

These real-life circumstances motivated the locals in Pulau Redang to embrace digital payments and transformed this tourist hotspot into a cash-less island. The stories also illustrate how adoption of e-payment eased day-to-day payment activities, improved livelihoods, and enhanced efficiency of payments especially in less accessible areas.

Given the challenges faced by the residents of Pulau Redang, the “Bayo Dok Gune Pitih” (pay without using cash) programme was introduced on the island since 2018. It is a collaboration between the Bank, the Terengganu state government and financial industry players. To encourage greater adoption of e-payments among residents and local businesses, a three-pronged approach was adopted to ensure sustainable and inclusive digital adoption across the island:

- a) ensuring the infrastructure is in place to facilitate customer on-boarding;
- b) enhancing digital and financial literacy to foster the safe and effective use of e-payment in order to optimise its benefits; and
- c) encouraging wider adoption and confidence in e-payments by leveraging on local community leaders and various stakeholders.

#### Diagram 1: Three-pronged Approach Adopted to Promote e-Payment in Pulau Redang

##### Infrastructure readiness



- Payment players namely PayNet, Maybank and Hong Leong Bank worked with the Bank to provide support and incentives including monetary benefits during on-boarding and low e-payment acceptance costs for local businesses. Around 50 card terminals and QR codes were also deployed to enable card and subsequently, DuitNow QR payments on the island.
- Prior to the programme, authorities erected network towers in Pulau Redang, thus supporting more stable internet connectivity throughout the island. This enabled the smooth roll-out and use of e-payments.

##### Digital & financial literacy



- Multiple engagement sessions were conducted to familiarise the local community with the e-payment infrastructure and to educate them on using e-payment in a safe and secure manner.

##### Support from community leaders



- Community leaders, officers from local authorities and representatives from the member of parliament’s office actively engaged local communities to familiarise and encourage them on the safe use and benefits of e-payment.
- Activities to get closer to the local community such as the cleaning of suraus and community halls as well as the donation of goods amid the COVID-19 pandemic also helped gain further support from the locals in Pulau Redang on the programme.

Source: Bank Negara Malaysia

The outcomes of these efforts in Pulau Redang are clearly visible today. 73% of small merchants and businesses across the island have adopted e-payment while most of the other communities are in the midst of migrating as well. Of note, about RM65,000 worth of debit card transactions are made via merchants on this island each month, more than double the amount recorded when the initiative was first introduced.



*Cikgu Har no longer worries about access to cash as she is now able to use e-payment to pay for purchases. More importantly, she is also relieved that she does not have to share her personal banking information with anyone. Now, she always has direct access to money in her account for use.*



*Meanwhile for Kak Zura, the shift to e-payment not only provides convenience, it also protects her from potential financial losses caused by spoiled or misplaced notes. Kak Zura no longer needs to pay her supplier in cash at the jetty. She can now pay from the comfort of her home. She is also able to keep a proper record of her sales transactions through her bank statement. The records will also help Kak Zura obtain financing from financial institutions to grow her business.*

The adoption of e-payment in Pulau Redang for safer and more efficient transactions provides a useful blueprint for others to follow. Similar initiatives and collaboration have been pursued to digitalise payments in other places across Malaysia such as Pasar Besar Siti Khadijah in Kota Bharu and the wet markets in Pulau Pinang. As this trend continues throughout Malaysia, more will benefit from increased efficiency, convenience and security.

**Diagram 2: Video ‘Redang: Sebuah Pulau Inklusif’ Documents the Success of this Outreach Programme<sup>1</sup>**



Source: Bank Negara Malaysia

<sup>1</sup> The video can be viewed via the link here: <https://www.youtube.com/watch?v=tGiOArZL-Cs>.

## e-Duit Campaign

The success of the structured approach taken in Redang inspired the launch of a nation-wide e-payment campaign, **e-Duit!: Selamat, Senang, Segera** by the Bank and financial industry in October 2022. This campaign aims to coordinate e-payment initiatives by public and private sectors nationwide. This is with the view to sustain the positive e-payment growth trends already observed towards achieving the target of more than 15% CAGR of e-payment transactions set in the Financial Sector Blueprint 2022-2026 (Blueprint).

Diagram 3: e-Duit Logo



Source: Bank Negara Malaysia

A key focus of the e-Duit campaign will be to encourage good cybersecurity precautionary measures. Education on cyber-security measures is important and will remain a permanent, central feature in the campaign, as the strongest defence against financial fraud. A recent Bank survey<sup>2</sup> revealed that four out of ten respondents would be willing to share their bank account passwords with family and close friends. Additionally, almost two thirds of respondents do not pay attention to the security features of bank websites when performing online banking transactions. Under the e-Duit campaign, we will double down on efforts to teach and raise awareness among consumers on behaviours that can protect them against fraud, such as never sharing passwords or downloading malware-compromised apps from unofficial application stores. Further details on the safe usage of digital financial services can be found in the Annual Report 2022 feature article “Let’s Go Digital Confidently”<sup>3</sup>.

Diagram 4: Benefits of e-Payment

### Secure



- Reduce potential losses due to robbery or theft from physical cash handling / transfers
- Security feature of e-payment instruments that can be customised to one’s risk appetite or use patterns provides added security
- High security standards imposed on e-payment operators and monitored closely by the Bank

### Simple



- Payments can be made with a simple wave, tap or scan
- Automatic deduction / reload facilities available for better customer convenience
- Payment is recorded for easy future reference

### Swift



- Quick payment service at any time and from anywhere across the globe
- No need to queue to make payment

Source: Bank Negara Malaysia

<sup>2</sup> The Financial Capability and Inclusion Demand Side Survey 2021 ([https://www.bnm.gov.my/documents/20124/8440087/fsr22h1\\_en\\_box1.pdf](https://www.bnm.gov.my/documents/20124/8440087/fsr22h1_en_box1.pdf))

<sup>3</sup> Feature Article “Let’s Go Digital Confidently”

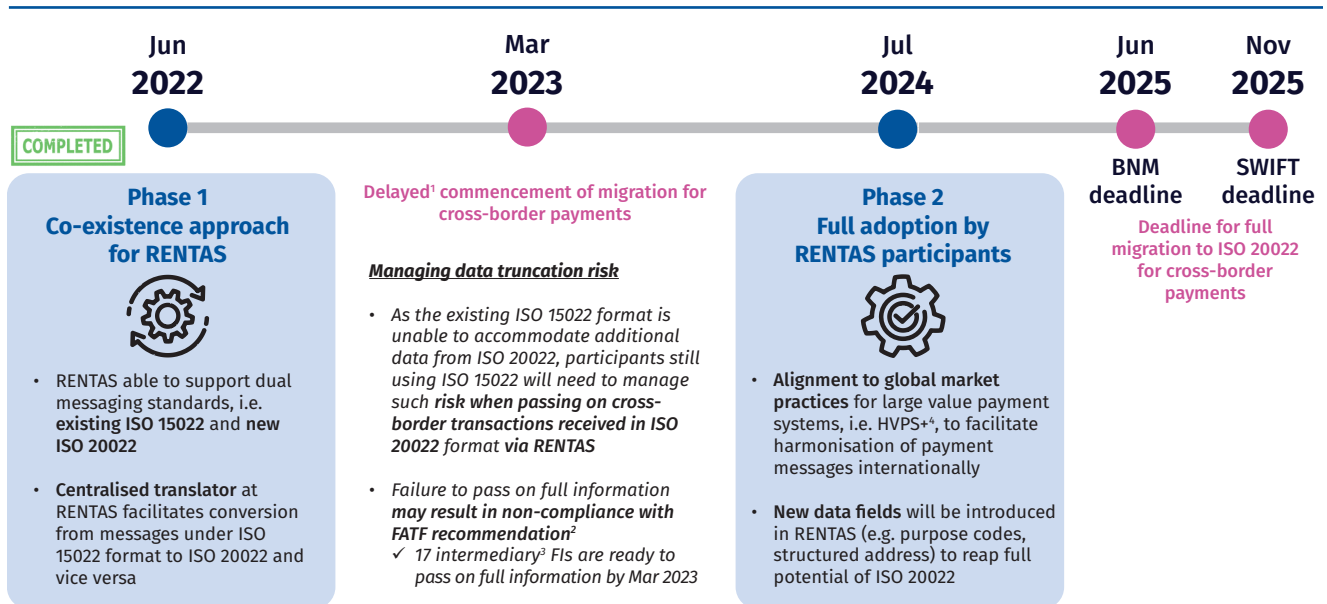
Throughout the multi-year campaign which will run until 2026, coordinated industry efforts will be ramped up to on-board new businesses, and curated education initiatives such as e-DuitDesa and e-DuitKampus will be carried out across the country to improve digital and financial literacy among financial consumers. An e-DuitDay, a designated day of the week on which the public will be encouraged to make all payments using digital means, is also being explored. During the e-DuitDay, businesses will be enlisted to encourage customers to use e-payment methods through awareness and promotional activities as well as benefit programmes tied to the use of e-payments.

## Futureproofing Key Payment Infrastructures

The financial industry remains on track to migrate fully to the new ISO 20022 messaging standard<sup>16</sup> for both domestic and cross-border payments (Diagram 7). ISO 20022 adoption will enhance payment efficiency, strengthen risk management and offer better value-added solutions to customers. Since June 2022, RENTAS has been equipped with a centralised translator to facilitate message conversion between the existing ISO 15022 standard and the new ISO 20022 standard. Individual RENTAS participants are on track to implement ISO 20022 for

domestic transactions. Around 30% of participants have already completed their migration ahead of the domestic July 2024 deadline for full adoption of ISO 20022 by RENTAS participants, which means they can already receive incoming and send outgoing ISO 20022 messages via RENTAS. For cross-border payments, SWIFT has announced that the commencement of ISO 20022 has been delayed to March 2023.<sup>17</sup> The Bank has set an earlier domestic June 2025 deadline for cross-border payments to minimise any risk of delays in meeting the global timeline (November 2025) for full migration. This in turn will reduce risks of disruptions to cross-border payment transactions.

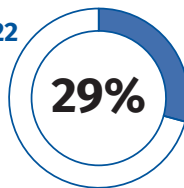
Diagram 7: Progress on ISO 20022 Migration



### Progress by RENTAS participants in 2022

19 out of 65 participants

have successfully migrated, while the remaining are progressing before the 2024 deadline



- Domestic payment
- Cross-border payment

<sup>1</sup> From November 2022 to March 2023

<sup>2</sup> Potential non-compliance with Financial Action Taskforce (FATF) Recommendation 16, where it requires FIs to include required and accurate sender and beneficiary information, and ensure that all information remain available throughout the payment chain to create an AML/CFT audit trail

<sup>3</sup> Refers to local FI that receives a cross-border payment from a foreign FI and subsequently passes it on to another local FI to be credited into beneficiary's account via RENTAS

<sup>4</sup> A global market practice for ISO 20022 messaging standards to harmonise usage of ISO 20022 for large value payment systems

Source: Bank Negara Malaysia

<sup>16</sup> ISO 20022 is a new internationally recognised messaging standard for the financial industry with enhanced data capabilities, structured messaging format and flexibility to adapt to new technologies.

<sup>17</sup> In October 2022, SWIFT announced that it had agreed to delay the commencement of its ISO 20022 migration for cross-border payments from November 2022 to March 2023, following a request by the SWIFT user community.

The Bank also advanced plans to modernise RENTAS as part of a multi-year project envisaged under the Blueprint. Key initiatives will be pursued to further:

- strengthen resilience;
- promote interoperability and efficiency;
- facilitate competition and innovation; and
- enhance user functionalities.

Industry engagements also surfaced pain points in current processes<sup>18</sup>, as well as suggestions for system and service enhancements. This will guide the development of the RENTAS modernisation roadmap. Financial institutions were generally supportive of proposals for a holistic review of the existing system infrastructure, enhancements to data analytics and reporting capabilities, as well as strengthened intraday liquidity management.

These proposals along with feedback from ongoing industry engagements will also inform our work under Phase 2 of central bank digital currency (CBDC) exploration<sup>19</sup> project to study the potential of CBDC and distributed ledger technology (DLT)<sup>20</sup> to futureproof RENTAS. Our aim is to ascertain how these technologies could potentially alleviate the issues raised by the industry such as reducing manual compliance processes, streamlining the trade confirmation process using DLT and smart contracts, as well as explore new use cases such as asset tokenisation.

**Facilitating responsible innovation while managing emerging risks**

To manage potential risks emerging from digital assets in Malaysia, the Bank – through the Digital Currency Research Hub – directed its focus on the following key areas throughout 2022:

- assess the potential risks of digital assets to the Bank’s mandates;
- scale up internal capacity and understanding on digital assets;
- strengthen surveillance capabilities; and
- elevate public awareness.

Our assessments revealed that spillovers from the digital asset market to the financial system so far

remain well-contained given limited interlinkages.<sup>21</sup> We stepped up engagements with key stakeholders such as digital asset players and financial institutions to obtain more granular market insights and data. These engagements also allowed us to better understand future plans of our banks in the digital asset space. The Bank continued our collaboration with the Securities Commission to identify and address any potential risks to financial stability arising from developments surrounding global and domestic digital asset market activities. We also held knowledge-sharing sessions, mainly targeted at youths, to raise awareness on digital assets and emerging payment innovations such as CBDC.



Speaker series with Perdana Fellow Alumni Association

**SPECIAL EPISODE**  
 First Ever Collaborative Podcast with BNM :  
**Calibrating Equilibrium - Balancing Risks and Opportunities for Digital Assets**

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Podcast session on the use of digital assets in collaboration with the Association of Malaysian Economics Undergraduates (AMEU)

<sup>18</sup> These include the level of manual intervention required in regulatory compliance checking and pre-settlement confirmation for securities trades.

<sup>19</sup> This is part of the multi-year CBDC exploration starting from Project Dunbar, led by BIS Innovation Hub Singapore alongside several central bank partners, which seeks to test the use of wholesale CBDC via a shared multi-CBDC platform.

<sup>20</sup> DLT is a means of saving information through a distributed ledger, i.e. a repeated digital copy of data available at multiple locations (FSB (2022, p.25)).

<sup>21</sup> Refer to BNM Financial Stability Review: First Half 2022 Box Article titled 'The State of Play of Digital Assets in Malaysia and Linkages to Financial Stability'.

### ***Faster, cheaper and more convenient cross-border payments***

In 2022, the Bank intensified efforts to bring about faster, cheaper and more convenient cross-border payment services. These initiatives are aligned with global targets set under the Group of 20 (G20) Roadmap for Enhancing Cross-border Payments.<sup>22</sup> Notable progress has been made to link Malaysia's instant payment system (IPS) with other IPS. To date, we have enabled payment linkages with Indonesia, Singapore and Thailand

– countries where Malaysia has strong economic ties in terms of trade, tourism and remittances. Efforts are also underway to establish payment linkages with the Philippines. With these payment linkages, consumers will be able to conduct cross-border QR payments and person-to-person (P2P) fund transfers at lower cost, higher speed and with greater transparency. These efforts support ASEAN's shared aspiration for a more interconnected payment systems, and greater financial and economic integration.

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<sup>22</sup> The G20 Roadmap is part of the initiative by the Financial Stability Board (FSB) to identify areas where further work is needed to improve cross-border payment systems and remove unnecessary barriers.





## Cross-Border Payment Linkages – Project Nexus and the Push for a Multilateral Approach

### Making cross-border retail payments and fund transfers faster, cheaper and more transparent

Making payments or sending money domestically within Malaysia has never been easier. Since the roll-out of our IPS in December 2018, users can make domestic retail payments just by scanning a QR code at merchants using DuitNow QR, or send money instantly via DuitNow Transfer simply by keying-in his or her mobile number. However, making payments overseas and sending money to another country remains a hassle. The fees and exchange rate could be high, not transparent, and at times, the recipient may only receive the money after a few days.

To mimic the benefits of faster, cheaper and more seamless payments that we currently enjoy domestically in the cross-border payment space, the Bank has been working on linking our IPS with other IPSs in several neighbouring countries. To date, we have established bilateral cross-border payment linkages for QR payments with Thailand, Indonesia and Singapore. This means that Malaysians travelling to these countries can make instant retail payments just by scanning QR codes displayed at participating merchants in these countries<sup>1</sup>, and vice versa. Complementary work is also underway to enable P2P transfers between these countries (Diagram 1). This would enable a sender to transfer funds to a recipient in the other countries instantly simply by using his or her mobile or national identification numbers. These efforts have collectively contributed towards increased payment connectivity in ASEAN with nine live linkages<sup>2</sup> already operational.

Diagram 1: Status of Bilateral Linkages with Malaysia

Partner countries	Cross border QR payments	Cross border P2P fund transfers
Thailand 	Live	Under development
Indonesia 	Live	Under discussion
Singapore 	Live <sup>3</sup>	Under development
Philippines 	Under development	Under discussion

Source: Bank Negara Malaysia

<sup>1</sup> Further details on the bilateral payment linkages can be found in the Annual Report 2021 spotlight article on 'Real-Time Payment System Linkages for Efficient Cross-Border Payments'.

<sup>2</sup> Seven cross-border QR payments: Cambodia-Thailand, Indonesia-Malaysia, Indonesia-Thailand, Malaysia-Thailand, Malaysia-Singapore, Thailand-Singapore, Thailand-Vietnam.

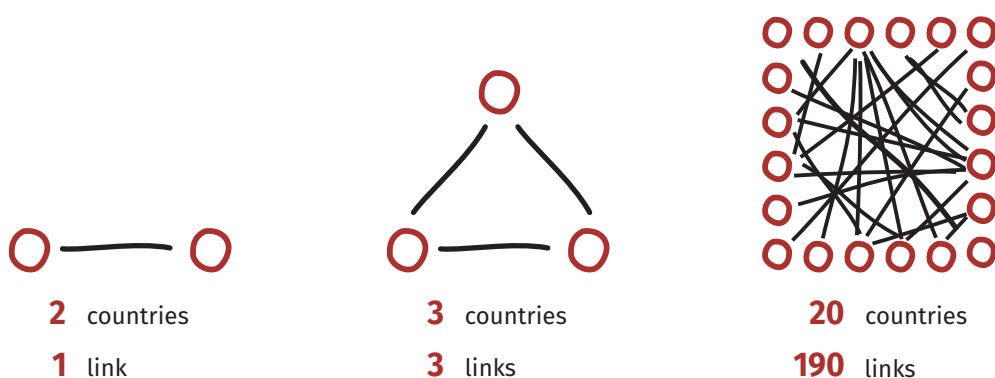
Two P2P fund transfers: Cambodia-Malaysia, Singapore-Thailand.

<sup>3</sup> To go live on 31 March 2023.

### A multilateral approach can address challenges in connecting IPS bilaterally

Given the region’s experience in building these linkages and their clear benefits, there has been growing interest from other countries to establish new bilateral payment linkages with ASEAN countries. However, a bilateral linkage with many different countries is highly inefficient (Diagram 2) for several reasons. Firstly, it can take significant time and resources to tailor each bilateral linkage to suit local infrastructure and requirements. Replicating the infrastructure across multiple countries can also be costly. Secondly, each bilateral linkage involves negotiations among many parties including the central banks, IPS operators, banks and other payment service providers to address operational matters such as user experience and payment settlement between banks in both countries. Dedicated resources are also needed to develop and test newly built systems.

**Diagram 2: Scaling Up Bilateral Payment Linkages is Challenging due to the Amount of Effort and Resources Needed to Develop Each Linkage**



Source: Bank for International Settlements (BIS)

Recognising the challenge in scaling up bilateral payment linkages, the Bank for International Settlements Innovation Hub (BISIH) in Singapore has developed a blueprint<sup>4</sup> for multilateral cross-border payment connectivity. Known as Project Nexus, the Bank, BISIH, PayNet as well as central banks and IPS operators in Singapore and Italy undertook a one-year experiment to test if such a connectivity model is feasible. The experiment, which was completed in December 2022, demonstrated that a multilateral model for connecting IPSs is technically feasible. This successful Nexus solution included a test model (or Nexus gateway) and draft participant rules (or Nexus scheme). The gateway acts as a central platform for IPSs to connect to and manage instant cross-border payments and fund transfers and payment-related processes such as payment messaging, currency conversion, and compliance screening. The scheme outlines the roles and responsibilities of all participants in the Nexus solution. These include the IPS operators and payment services providers. It also outlines key operational processes of the Nexus model. During the experiment, cross-border payments were successfully credited into a beneficiary’s account within 60 seconds.

Despite the experiment showing that the Nexus solution is technically feasible, there are other factors that still need to be considered before it can be implemented in the real-world. One example is the governance arrangement for the entity that will eventually manage and operate the Nexus solution. This would require, among others, identifying the right structure, composition and voting mechanism for its board of directors that would appropriately represent the interests of various parties, while ensuring that decisions are made efficiently. Other factors include developing a viable business model for participating banks and other payment services providers, and establishing an appropriate supervisory oversight arrangement to ensure the solution remains safe and resilient.

*(Detailed findings can be found in the Project Nexus report<sup>5</sup>)*

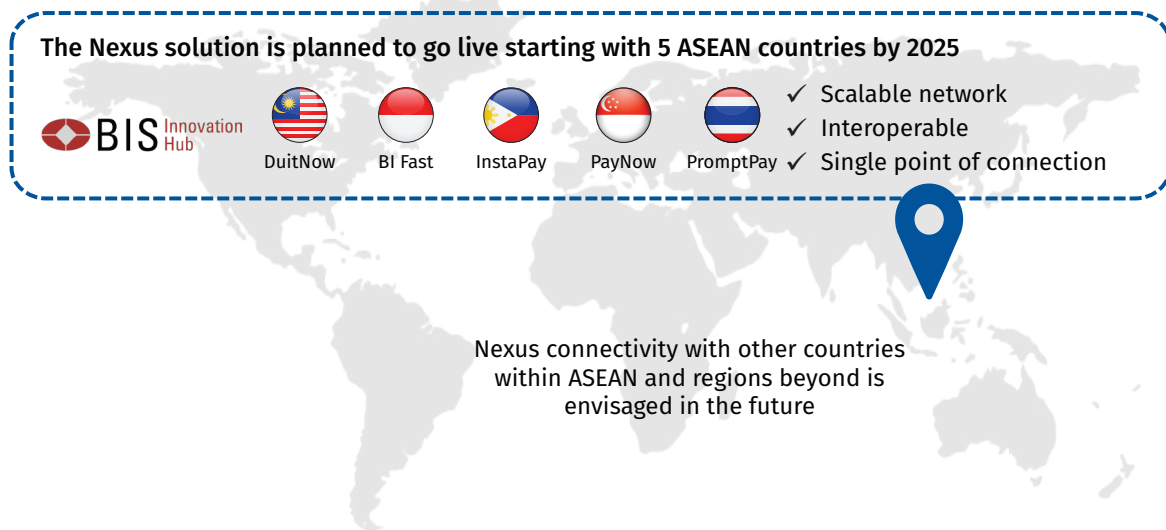
<sup>4</sup> <https://www.bis.org/about/bisih/topics/fmis/nexus.htm>.

<sup>5</sup> <https://www.bis.org/publ/othp62.pdf>.

### Bringing Nexus to the real world, with ASEAN as the ‘first-mover’

Given the experience with bilateral payment linkages in the region, a push for multilateral payment connectivity is a natural next step for ASEAN. To realise this vision, the Bank has signed a Memorandum of Understanding (MoU) on Regional Payment Connectivity with the central banks of Indonesia, Philippines, Singapore and Thailand during the G20 Summit in Bali in November 2022. The five countries will participate in the next phase of Project Nexus which aims to translate the current Nexus solution into an operationally and commercially viable model by 2025. This project has tremendous potential for the region. Consumers would be able to enjoy cheaper, faster and more transparent payment and fund transfers among the participating countries in the future. It can also strengthen intra-regional trade and economic cooperation, and spur greater innovation in the payments space. Ultimately, it is envisaged to set the global benchmark for next-generation payment infrastructure that can be used by all, for cheaper and more transparent cross-border payments (Diagram 3).

**Diagram 3: Multilateral Payments Connectivity between 5 ASEAN Countries and Beyond**



Source: Bank Negara Malaysia



MoU on Regional Payment Connectivity was signed by the Governors of the five central banks (from left: Bank of Thailand, Monetary Authority of Singapore, Bank Indonesia, Bank Negara Malaysia, and Bangko Sentral ng Pilipinas)

Source: Bank Indonesia

## Going Forward

In 2023, the Bank will continue to work on ensuring that key payment and remittance services remain safe, efficient, and reliable. This will be guided by the objectives embedded within the Blueprint.

The Bank is committed to futureproofing the country's payment infrastructure to meet the evolving needs

of the financial system and broader economy. We will closely monitor market developments and undertake policy or supervisory interventions as appropriate to mitigate emerging risks. We will also continue to strengthen our collaboration with public and private sector stakeholders. This is important to elevate public awareness on the benefits and risks of emerging payments, as well as to promote responsible innovation.