

COMCEC COORDINATION OFFICE

Ankara, Türkiye

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# Digital Transformation of Payment Systems in OIC Member Countries

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# CASE STUDIES: MALAYSIA

SECTION 2



## SECTION 2 – CASE STUDIES (MALAYSIA)

- 4.1 Introduction: Justification for Choosing the Country
- 4.2 Legal and Regulatory Framework on Payment Systems
- 4.3 The Current Level of Development of Digital Payment Systems
- 4.4 Payment Systems: Current Trends, Issues and Challenges
- 4.5 Digital Payment Systems and Economic Activities
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- 4.9 Country-Specific Policy Recommendations
- 4.10 Implications of Policy Recommendations for OIC Member Countries

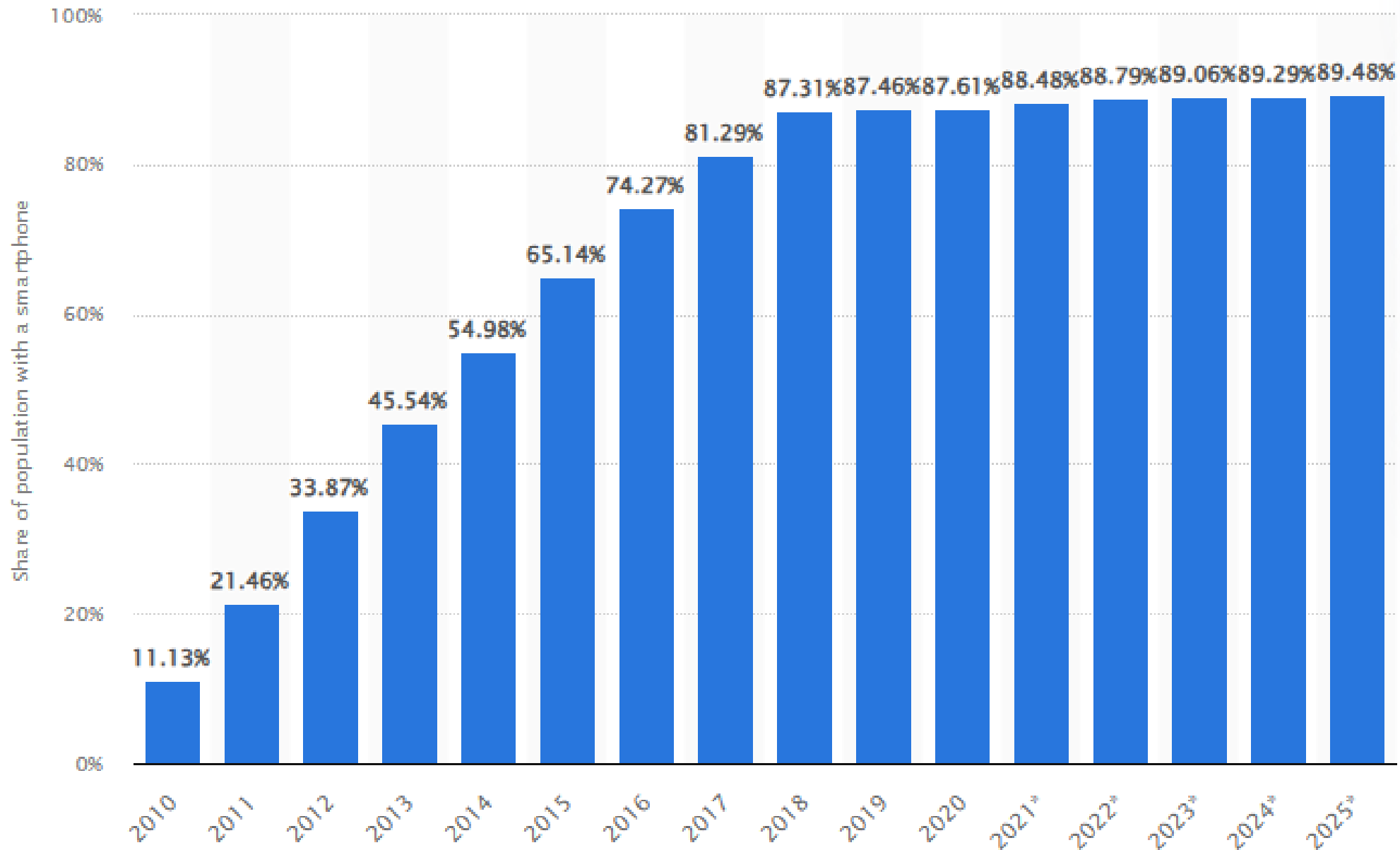
## 4.1 JUSTIFICATION FOR CHOOSING THE COUNTRY

# JUSTIFICATION FOR CHOOSING THE COUNTRY

- **Population:** approximately **34.3 million**
- **Estimated GDP** in 2024: **\$465.541 billion** (International Monetary Fund, 2023)
- High levels of human development, urbanization, and digital adoption
- Robust **internet and smartphone penetration rates** of **97.56% and 89.06%** (Statista, 2024a; Statista, 2024b), respectively, in 2023
- Reflects a progressive and inclusive society, accommodating various ethnicities, religions, and cultures harmoniously
- The **integration of innovative payment system methods**, such as electronic payment platforms and real-time gross settlement systems, further propelled Malaysia's economic growth path
- Malaysia bolstered **investor confidence** by providing secure and reliable payment infrastructures, crucial for attracting FDI (Ng, 2015)
- The nation's proactive stance, particularly evident in its response to the **Asian Financial Crisis** and the formulation of the **Financial Sector Master Plan 2001**, underscores its commitment to modernizing payment systems (Basir, 2009)

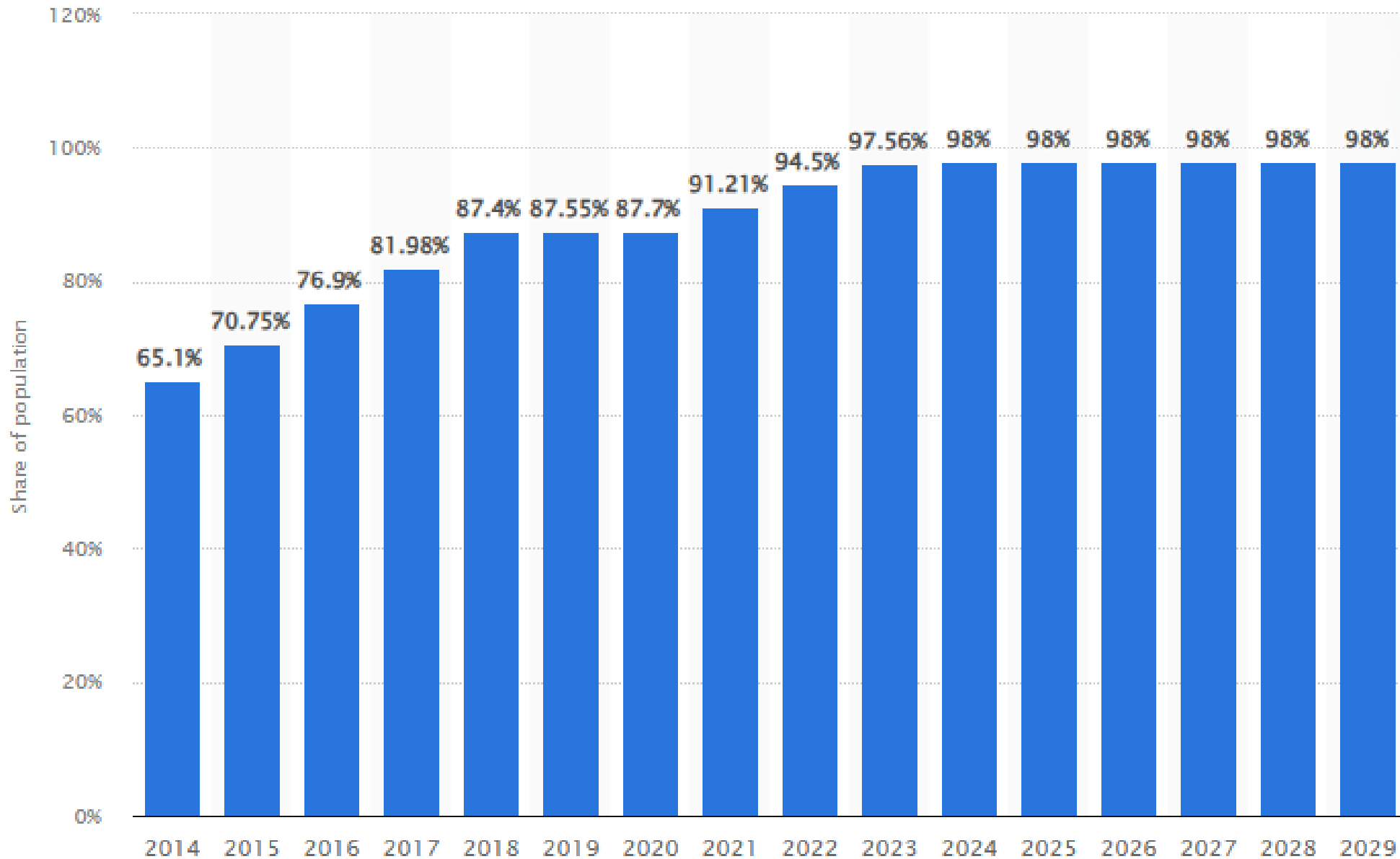


# JUSTIFICATION FOR CHOOSING THE COUNTRY



Smartphone penetration rate as share of the population in Malaysia from 2010 to 2020 and a forecast up to 2025

# JUSTIFICATION FOR CHOOSING THE COUNTRY



Internet penetration rate  
in Malaysia **2014-2029**

# JUSTIFICATION FOR CHOOSING THE COUNTRY

## Developments in the Malaysian Economy

### Gross Domestic Product

GDP grew by 3% in 4Q 2023. Overall 2023 growth normalised to 3.7% (2022: 8.7%)

Quarterly GDP



Source: Bank Negara Malaysia (Central Bank of Malaysia)

What factors support growth in 4Q 2023?



Continued household spending



Improvement in labour market conditions



Further recovery in tourism activities



Sustained investment activity

Which sectors affected growth in December 2023?



Services (Dec: 3%)  
Nov: 5.5%; Oct: 4.1%



Manufacturing (Dec: -1.5%)  
Nov: -0.2%; Oct: 0.9%



# JUSTIFICATION FOR CHOOSING THE COUNTRY

## Developments in the Malaysian Economy

### Malaysia's Economic Performance

#### Higher domestic demand

Annual change, %

##### Private Consumption



Continued household spending in both necessities and discretionary items

##### Private Investment



Support from capacity expansion by firms and further progress in ongoing projects

##### Public Consumption



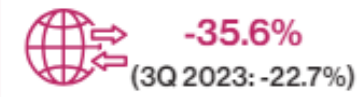
Higher supplies and services spending by the Government

##### Public Investment



Higher capital expenditure by Government and public corporations

##### Net Exports



Higher imports outpaced exports

#### Expansion in most economic sectors

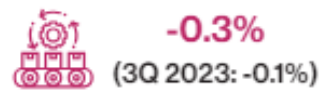
Annual change, %

##### Services



Ongoing recovery of tourism activities weighed by contraction in finance and insurance subsector

##### Manufacturing



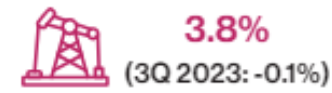
Continued weakness in E&E cluster amid tech downcycle, offsetting resilient growth in domestic-oriented clusters

##### Construction



Further expansion in civil engineering subsector weighed by weak non-residential activities

##### Mining



Improvement in natural gas and oil production

##### Agriculture

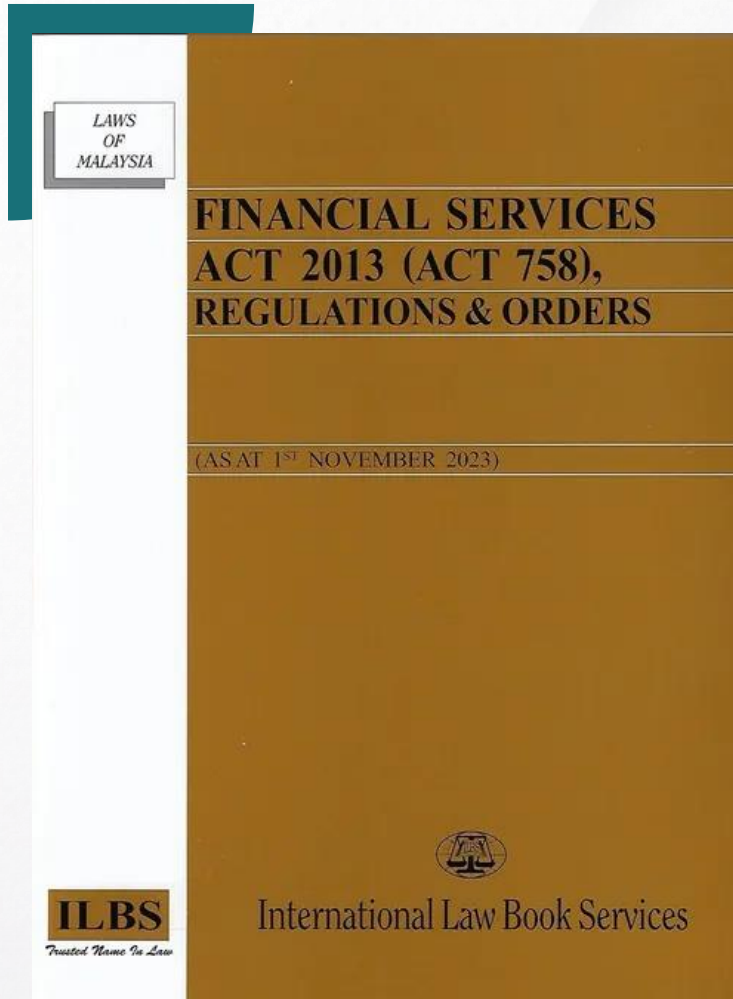


Expansion in oil palm production amid improved labour supply

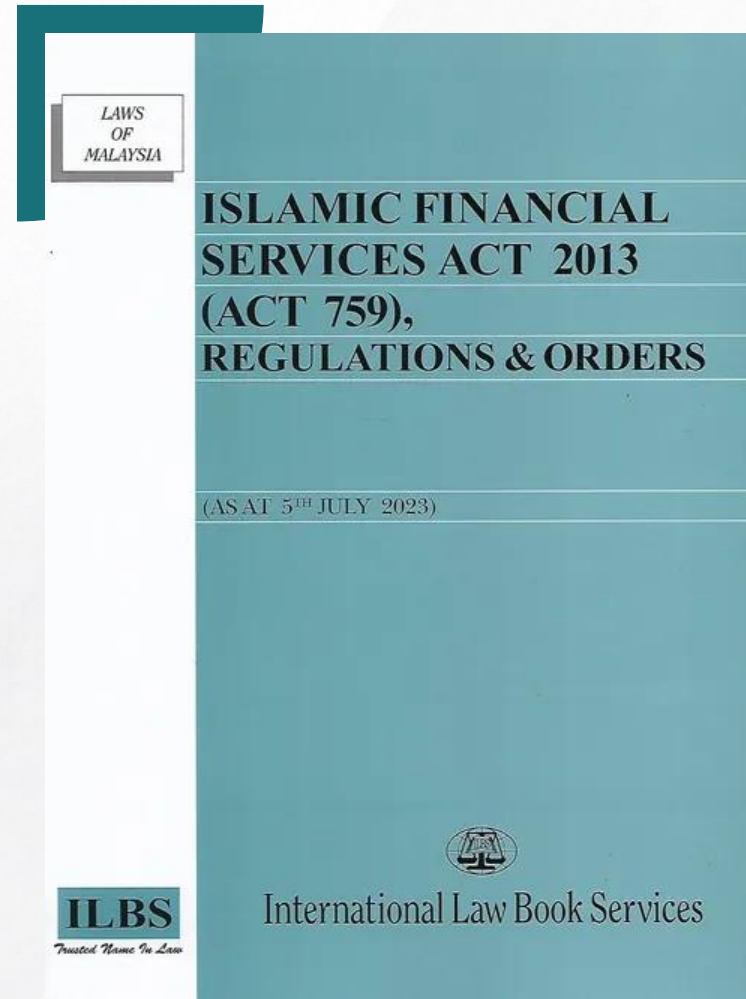
Source: Bank Negara Malaysia (Central Bank of Malaysia)

## 4.2 LEGAL AND REGULATORY FRAMEWORK ON PAYMENT SYSTEMS

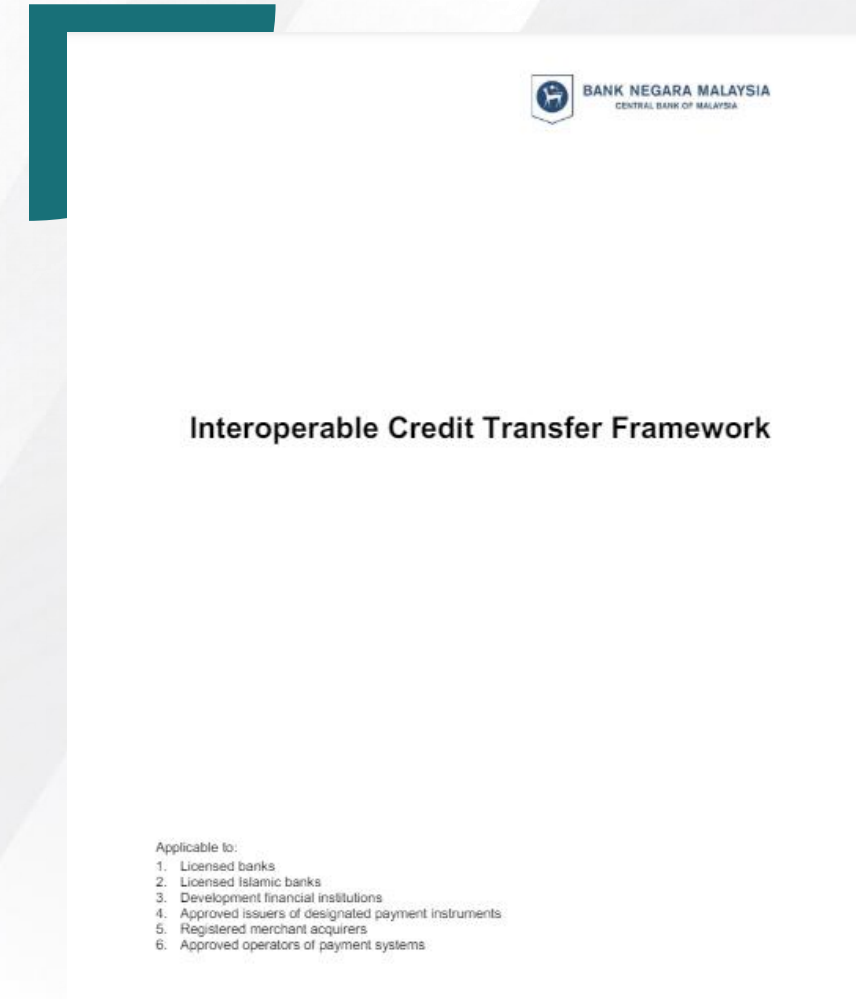
# LEGAL AND REGULATORY FRAMEWORK ON PAYMENT SYSTEMS



**FINANCIAL SERVICES ACT 2013**



**ISLAMIC FINANCIAL SERVICES ACT 2013**



**INTEROPERABLE CREDIT TRANSFER FRAMEWORK**



**BANK NEGARA MALAYSIA**  
CENTRAL BANK OF MALAYSIA

## Repealed Payment System Act 2003

Central to its objectives was the mandate bestowed upon the Central Bank of Malaysia to **regulate and supervise payment systems and instruments**, thereby safeguarding their reliability and efficiency

Under this Act, the Central Bank Malaysia was empowered to promote the **reliable and efficient operation of payment systems**, emphasizing the importance of compliance with regulatory requirements

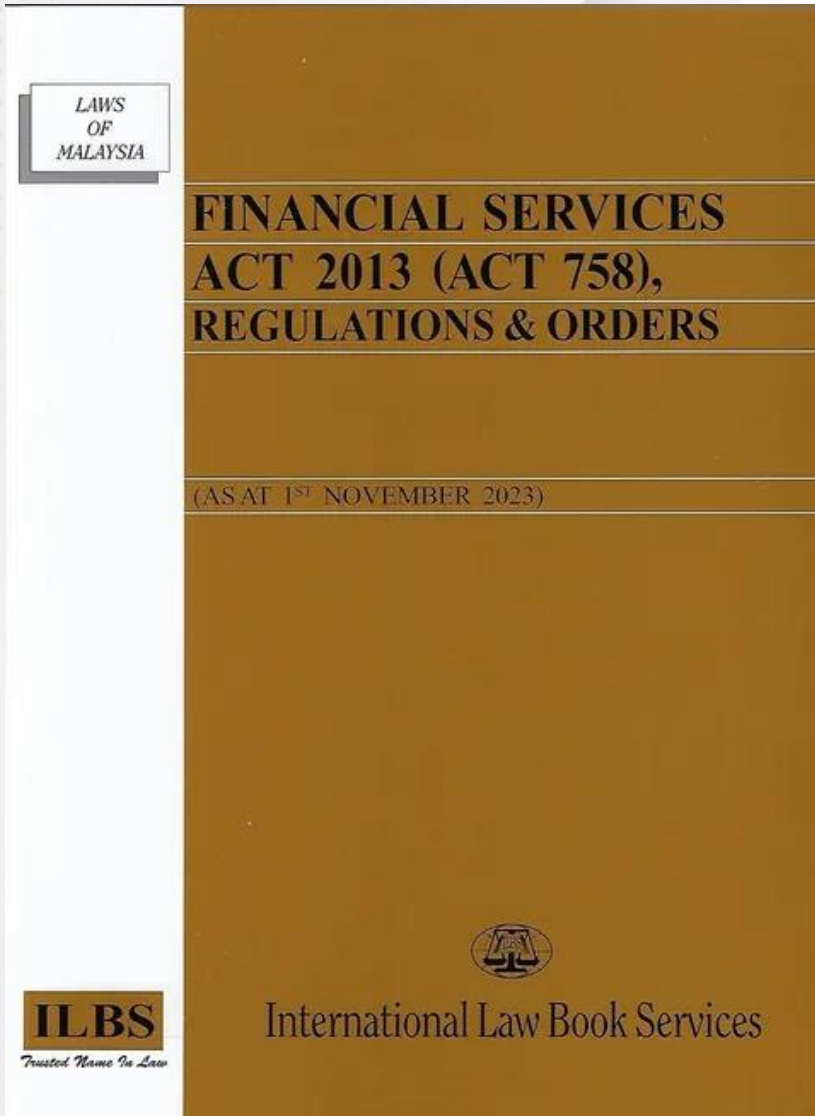
The Financial Services Act (FSA) and the Islamic Financial Services Act (IFSA) came into effect on 30 June 2013, **repealing the outdated Payment System Act 2003 (PSA)** amongst other legislative objectives

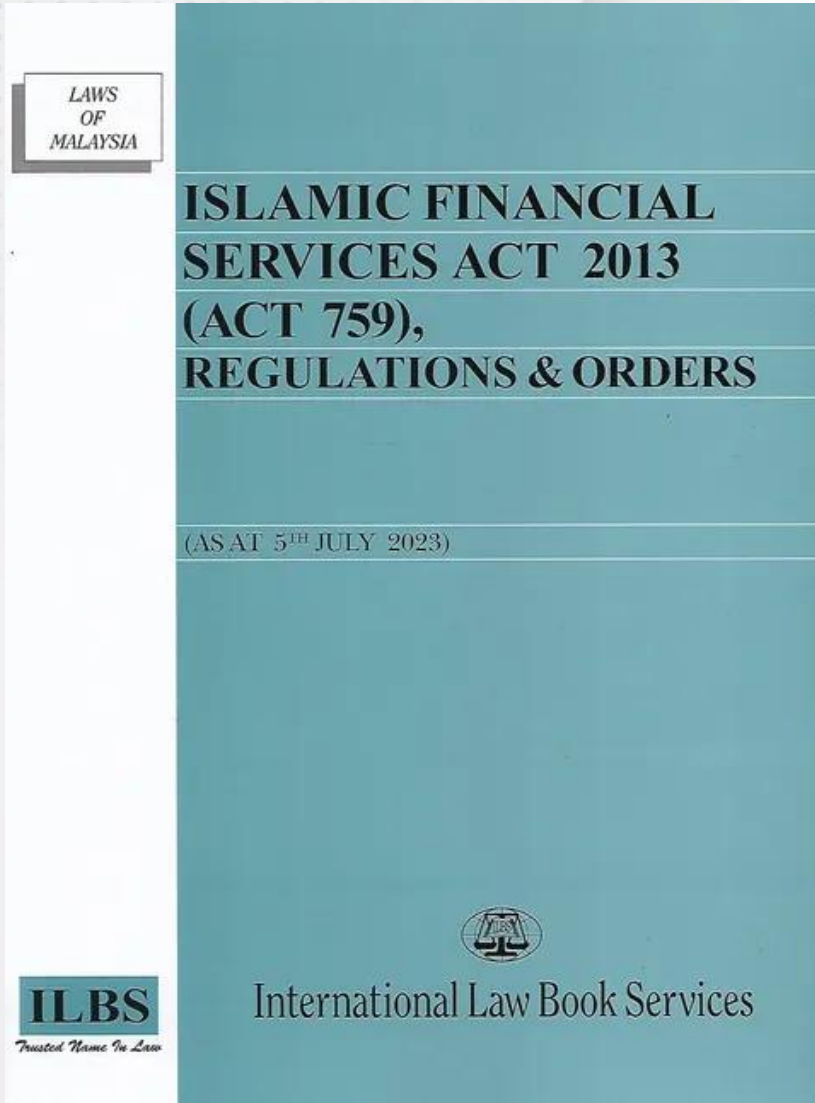
## Financial Services Act 2013

It aims to regulate and supervise financial institutions, payment systems, and relevant entities, ensuring the stability of money and foreign exchange markets

It addresses related matters to promote financial stability and addresses consequential or incidental issues (Ghazali & Kandiah, 2014)

Part IV of the Act focuses on payment systems, delineating the designation of payment systems and payment instruments, specifying operational requirements, and detailing the finality of payment and netting arrangements





## Islamic Financial Services Act 2013

It aims to regulate and supervise Islamic financial institutions, payment systems, and relevant entities, ensuring compliance with Shariah and promoting financial stability in the Islamic money and foreign exchange markets

It also addresses related matters and consequential or incidental issues  
(Lee & Oseni, 2015)

Part V of the Act: processes for designating payment systems and Islamic payment instruments, stipulates the operational requirements for payment systems, and outlines the finality of payment and netting arrangements



## Interoperable Credit Transfer Framework

Applicable to:

1. Licensed banks
2. Licensed Islamic banks
3. Development financial institutions
4. Approved issuers of designated payment instruments
5. Registered merchant acquirers
6. Approved operators of payment systems

## Interoperable Credit Transfer Framework

Developed based on feedback received during a public consultation period, the ICTF aims to create an **efficient, competitive, and innovative** payment ecosystem in Malaysia

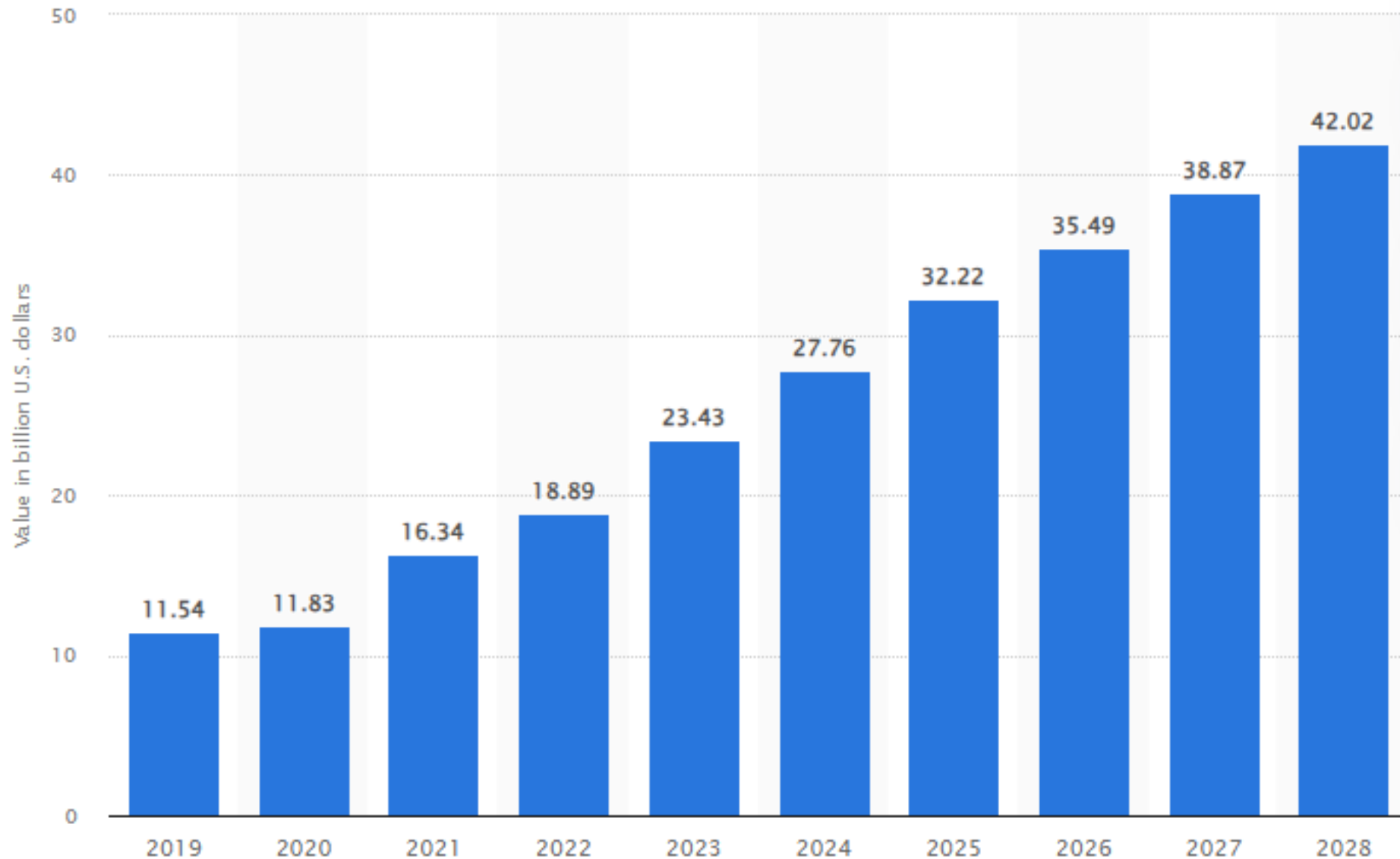
By enabling interoperability of credit transfer services, the framework facilitates seamless transactions and **promotes collaborative competition** among financial institutions (Abdullah et al., 2020)

The ICTF represents a significant step towards promoting **collaboration, innovation, and efficiency** in Malaysia's payment landscape, ultimately benefiting businesses and consumers alike (Kylasapathy et al., 2017)

## 4.3 THE CURRENT LEVEL OF DEVELOPMENT OF DIGITAL PAYMENT SYSTEMS

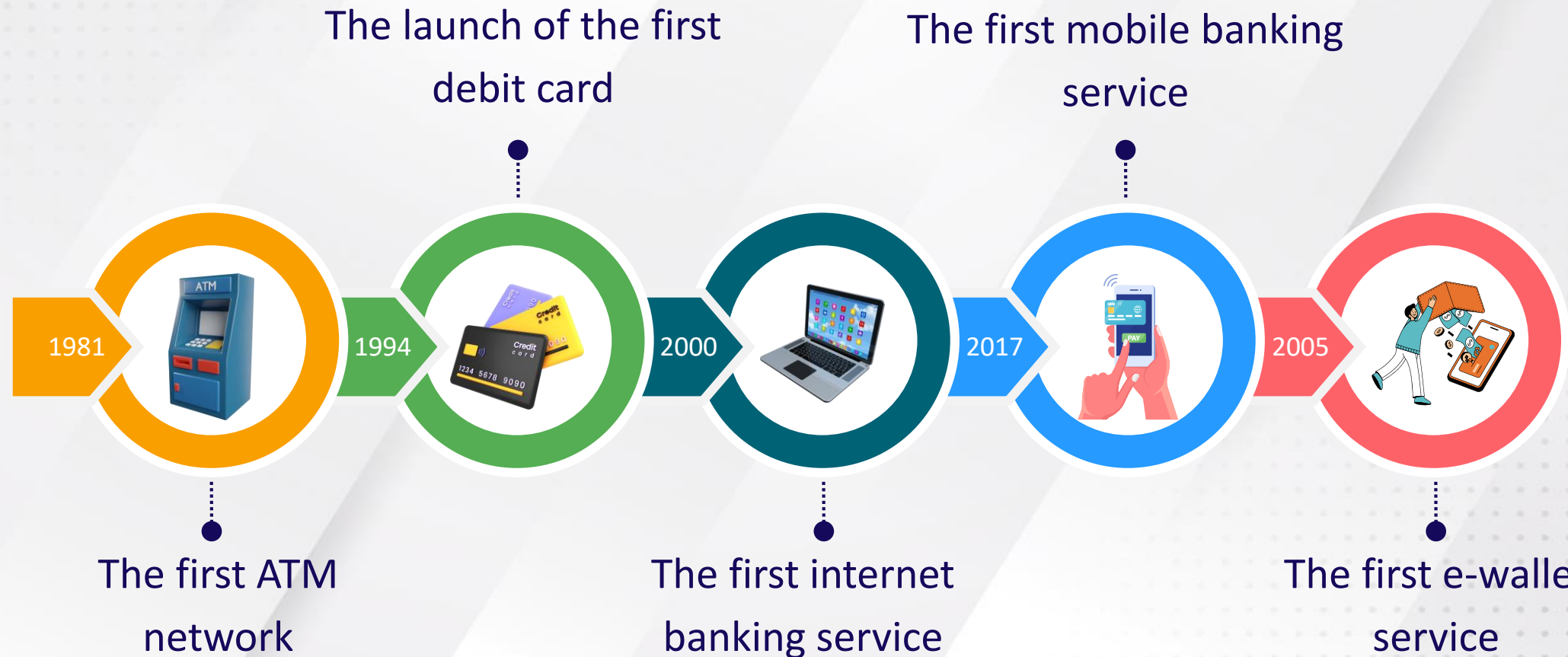


# THE CURRENT LEVEL OF DEVELOPMENT OF DIGITAL PAYMENT SYSTEMS



Revenue of the digital payments industry in Malaysia **2019-2028**  
(in billion U.S. dollars)

## MALAYSIA'S MILESTONES



## 4.4 PAYMENT SYSTEMS: CURRENT TRENDS, ISSUES AND CHALLENGES

# PAYMENT SYSTEMS: CURRENT TRENDS, ISSUES AND CHALLENGES

- **RENTAS** - real time gross settlement system (RTGS)
  - ❑ Interbank Funds Transfer System (IFTS)
  - ❑ Scripless Securities Depository System (SSDS)
- **Interbank GIRO**
- Financial Process Exchange (**FPX**)
- **Direct Debit**
- **JomPay**
- Real-time Retail Payments Platform (**RRP**)
  - ❑ DuitNow services

Various  
Types of  
Digital  
Payments  
Systems

Emerging  
Legal and  
Regulatory  
Issues

- **Sound balance** between fostering innovation and ensuring financial stability
- Focus on **financial consumer protection**
- Managing **operational risks, security risks, fraud risk, etc.**
- **Cyber risks** continue to be a major threat to payment systems infrastructures

- **Cybersecurity** emerges as a paramount concern
- Cybersecurity risk management through BNM **Technology Risk Management policy**
- BNM established the **Financial Sector Cyber Threat Intelligence Platform (FinTIP)** which became operational in September 2021
- **Bilateral agreements** on cybersecurity cooperation with regional peers

Malaysia's  
Leading  
Payment  
System and  
Fintech  
Regulation

Malaysian  
Regulators'  
Balanced  
Approach

Bank Negara Malaysia (BNM), Securities Commission of Malaysia (SC), and the Malaysia Digital Economy Corporation (MDEC) have adeptly navigated the **dual objectives** of **fostering innovation** within the FinTech sector while **safeguarding financial stability** (Abd Shukor, Mooi & Ibrahim, 2023)

# PAYMENT SYSTEMS: CURRENT TRENDS, ISSUES AND CHALLENGES

| Mil<br>/RM bil  | RENTAS <sup>^</sup> |          | Interbank GIRO |         | FPX    |       | Direct Debit |       | JomPAY |       | RPP <sup>*</sup> |         |
|-----------------|---------------------|----------|----------------|---------|--------|-------|--------------|-------|--------|-------|------------------|---------|
|                 | Volume              | Value    | Volume         | Value   | Volume | Value | Volume       | Value | Volume | Value | Volume           | Value   |
| 2019            | 5.1                 | 56,790.0 | 202.9          | 1,126.0 | 174.2  | 89.8  | 4.5          | 42.5  | 41.9   | 25.5  | 109.3            | 151.4   |
| 2020            | 4.9                 | 62,101.0 | 264.5          | 1,184.1 | 367.2  | 138.5 | 5.0          | 44.8  | 52.8   | 32.4  | 570.6            | 679.7   |
| 2021            | 5.0                 | 64,656.4 | 351.4          | 1,392.3 | 638.5  | 219.8 | 9.0          | 52.9  | 69.2   | 38.7  | 1,057.2          | 1,171.5 |
| 2022            | 5.1                 | 76,752.4 | 297.0          | 1,496.4 | 646.1  | 251.4 | 12.0         | 63.9  | 77.2   | 46.2  | 1,438.2          | 1,685.6 |
| 2023            | 5.4                 | 77,205.0 | 294.2          | 1,485.1 | 714.2  | 299.6 | 13.9         | 69.6  | 84.7   | 53.7  | 2,090.5          | 2,173.4 |
| Jan-Feb<br>2024 | 0.9                 | 12,110.2 | 51.0           | 260.1   | 127.4  | 58.6  | 2.5          | 12.0  | 15.1   | 9.8   | 459.0            | 437.1   |

<sup>^</sup> Real time gross settlement system - with two subsystems i.e. Interbank Funds Transfer System (IFTS), and Scripless Securities Depository System (SSDS)

<sup>\*</sup> Real-time Retail Payments Platform refers to DuitNow services such as DuitNow Transfer, DuitNow QR etc.

Source: Bank Negara Malaysia (2024)

## 4.5 DIGITAL PAYMENT SYSTEMS AND ECONOMIC ACTIVITIES



The potential impact of the digital payment system on the country's economy is positive and significant, as it can enhance the efficiency, convenience, and security of transactions, as well as reduce the cost, risk, and environmental impact of cash handling (Bhuiyan et al., 2024)

Moreover, digital payment systems can also foster financial inclusion, innovation, and competitiveness, as well as support the development of the digital economy, e-commerce, and fintech sectors (Patra & Sethi, 2023)

According to Minister in the Prime Minister's Department (Economy) Datuk Seri Mustapha Mohamed, Malaysia's digital economy is projected to contribute **22.6%** to the nation's GDP and create around **500,000** fresh job opportunities by the year **2025** (MIDA, 2024)

## 4.6 CROSS-BORDER DIGITAL PAYMENT INITIATIVES AND COLLABORATIONS



# CROSS-BORDER DIGITAL PAYMENT INITIATIVES AND COLLABORATIONS



Signing of a Memorandum of Understanding (MOU) on Cooperation in **Regional Payment Connectivity (RPC)** during the G20 Leaders' Summit held in Bali, Indonesia

Solidified their **commitment to bolstering payment connectivity** to facilitate faster, cheaper, and more transparent cross-border transactions

President Joko Widodo of Indonesia emphasized the **significance of collaborative endeavours in tackling global challenges** during the signing ceremony, commending the commitment of the central bank governors to drive innovative breakthroughs

# CROSS-BORDER DIGITAL PAYMENT INITIATIVES AND COLLABORATIONS



Monetary Authority  
of Singapore



BANK NEGARA MALAYSIA  
CENTRAL BANK OF MALAYSIA



BANK INDONESIA  
BANK SENTRAL REPUBLIK INDONESIA



ธนาคารแห่งประเทศไทย  
BANK OF THAILAND

The collaboration also echoes ASEAN's vision for **interconnected payment systems**, with a focus on achieving faster, seamless, and affordable cross-border transactions by **2025**

The RPC is anticipated to play a pivotal role in **expediting regional economic recovery and fostering inclusive growth** by facilitating cross-border trade, investment, remittance, tourism, and financial deepening

The participation of central banks, BI, BNM, BSP, MAS, and BOT underscores the collective commitment to fostering regional payment connectivity, which is crucial for advancing **ASEAN's digital transformation agenda and promoting financial integration** within the region

## 4.7 SPECIFIC NEEDS TO IMPROVE THE PAYMENT SYSTEMS

# SPECIFIC NEEDS TO IMPROVE THE PAYMENT SYSTEMS

## Internet Connectivity

- Singapore leads in internet connectivity, followed by Thailand and Malaysia, albeit at a slower pace
- Collaborative efforts within ASEAN are vital to address these disparities, driving economic prosperity and digital inclusion across the region

## Malaysia's E-Payment Advancement Boosts E-Commerce

- Malaysia's advanced banking and financial sectors provide a competitive edge in developing and managing robust e-payment infrastructure
- Collaboration within ASEAN can further enhance Malaysia's e-payment ecosystem, fostering regional economic growth and digital innovation

## Regulatory Oversight for efficiency

- Countries are enhancing their payment systems infrastructure and institutions, both in retail and large-value segments, to adapt to technological advancements
- Regulatory authorities always need to consider the balance between efficiency and security

## Cross-Border Payment and Collaboration

- Through sustained collaboration among banks, regulators, and fintech innovators, Malaysia can establish standardized protocols and interoperable systems, fostering seamless cross-border transactions within ASEAN (DAN & Dewi, 2023)

## Protecting Individual Privacy in the Age of Big Data

- To assess the national landscape of privacy protection, the development of a cyberprivacy index could serve as a valuable tool in evaluating countries' efforts to safeguard citizens' privacy rights

## **4.8 LESSONS LEARNT FROM THE CASE STUDIES AND TRANSFER OF KNOWLEDGE AMONG OIC MEMBER COUNTRIES**

# LESSONS LEARNT FROM THE CASE STUDIES AND TRANSFER OF KNOWLEDGE AMONG OIC MEMBER COUNTRIES

## Propensity for Fast and Seamless Fund Transfer

With the introduction of RPP in Malaysia, there is the real-time, data-rich payments between accountholders in various financial institutions

## Enhancing Mobile Banking Capabilities

With the preference for mobile banking among customers as opposed to desktop online banking, Malaysia has been able to enhance its mobile banking capabilities

## Further enhancing the payment system through QR Payments

The convenience of using QR payments with mobile phones is a step further in enhancing the payment systems which deemphasizes the use of cash and bank cards

## Continued relevance of Cards

Despite the increasing rise in digital payments, including the use of QR payments, there is continued trust in bank cards. Both debit and credit cards are still being used and are trusted for both in-store and e-commerce payments

## Significant reduction in cash usage

With the increasingly diversified digital payment systems, there is less reliance on cash. It appears that one of the lessons learnt from the pandemic was erosion in cash usage

## Benefits of Cross-border collaborations

The collaboration among the ASEA countries to develop a robust cross-border payment systems infrastructure makes a good case for the OIC-wide payment systems infrastructure which will help promote trade and boost the economies of the member countries

## 4.9 COUNTRY-SPECIFIC POLICY RECOMMENDATIONS

## 1. SUSTAINED PROMOTION OF DIGITAL PAYMENTS



Malaysia should continue to **promote the use of digital payments** through various strategies, particularly in the rural communities

Customers should be encouraged to discontinue the use of traditional methods such as cheques and cash. This requires some **incentives** and **public awareness campaigns**

Digital payments platforms need to be **user-friendly** and **accessible to all**, including people who reside in the rural areas and the underserved communities



## 2. STRENGTHEN CYBERSECURITY

Malaysia through BNM and other industry partners such as the SC has taken giant steps in **enhancing cybersecurity** to minimize the risks associated with digital payments

There is still a need for continuous improvement, enhancement and finetuning to ensure a robust, resilient and ironclad **cybersecurity protocols** are deployed in the payment systems infrastructures in the country

**Bilateral and multilateral arrangements** on cybersecurity cooperation not only with regional partners but also with all OIC member countries could help promote information exchange and further support ongoing capacity building initiatives



## 3. PROACTIVE REGULATORY REFORMS



The payment landscape keeps evolving, particularly the digital payment systems with the **proliferation of Fintech**

BNM need to continue **to track developments globally** and **monitor emerging risks** which would help in updating and reforming existing regulatory policies



## 4. FOSTER AN ENVIRONMENT THAT ENCOURAGES INNOVATION

Malaysia needs to continue to foster an environment that **promotes innovation** and **adoption of new technologies** in the payment systems.

To control the activities of **non-state** or **faceless players** who have utilized blockchain technology in introducing cryptocurrencies

Hence, BNM should actively consider enhancing its payment systems through the **introduction of CBDC**. Utilizing blockchain for its regulatory and supervisory roles will also **enhance service delivery** and **promote transparency**.

## 5. PROMOTE FINANCIAL LITERACY

### Financial Literacy

*[fə-'nan(t)-shəl 'li-t(ə-)rə-sē]*

The ability to understand and effectively use various financial skills, including personal financial management, budgeting, and investing.

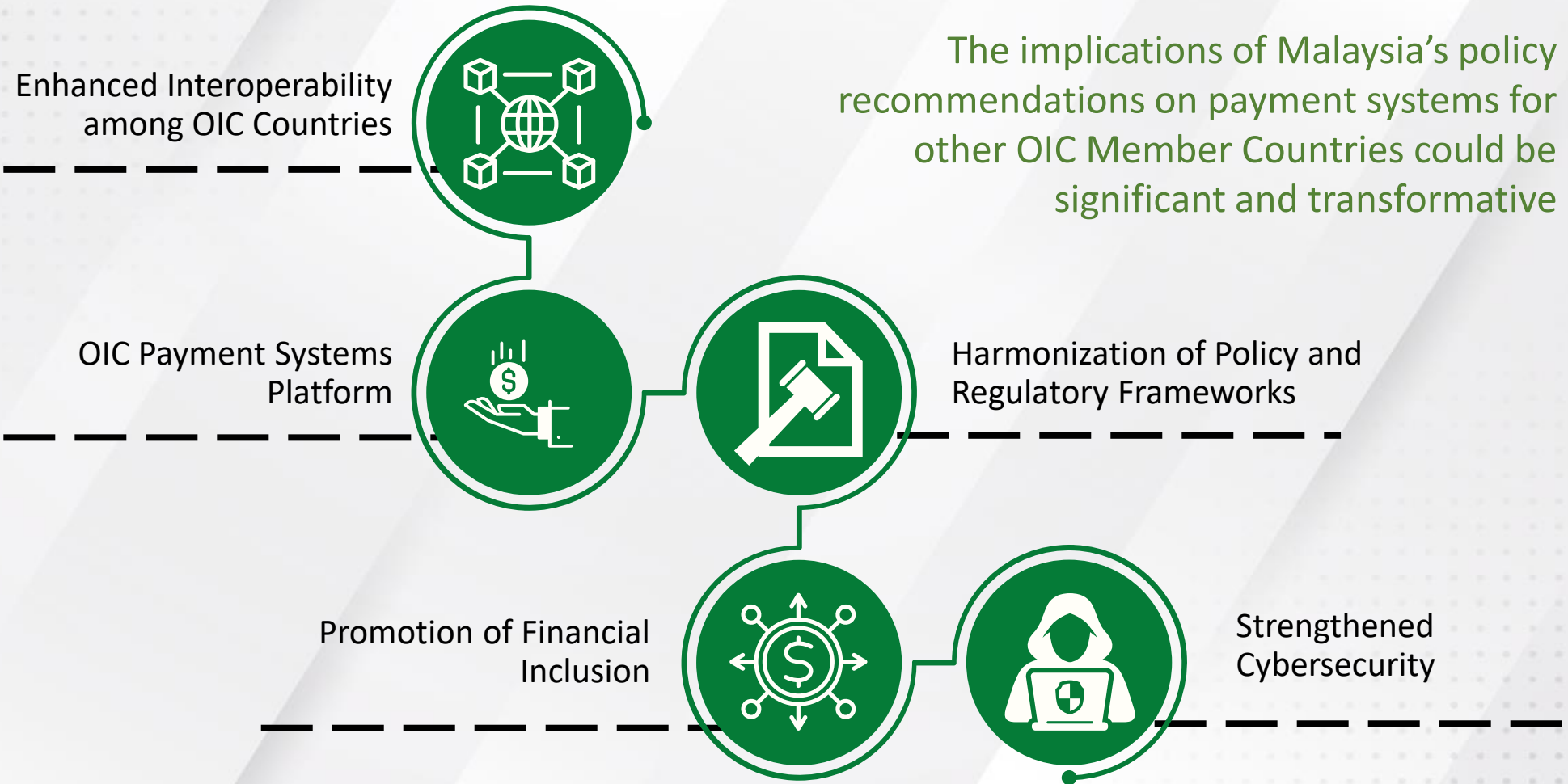
 Investopedia

Consumers, particularly the underserved and vulnerable, need to be **well informed** about digital payments, including how to benefit from its potentials and protect themselves against the risks

Understanding the benefits, risks and security aspects of digital payments would help such consumers utilize such payment systems with **enhanced user experience**

## **4.10 IMPLICATIONS OF POLICY RECOMMENDATIONS FOR OIC MEMBER COUNTRIES**

# IMPLICATIONS OF POLICY RECOMMENDATIONS FOR OIC MEMBER COUNTRIES



COMCEC COORDINATION OFFICE

Ankara, Türkiye

30 April 2024

Thank You

