

# Promoting Safe and Efficient Payment and Remittance Services

Bank Negara Malaysia (BNM) remains committed to ensuring a resilient and conducive payment ecosystem that meets the evolving needs of Malaysians.

In 2023, BNM continued to drive greater innovation and efficiency in Malaysia's payment systems and the money services business (MSB)<sup>1</sup> industry, while preserving the stability and public confidence in payment services. In doing so, we took steps to increase electronic payment (e-payment) adoption. These efforts have sustained the strong growth of e-payment adoption among households and businesses. We also devoted significant resources towards futureproofing key payment infrastructures and enhancing our regulatory and supervisory framework.

## Sustaining Greater Digitalisation of Payment and MSB Services

**E-payment adoption continued to increase among Malaysians, rising from 9.3 billion transactions in 2022 to 11.5 billion in 2023.**

We are on track to achieve the Financial Sector Blueprint (Blueprint) target of more than 15% compounded annual growth of e-payment transaction per capita between 2022 and 2026. This is on the back of the 20% growth to 343 transactions per capita in 2023 (2022: 285). E-payment growth was supported by consumption activity as total value of selected retail e-payment transactions<sup>2</sup> grew by 17% to reach RM592 billion. This was complemented by collective public and private sector efforts to increase e-payment adoption.

Credit transfer<sup>3</sup> services form the largest share of e-payment transactions with a 43% share. Among the many credit transfer services, DuitNow Transfer continued to be the preferred option, sustaining a high annual growth rate of 32% (2022: 26%) and a 39% market share of credit transfer services.

In 2023, electronic money (e-money) transactions increased by 26%, with 59% of transactions stemming from e-wallet usage, and the remainder from card-based e-money. In line with the wide use of e-money for small value toll or transit payments, the average size of e-money transactions remained low at around RM27.

Debit card transactions constitute 66% of the total payment card transactions after first surpassing the number of credit card transactions in 2020 during the pandemic. In 2023, debit card usage recorded a growth of 33%, which is double that of credit cards (15%). Contactless card adoption has also become further entrenched, with use of contactless payments more than doubling its share (77%) as compared to pre-pandemic levels (2019: 32%).

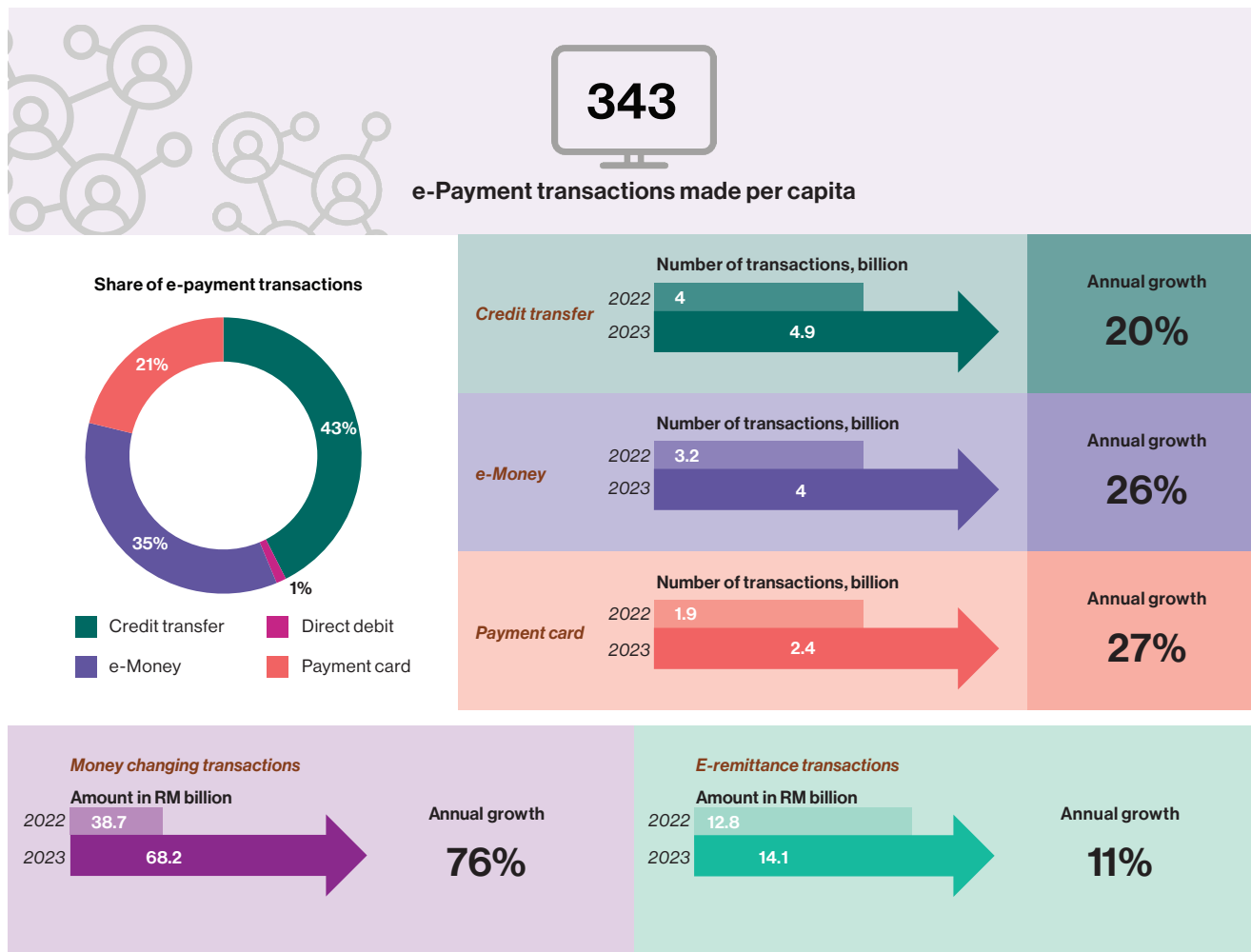
Acceptance of e-payment transactions among businesses, especially among small-sized enterprises, continued to gain traction. In particular, DuitNow QR transactions have seen significant take-up since its introduction. This may be driven by greater familiarity with the DuitNow QR service, popularity with customers due to its convenience and its lower cost for merchants relative to other e-payment alternatives (feature article on 'DuitNow QR: Fostering Inclusive Digital Payments').

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

<sup>2</sup> Includes e-payment transactions such as payment card and e-money purchase transactions as well as Financial Process Exchange (FPX) transactions. FPX is commonly used for e-commerce purchases.

<sup>3</sup> Credit transfer services refer to payment systems that facilitate fund transfers between accounts, such as DuitNow Transfer, Interbank GIRO, Real Time Electronic Transfer of Funds and Securities System (RENTAS) third-party transfer and intrabank transfer.

Diagram 1: Snapshot of e-Payment and Money Services Business



Source: Bank Negara Malaysia

In contrast, the use of cheques continues to decline with greater e-payment adoption. There are now almost 14 times more internet banking transactions made by business entities as compared to cheques issued. In 2023, 40.9 million cheques were issued as compared to 46.1 million in 2022. The predominant users of cheques continue to be large corporations, many of which are also increasingly migrating to e-payment alternatives for some, if not all their payments.

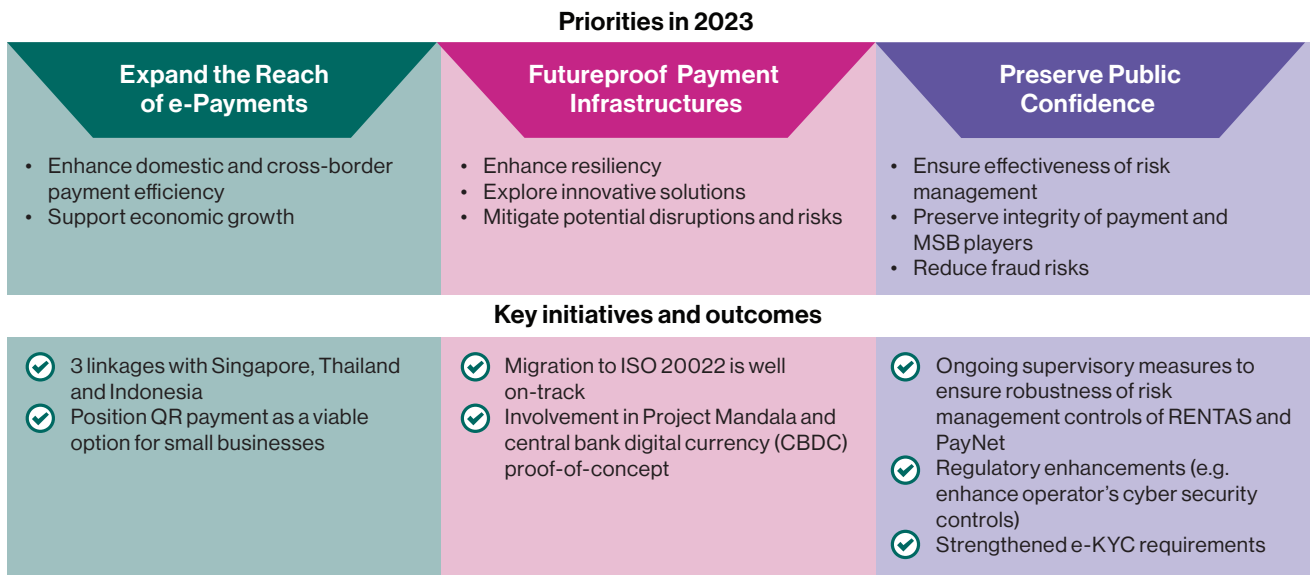
Money changing transactions continue to register strong growth (76%) for the third year since the pandemic. This is in line with the ongoing recovery in tourism, marked by the doubling of tourist arrivals in 2023. Based on a recent survey, we found that about 42% of licensed

money changers have provided e-payment options over their counters. Several licensed money changers have also issued multicurrency cards as part of their product offerings. Similarly, overall outward remittances increased by 20% to RM34.2 billion, in line with the post-pandemic recovery in economic sectors such as construction and agriculture where more foreign workers are employed. E-remittance services offered by licensed non-bank remittance service providers (RSPs), continued to grow in 2023 by 11% to RM14.1 billion.

### Priorities in 2023

To advance our payment ecosystem, BNM pursued three key priorities as summarised in Diagram 2.

Diagram 2: Priorities in 2023



Source: Bank Negara Malaysia

## Expanding the Reach of e-Payments

### Driving digital adoption

BNM continued to accelerate e-payment adoption in Malaysia through e-Duit initiatives. In total, there were more than 110 e-Duit related programmes organised nationwide. These were mostly in collaboration with Payments Network Malaysia Sdn. Bhd (PayNet) and the financial industry. In 2023, we focused on expanding this initiative to rural areas through the e-Duit Desa programme.

During the year, BNM supported public sector-led initiatives to drive greater digitalisation in the economy. This included providing technical advice and support in the roll-out of the Government's cash transfer programme via e-wallets (e-Madani

initiative) and the open toll payment system. BNM also continued to support ongoing efforts to encourage greater adoption of e-payments among Federal and state-level government agencies. For instance, BNM worked with Lembaga Hasil Dalam Negeri Malaysia to remove surcharges on income tax payments using e-payment channels.

DuitNow QR has gained significant popularity among businesses. Within four years of introduction, the number of DuitNow QR registrations is now more than double the number of point-of-sales (POS) terminals (2023: 2 million QR code registration and 875,504 POS terminals). Recognising this strong demand, BNM will continue to ensure that the payment system is able to cater for the needs of different segments of merchants.



e-Duit programmes organised by the industry in collaboration with BNM

## DuitNow QR: Fostering Inclusive Digital Payments

Imagine this scenario:

On a typical day at a local roadside stall, customers queue patiently for their favourite nasi campur. The mak cik who owns the small stall prepares each plate diligently for her customers. Suddenly, the mak cik encounters an anxious customer who realised that he forgot to bring his wallet to pay for his meal. Without hesitation, the mak cik points towards the iconic pink DuitNow QR code displayed on a stand. With a quick scan, the customer promptly settles the bill and enjoys his meal without further worry.



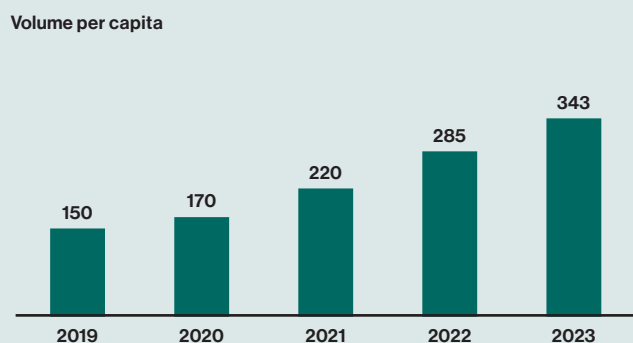
Source: PayNet

This is just one example of how digitalisation has become an integral part of economic activity here in Malaysia. Electronic payment (e-payment) services, like DuitNow QR, are accessible, affordable and easy-to-use. They allow the entire ecosystem, including micro and small businesses, to be more digitally ready to enable seamless business transactions. Importantly, it helps small business owners like the *mak cik*, to avoid the hassle and risks from handling cash. For the *mak cik*, with most of her customers paying via DuitNow QR, the amount of cash she must handle and carry around now is much less. This also reduces the times and risks of theft when she visits a bank branch or finds a cash deposit machine to deposit her cash earnings.

### Significant uptake in DuitNow QR payment transactions in 2023

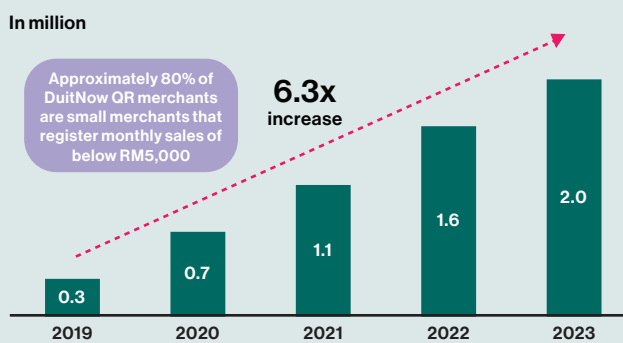
Since the launch of the DuitNow QR payment rail<sup>1</sup> in 2019 by Payments Network Malaysia Sdn. Bhd. (PayNet), it has continued to promote a more inclusive payment ecosystem with the diverse participation of 40 bank and non-bank players to serve different market segments. In 2023 alone, the year-on-year growth in DuitNow QR transactions has more than doubled to 360 million transactions valued at RM14.6 billion (2022: 125 million transactions valued at RM5.5 billion). The strong growth is supported by the high smartphone penetration rate of around 95%<sup>2</sup> and internet access of around 97%<sup>3</sup> among Malaysians. As a result, there has been a steady increase in the overall volume of e-payment per capita (Diagram 1) and DuitNow QR acceptance points by merchants across the nation (Diagram 2).

**Diagram 1: e-Payment Transactions Made per Capita**



Source: Bank Negara Malaysia

**Diagram 2: Number of Registered DuitNow QR Codes**






Source: PayNet

<sup>1</sup> DuitNow QR is part of a shared infrastructure for retail payments (i.e. Real-time Retail Payments Platform, RPP). The RPP allows industry players to pool resources and share costs for the development and maintenance of the infrastructure while also competing at product level to better serve end-users.  
<sup>2</sup> Based on the Hand Phone Users Survey 2021 released by the Malaysian Communications and Multimedia Commission, the penetration rate for smartphone users in Malaysia for 2021 was at 94.8%. Meanwhile, 41% of respondents had used mobile payment applications as an alternative to traditional payment methods.  
<sup>3</sup> Based on Pelan Jalanan Digital Negara (JENDELA) Phase 1 Concluding Report, 96.9% of populated areas in Malaysia have access to 4G network as of 31 December 2022.

## Simple and cost-effective setup has facilitated wider adoption of DuitNow QR

DuitNow QR is designed to facilitate payment transactions across different e-wallets, issued by banks and non-banks. Such interoperability provides convenience and a wider choice to both merchants and consumers. It fosters competition amongst e-wallet providers to drive innovative product offerings that cater to various merchant segments. DuitNow QR is also designed to be a more cost-effective payment method, compared to other payment options such as cash or payment cards. As an example, the use of QR code payments removes the need for merchants to incur recurring rental costs for point-of-sale (POS) terminals<sup>4</sup> that are otherwise required for payment card acceptance. Collectively, these factors reduce the barriers to entry for e-payment acceptance among merchants, especially smaller merchants (Diagram 3). This in turn encourages wider use of e-payments by bridging the last mile in e-payment acceptance.

**Diagram 3: Key Features of DuitNow QR**

Key Feature	Description
 <p><b>Interoperability<sup>5</sup></b></p>	<ul style="list-style-type: none"> <li>Merchants can accept payments from customers using different e-wallet accounts through a unified QR code, i.e. DuitNow QR.</li> <li><i>Example: A merchant with an account with e-wallet brand A can receive payment from their customer using e-wallet brand B.</i></li> </ul>
 <p><b>Cost efficiency</b></p>	<ul style="list-style-type: none"> <li>Competitive DuitNow QR Merchant Discount Rate (MDR)<sup>6</sup> that is equivalent or lower than that of domestic debit card, MyDebit.</li> <li>Merchants save on intrinsic costs associated with the handling of cash or payment cards.</li> </ul>
 <p><b>Inclusivity</b></p>	<ul style="list-style-type: none"> <li>All merchants regardless of size, have access to a variety of payment providers participating in the DuitNow QR ecosystem.</li> </ul>

Source: Bank Negara Malaysia

## Maintaining the reliability of the DuitNow QR infrastructure incurs cost and investment

For any payment infrastructure, ensuring the safety, soundness and reliability of the payment system is critical. This requires continuous investments, particularly for cybersecurity and fraud prevention controls. It is imperative that these controls are of high standards to provide protection against latest threats, whilst assuring efficient services for users.

During the initial stages of DuitNow QR implementation, as part of efforts to familiarise the public with DuitNow QR payments and encourage take-up, PayNet and the industry provided a temporary waiver on DuitNow QR transaction fees<sup>7</sup> for DuitNow QR service providers. This in turn translated to zero MDR charges for most merchants. The waiver, which was intended to be lifted in 2022, was extended for another year to provide support to merchants during the post-pandemic recovery period.

With the normalisation of economic activities, the industry in consultation with BNM, has introduced a more sustainable model to recoup costs associated with providing the DuitNow QR payment service. This will ensure the payment ecosystem remains secure and reliable for users through continuous investments needed to maintain the payment infrastructure, including investments in measures to deal with the evolving cybersecurity threats and fraud. The long-term commercial model for DuitNow QR balances this need with preserving access to DuitNow QR services at the lowest possible cost for smaller merchants.

<sup>4</sup> This applies to merchants that adopt static QR codes, i.e. a fixed QR code displayed by a merchant for their customers to scan and make payments. The DuitNow QR solution also offers dynamic QR codes which enables merchants to automatically generate QR codes that are integrated with sales and inventory management systems of businesses for easier tracking of transactions. The dynamic DuitNow QR solution requires a POS terminal to operate and is mainly used by larger merchants.

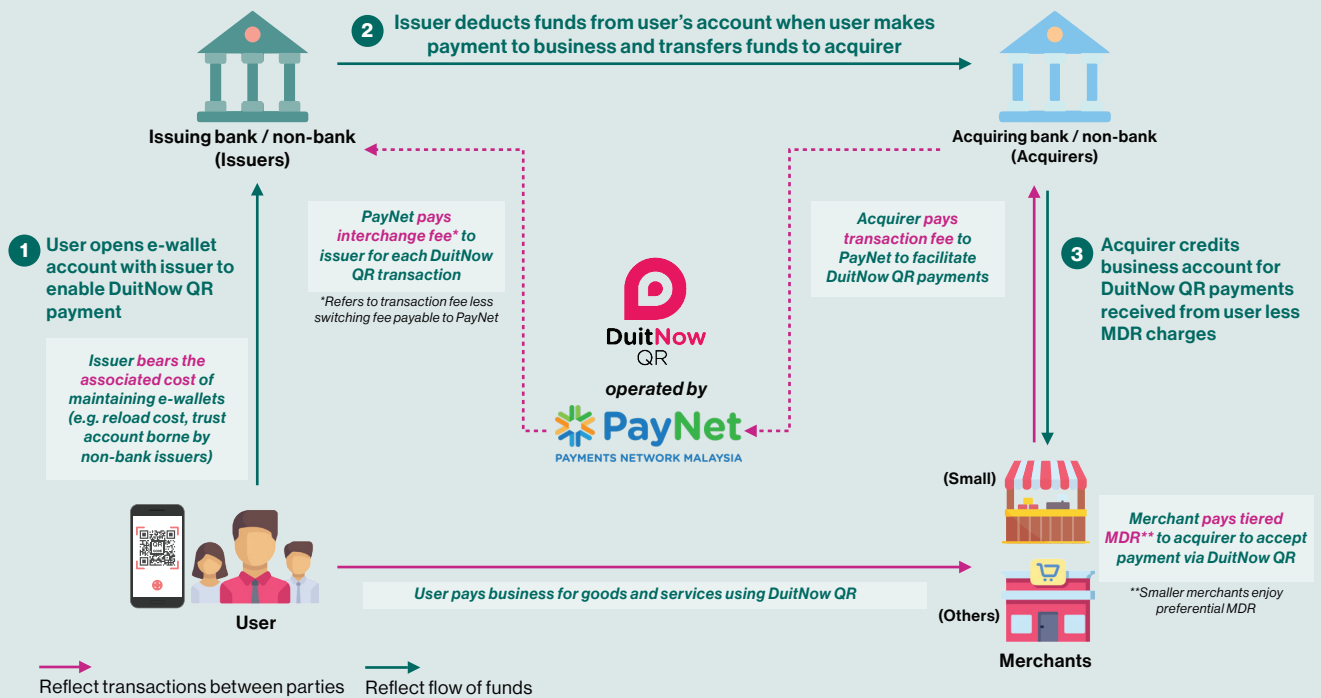
<sup>5</sup> Under the Interoperable Credit Transfer Framework, banks and non-banks are mandated to participate directly or indirectly in a shared payment infrastructure (i.e. RPP) to enable greater accessibility to e-payment services.

<sup>6</sup> MDR is a common fee associated with the provision of e-payment services and is charged based on the transaction value of the e-payment transaction. The MDR is intended to cover costs and investments needed by the industry for the upkeep of their payment systems, in order to maintain high service and security standards for e-payment services.

<sup>7</sup> Refer to the interchange fee and switching fee payable by acquirers to issuers and PayNet, respectively in the DuitNow QR ecosystem.

Pricing model will be periodically reviewed to ensure the longer-term sustainability of the DuitNow QR ecosystem

Diagram 4: Cost-sharing Arrangement Adopted in the DuitNow QR Ecosystem



Source: Bank Negara Malaysia

The model illustrated in Diagram 4 adopts a tiered approach to DuitNow QR transaction fees. Under this arrangement, larger merchants which often have greater financial capacity would incur some costs in the form of MDR for access to DuitNow QR services. Such merchants have economies of scale to absorb these costs and the ability to better negotiate pricing terms with payment providers. Smaller merchants would enjoy a preferential MDR that would be maintained at a low level, thus ensuring that all merchants, big and small, will continue to have affordable access to DuitNow QR payments. Importantly, DuitNow QR payments will remain a lower cost payment option compared to other e-payment alternatives. Consumers will also continue to pay the same price for their goods and services regardless of whether they pay via cash or DuitNow QR.

This arrangement is consistent with the goal of supporting the widespread adoption of e-payments in Malaysia through a vibrant, secure and inclusive payment ecosystem that is also sustainable in the long run.

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

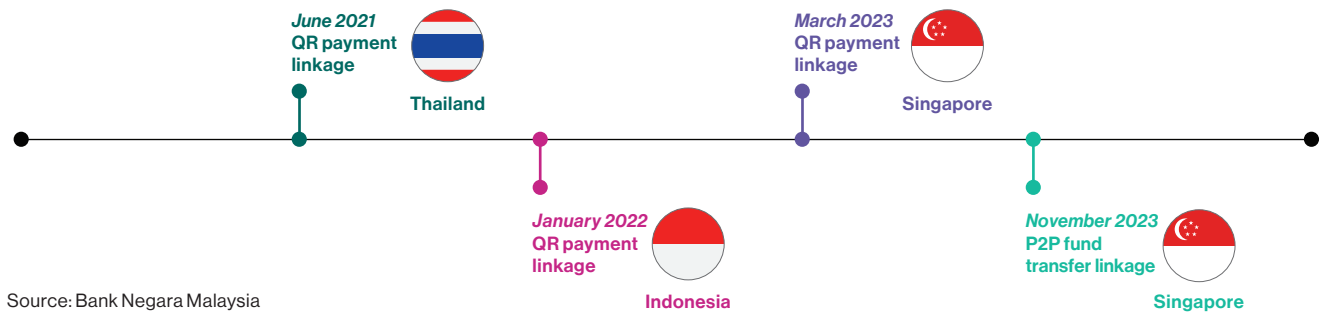
In 2023, BNM intensified efforts to bring about faster, cheaper and more convenient cross-border payments. These initiatives align with global targets set under the Group of 20 (G20) Roadmap for Enhancing Cross-border Payments.<sup>4</sup> Notable progress has been made to link Malaysia's instant payment system (IPS) with other IPS in the region (Diagram 3).

The cross-border real-time payment connectivity with Singapore, covering QR payments and person-to-person (P2P) fund transfers, went live in March 2023 and November 2023 respectively. This connectivity complements our existing payment links with Thailand and Indonesia for QR payments, which went live earlier

in 2021 and early 2022 respectively. The three linkages enable customers of participating banks and non-banks travelling to these countries to pay merchants that accept QR code payments. Meanwhile, visitors from these countries to Malaysia can benefit from most of the 2 million DuitNow QR acceptance points registered in Malaysia. In 2023, about 674,000 transactions worth RM59 million flowed through these linkages. Users also benefit from competitive exchange rates as well as a seamless and familiar user experience as these linkages mirror the domestic payment experience.

Another major initiative to enhance the efficiency of cross-border payments has been the development of a scalable multilateral payment connectivity model<sup>5</sup> under Project Nexus. In 2023, BNM partnered with the Bank

**Diagram 3: Bilateral Linkages with Malaysia**



Source: Bank Negara Malaysia



Launch of the cross-border real-time P2P fund transfer linkage between Malaysia and Singapore at the Singapore Fintech Festival 2023

<sup>4</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.

<sup>5</sup> For more details, refer to our box article 'Cross-Border Payment Linkages – Project Nexus and the Push for a Multilateral Approach'.



QR4Food festival hosted by BNM during the Sasana Symposium 2023

for International Settlements Innovation Hub (BISIH) Singapore Centre and central banks from Indonesia, Philippines, Singapore and Thailand, to embark on the transition phase of Project Nexus (Phase 3) which will bring the solution closer to implementation. Phase 3 will deliver a clear and detailed implementation roadmap to operationalise Nexus. This roadmap will include the appropriate governance arrangement, business model, technical specifications of the Nexus gateway and joint oversight arrangement to ensure the multilateral linkage remains safe and resilient. The next phase of Project Nexus (Phase 4) to operationalise these arrangements is on track to commence in 2024.

### Futureproofing Key Payment Infrastructures

BNM is carrying out multiple initiatives to modernise Malaysia's payment infrastructure and to keep pace with latest developments (Diagram 4).

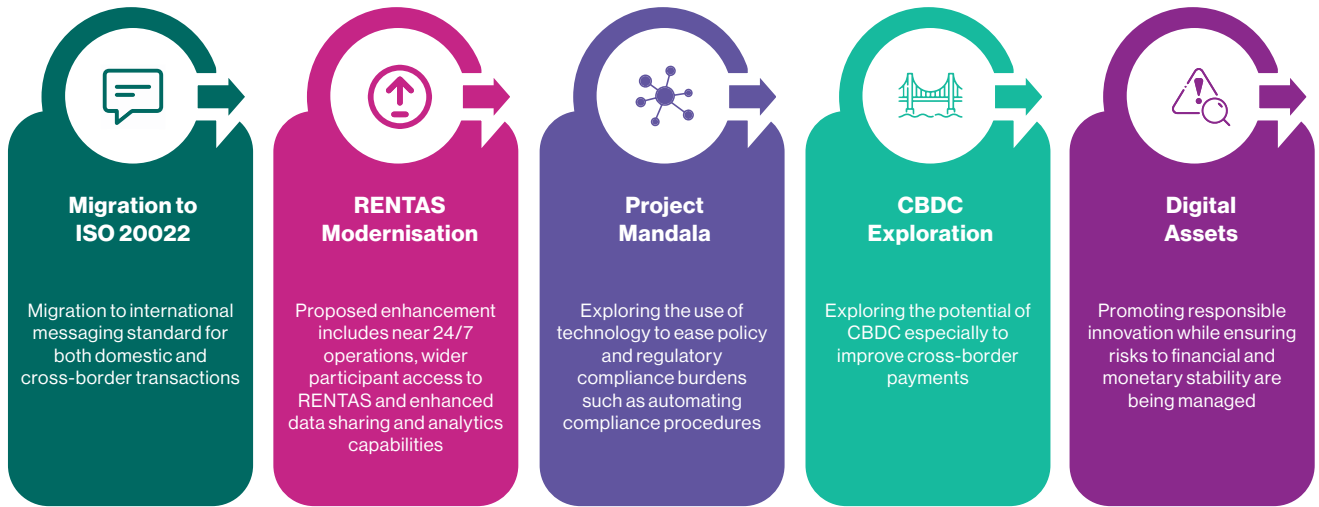
Adoption of the internationally recognised messaging standard, ISO 20022, among financial sector participants will have many benefits. For the ecosystem, it

will enhance the efficiency of the payment infrastructure. For market participants, it will strengthen their risk management capability. For the consumer, it will allow customers to benefit from value-added services such as more transparent transaction details and advanced cash management tools that can now be offered by players with ISO 20022 implementation. To date, the financial industry remains on track for full adoption of the new ISO 20022 messaging standard<sup>6</sup> for both domestic and cross-border payments (Diagram 5).

In 2023, we continued our plans to modernise RENTAS. To this end, we have identified several key focus areas to seek industry feedback in a discussion paper. Key areas that we intend to pursue include supporting near 24/7 operations and wider participant access to RENTAS, enhancing data sharing and analytics capabilities as well as more effective liquidity management tools in RENTAS.

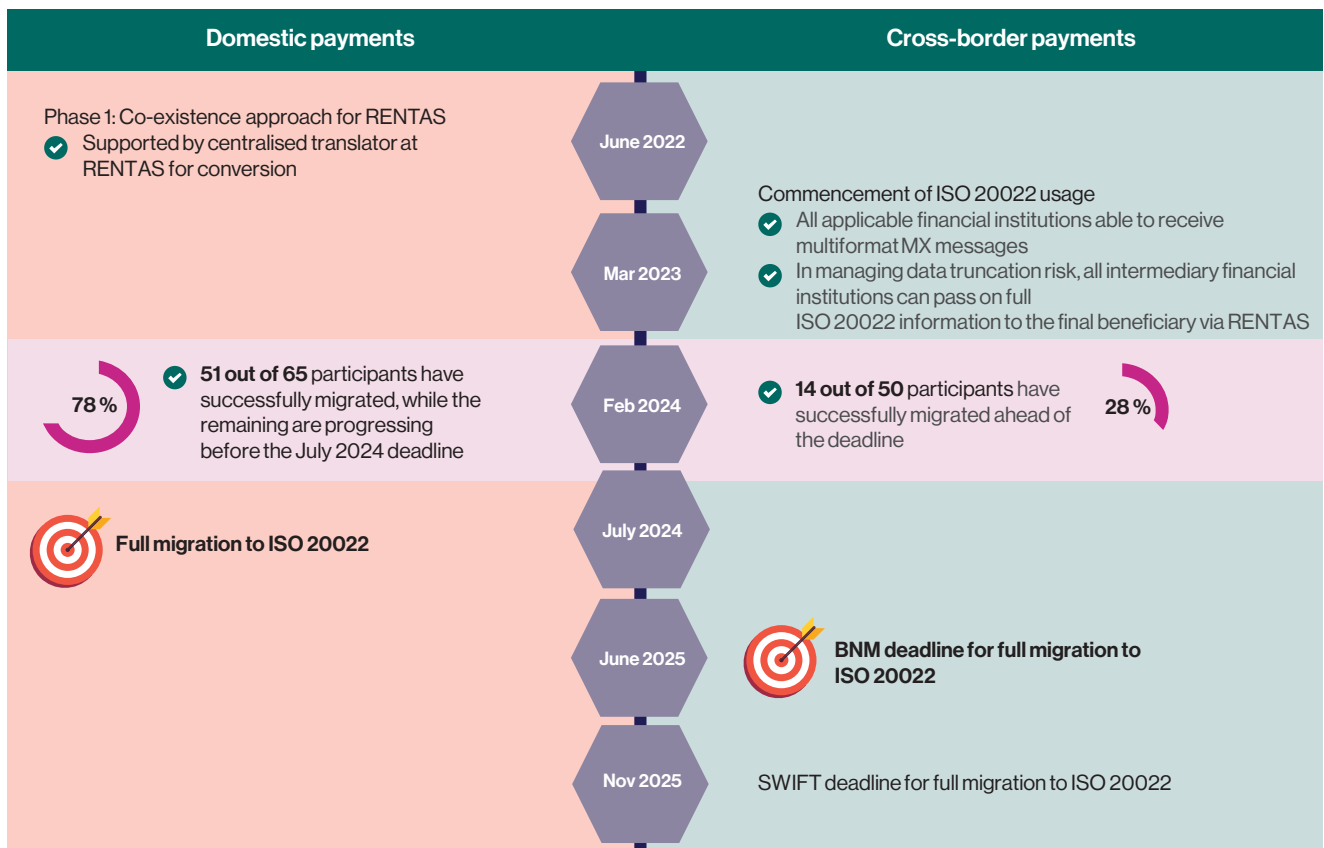
<sup>6</sup> ISO 20022 is an internationally recognised messaging standard for the financial industry with enhanced data content and structured messaging format. For more information please refer to Bank Negara Malaysia Annual Report 2020 and introductory video at <https://www.iso20022.org/about-iso-20022>.

**Diagram 4: Key Initiatives to Modernise Malaysia's Payment Infrastructures**



Source: Bank Negara Malaysia

**Diagram 5: Progress of ISO 2022 Migration**



Source: Bank Negara Malaysia

### Shaping the future of payment infrastructures

BNM is also actively involved in Project Mandala. The project explores technology enablers that can ease financial institutions' compliance with policy and regulatory requirements such as foreign exchange requirements. This may be done by automating compliance procedures, providing real-time transaction monitoring and increasing transparency around country-specific policies. This project is led by BSIH Singapore Centre alongside BNM, including central bank and financial institution partners from Australia, Republic of Korea and Singapore.

The first use case of Project Mandala explores the potential to simplify the compliance process around cross-border lending from an entity located in Singapore to an entity located in Malaysia by encoding the compliance policies and regulatory requirements into a common protocol. The project team developed solutions that enable concurrent sanction screenings and compliance checks against capital flow management measures prior to loan disbursement.

### Facilitating responsible innovation while managing emerging risks

Digital assets have grown in popularity as an asset class. To this end, BNM's Digital Currency Research Hub closely monitors developments in this space and in 2023, directed its focus on two key areas. First, monitoring developments to assess the impact to our financial and monetary stability mandates and strengthening key surveillance capabilities. Second, promoting responsible innovation through our engagements and participation in CBDC projects.

Our assessment indicates that the impact of digital assets to the financial system remains limited. We have also enhanced our surveillance capabilities, working closely with the Securities Commission Malaysia (SC) to identify and address any potential risks to financial stability arising from digital asset market activities. This included ongoing work to strengthen data sharing arrangements between both institutions. Given the cross-border nature of digital assets, BNM continued to contribute to bilateral and international cooperation efforts to better understand and monitor global developments surrounding digital asset activities.

In 2023, we continued to explore the potential of CBDC, especially to improve cross-border payments. Exploratory work on domestic wholesale CBDC is

ongoing and is expected to further intensify in 2024. We continue to explore a range of potential use cases for digital assets and tokenisation. As digital assets gain traction, we are also committed to ensure that the involvement of Malaysian financial sector in digital asset activities is managed responsibly, with a clear understanding of how such activities can reduce or increase operational and financial risks. Although financial institutions have indicated openness to explore the potential of digital asset related activities and distributed ledger technology (DLT), their current focus remains limited to providing traditional services to digital asset players such as payments, deposit and trust accounts.

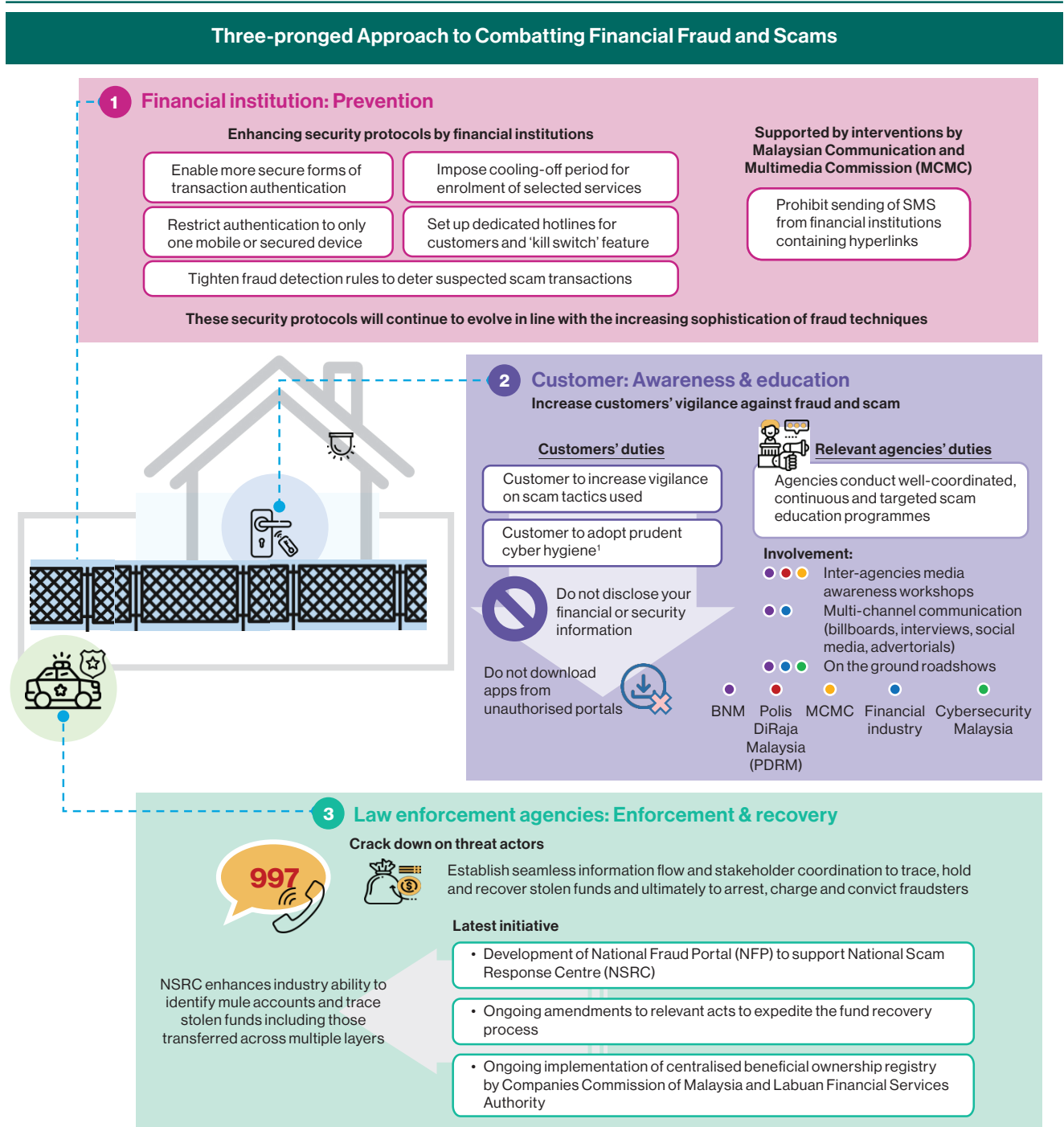
### Preserving the Resilience and the Integrity of the Payment Systems

We remain focused on promoting sound risk management practices and safeguarding the resilience of critical payment system infrastructures, such as RENTAS and the retail payment systems. In 2023, RENTAS and the major retail payment systems remained resilient. As part of ongoing efforts to ensure resiliency of key payment infrastructures, supervisory efforts were focused on several key areas. These include RENTAS' risk management controls and governance arrangements and the effectiveness of PayNet's data management practices. In response to BNM supervisory reviews, enhancements were implemented to further strengthen these areas.

Additionally, we continue to take measures to protect the integrity of payment services from being abused for illicit purposes. This includes ongoing engagements with payment service providers to strengthen risk management practices. We also strengthened the requirements on electronic Know-Your-Customer (e-KYC) processes to improve the quality and effectiveness of e-KYC solutions. To support risk monitoring of non-bank e-money issuers and MSB licensees, we enhanced our supervisory capabilities by expanding the use of data analytics tools. By leveraging on machine learning and artificial intelligence, we can better identify potential vulnerabilities and detect anomalies at the entity level.

BNM remains fully committed to combat the threat of online fraud and scams and ensure the security controls

Diagram 6: Three-pronged Approach to Combatting Financial Fraud and Scams



<sup>1</sup> See 'Let's Go Digital Confidently' feature article, Annual Report 2022 for further details on prudent cyber hygiene measures.

Source: Bank Negara Malaysia

of financial institutions remain robust. As all parties in the ecosystem play a critical role in combating fraud and scam crime, we have undertaken a holistic approach to support this work in recent years. These initiatives have focused on prevention, enforcement and recovery as well as greater customer awareness (Diagram 6).

In 2023, we initiated a review of existing policies to strengthen industry practices in fraud case management to ensure victims are treated fairly. This is achieved by ensuring the fraud investigation process is transparent, robust and completed within a reasonable timeline. The industry also initiated work on establishing a protocol for reporting and handling mule accounts. The protocol outlines procedures and criteria for financial institutions to categorise mule accounts to facilitate sharing of information on mules across financial institutions.

### Going Forward

In 2024, BNM will continue to work on ensuring that payment and MSB services in Malaysia remain safe, efficient and reliable in support of the needs of the economy. To this end, we continue to proactively identify and address emerging risks, as well as to support greater use of e-payments. We will also work closely with stakeholders from the public and private sector to safeguard public confidence and promote responsible innovation.

BNM also remains dedicated to futureproofing the domestic payment infrastructures in line with aspirations in our Blueprint. This is to ensure that the payment system is responsive to the evolving needs of the financial system and broader economy. This includes intensifying exploratory work on CBDC and asset tokenisation as well as adopting emerging technologies such as DLT in the financial system.