

World Bank Fast Payments Toolkit

Case Study: Malaysia

RPP (Real-time Retail Payments Platform) | 2018

Payment Instruments



Credit Transfer



E-money

Use Cases/Services



Merchant Payment



Bill Payment



Glossary of terms

S. No.	Term	Definition
1	GDP	Gross Domestic Product at current price
2	Income Category	Classification as per World Bank based on Gross National Income (GNI) per capita
3	CPMI	Committee on Payments and Market Infrastructure
4	FPS	As per CPMI, fast payment system is defined as payments in which the transmission of the payment message and the availability of final funds to the payee occur in real time or near-real time and on as near to a 24-hour and 7-day (24/7) basis as possible
5	Oversight	Regulating or governing body supervising the payments system
6	Operator	Institutions responsible for the operation of the payment system
7	Alias	Alternative to bank account numbers for increased convenience of the customer. For e.g., mobile number, national identification number
8	Access Channels	Modes used by customer to initiate transaction on FPS. For e.g., branch, internet, mobile
9	Individual Payment Type	Person to person (P2P) – Payment between individuals for non-business purposes
10	Business Payment Type	Person to Business (P2B) – Payment from an individual to a business entity Business to Person (B2P) – Payment from a business entity to an individual Business to Business (B2B) – Payment between two business entities
11	Government Payment Type	Person/Business to Government (P/B2G) – Payment from person/Business to a government institution Government to Person/Business (G2P/B) – Payment from government institution to a person or business entity
12	Credit transfers	Credit transfers are payment instruments based on payment orders or possibly sequences of payment orders made for the purpose of placing funds at the disposal of the payee
13	Direct Debits	Direct debits are payment instruments in which the transaction is pre-authorized, and funds are blocked in account for a debit to be initiated at a future date. In direct debits, payer's account is debited on execution of mandate by merchant or payee
14	E-money	E-money is a prepaid value stored electronically, which represents a liability of the e-money issuer (a bank, an e-money institution or any other entity authorized or allowed to issue e-money in the local jurisdiction), and which is denominated in a currency backed by an authority

Abbreviations

S.No.	Term	Expanded form
1	AMLA	Anti-Terrorism Financing and Proceeds of Unlawful Activities Act 2001
2	BNM	Bank Negara Malaysia
3	FSA	Financial Services Act 2013
4	ICTF	Interoperable Credit Transfer Framework
5	IFSA	Islamic Financial Services Act 2013
7	MEPS	Malaysian Electronic Payment System Sdn Bhd
8	NRIC	National Registration Identity Card
9	PayNet	Payments Network Malaysia Sdn Bhd
10	PGMC	The PayNet Group Management Committee
11	RPP	Real-time Retail Payments Platform

Select parameters



GDP

GDP – \$365 billion



Income Category

Upper Middle Income



Population

32 million



Access to mobile phone*

78.75%



Access to internet*

87.4%



Bank account coverage*

85.5%



Branches per 100,000 adult

10.05



Made or received digital payment in last 1 year*

70.42%



Received government wages or transfer in account*

40.30%

Source : World Bank – 2019, Income Category: World Bank – June 2019

Currency Exchange Rate USD 1 = MYR 4.14 <2019 Average, World Bank>

Others – World Bank 2017

- For age >15 years
- Access to internet - [Internet Users Survey 2018](#) conducted by the Malaysian Communications and Multimedia Commission (MCMC)

How to read this report

- This **deep dive report** relates to the **RPP** in **Malaysia**
- It has been developed based on **primary interviews** with key stakeholders such as **regulators, operators** and **service providers** in the system as well as by leveraging **secondary sources**
- Key secondary sources include BNM website, PayNet website and BNM publications
- The table below presents a legend to assist readers as they navigate through different sections of the report

Legend



The first slide of every section includes a chapter summary to provide readers with an overview of the section contents



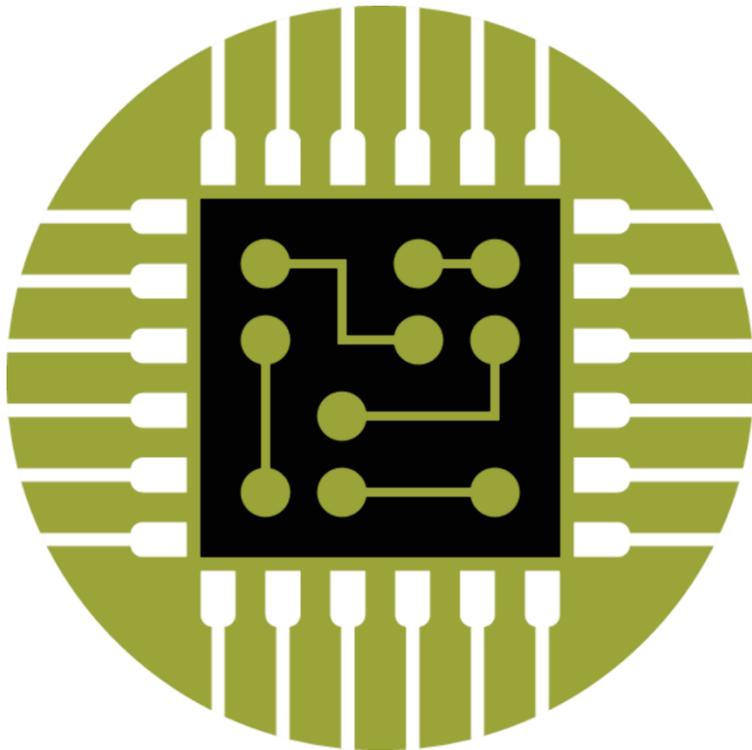
The green box with the adjacent icon indicates **section/sub-section summary across** the report. Reader may choose to read through this for a **high-level overview on the selected topic**

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A. Executive Summary

Real-time Retail Payments Platform | Malaysia FPS



- Real-time Retail Payments Platform (RPP) is a fast payment system (launched in 2018) that enables Malaysian consumers, businesses and government agencies to make real-time, data-rich payments between accounts at participating financial institutions
- RPP was launched by PayNet, the operator of shared payments infrastructure formed by merger of MEPS (Malaysian Electronic Payment System) - an interbank network service provider in Malaysia and MyClear (Malaysian Electronic Clearing Corporation Sdn Bhd) - a wholly-owned subsidiary of Bank Negara Malaysia.
- The implementation of the RPP took approximately **1 year** with ACI selected as vendor to support the implementation
- **DuitNow** is the initial service offered to the public under the platform, an **instant credit transfer with an aliasing service that works on mobile numbers, -national ID, passport numbers and business registration numbers**
- RPP transactions are settled in **RENTAS**, -the RTGS system operated by PayNet

Key features of RPP are

- Real time payments
- Operates 24x7x365
- Enterprise Risk Management Framework
- National addressing database
- Cross-Border payment including QR
- ISO 20022 messaging standard

- Users can make RPP payments via their **internet banking or mobile banking/payment applications**. They can also make payments via **QR codes, and ATM**
- Currently, RPP supports **P2P and merchant payments**, while new services, i.e., **Request-To-Pay (including bill payments), Consent (e-Mandates), Real-time Debit** and **cross-border payments** are under development
- Efforts are being made to facilitate interoperable QR code payments with other countries in the region including Thailand, Indonesia and Singapore

B. Detailed Report

1. Overview

Chapter sections:

- 1.1. Background & Objectives
- 1.2. System Development & Key Timelines



Chapter Summary:

- MyClear and MEPS were merged in 2017 to form PayNet, which operates Malaysia's shared Payment Infrastructure, and is jointly owned by BNM and the financial services industry.
- Pursuant to an industry consultation facilitated by BNM, PayNet decided to embark on a multi-year program to modernize the payments infrastructure, by migrating the pre-existing instant fund transfer system leveraging on the ATM/card switch (Instant Transfer) to a new system (RPP).
- The RPP is envisaged to be an open, highly agile and scalable system with richer data elements (ISO20022) to facilitate the development of new features, and onboarding of new players, and cross-border interoperability.
- After a vendor selection process, ACI was appointed to build the RPP.
- The development of the RPP took approximately **1 year** and was **launched in December 2018**.
- RPP supports an instant credit service (DuitNow) where payments can be made using **mobile number, business registration number, National Registration Identity Card (NRIC) number and passport** numbers as an alias, as well as an interoperable QR code payment service (DuitNow QR).
- New services would be introduced under the RPP from 2021 onwards (Request-To-Pay, Consent (e-Mandates), Real-time Debit, Cross-Border Payments in order to enhance customer experience and meet user needs.

1.1. Background and Objectives



- PayNet launched a multi-year program to modernize **Malaysia's payment infrastructure**, major part of it was a plan to develop a new Real-time Retail Payments Platform that will serve as both a catalyst and enabler for innovative payments in Malaysia

Malaysia had an instant fund transfer system (Instant Transfer) from as early as 2011. It was facilitated by an ATM/card switch and was available via ATM, mobile and internet banking. Over time, there was a growing need for a real-time payment system with a higher degree of agility and scalability and that supports richer messaging standards

Pursuant to an industry-wide consultation facilitated by BNM, PayNet decided to embark on a multi-year program to modernize and future-proof Malaysia's payments infrastructure. A key component of this is the development of the RPP not only to replace the Instant Transfer system, but also to serve as an open, agile and scalable platform with richer data elements to meet the emerging and future needs of the economy. In line with the Interoperable Credit Transfer Framework (ICTF) issued by BNM, the RPP provides fair and open access to both banks and eligible non-bank e-money issuers, and facilitates interoperability and seamless payments between bank accounts and e-money accounts.

Objectives

As per PayNet Website

- Provide the nation with a cost effective, agile platform, to respond quickly to new requirements and innovations, ensuring needs that can meet in a timely & efficient manner and Malaysia's e-Payment ecosystems remains capable, relevant and competitive
- Customers of financial institutions connected to the RPP will be able to make or receive payments in a matter of seconds. The platform also supports the flow of information with these payments, carrying extended data to describe a payment or allow the attachment of documents like invoices and receipts. And all of this can happen 24 hours a day, 365 days a year.

As per PayNet Website

PayNet the national payments network and central infrastructure provider, has implemented the Real-time Retail Payments Platform (RPP) that will facilitate interoperable payments

A central feature of the RPP is the national addressing database that will allow payments to be made using mobile phone numbers, National Registration Identity Card (NRIC) numbers, and passport numbers instead of referencing bank account numbers.

In line with principles of fair and open access, the RPP is open to both banks and eligible non-bank payment service providers

RPP sets in place a real-time clearing and messaging infrastructure, aimed to efficiently and cost effectively support Malaysia's current and future Retail e-Payment services needs. One of the objectives was to build a highly resilient architecture, built for high volume, based on ISO20022 standards.

2. Business and Operating Model

Chapter sections:

- 2.1. FPS Structure
- 2.2. Participants
- 2.3. Payment Instruments, Types & Use – Cases/Services
- 2.4. Aliases, Overlay and Access Channels
- 2.5 Scheme Pricing and Fee Structure



Source: PayNet| BNM

Chapter Summary:

- The RPP enables Malaysian **consumers, businesses and government agencies** to make payments in MYR between accounts at participating financial institutions (banks and non-bank payment service providers)
- **DuitNow** is the initial service offered to the public under the RPP, an **instant credit transfer service with a national addressing database that links mobile numbers, and NRIC numbers, passport numbers and business registration numbers to account numbers**
- **DuitNow QR** is an interoperable QR code payment service facilitated by the RPP, where a merchant can accept payments from customers of different participating financial institutions via a unified QR code
- The RPP transactions are settled on a deferred net basis via the **RENTAS**, which is the RTGS operated by the PayNet
- RPP payments can be made **via the Internet banking and mobile banking/payment applications and ATMs** of the participating financial institutions
- Fees are applicable to participating financial institutions while the fees for transfers of 5,000 MYR and below are waived for individuals and SMEs
- Currently, RPP supports **P2P and merchant payments (DuitNow and DuitNow QR)**, while new services, i.e., **Request-To-Pay (including bill payments), Consent (e-Mandates), Real-time Debit** and **cross-border payments** are under development

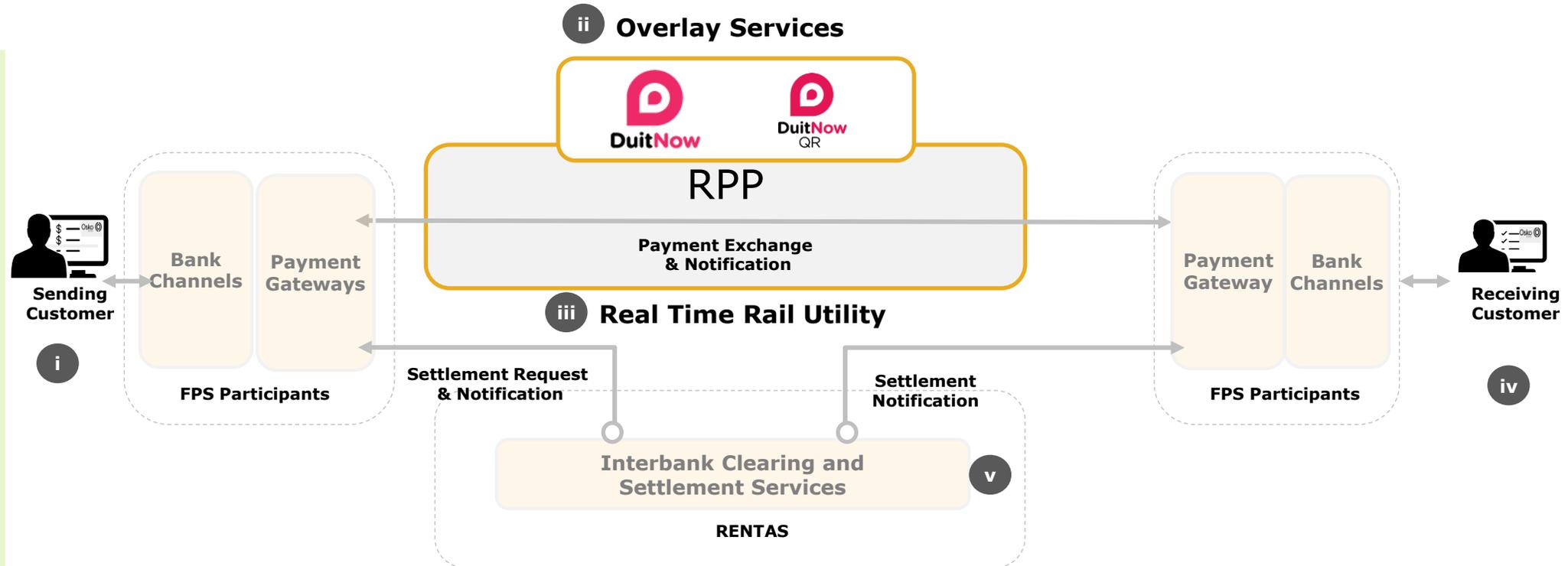
2.1. FPS Structure



- **DuitNow** is the first service offered to the public under the platform, an **instant credit transfer service with an aliasing service that works on mobile numbers, NRIC numbers, passport numbers and business registration numbers**

- **DuitNow QR** is an interoperable QR code payment service facilitated by the RPP, where a merchant can accept payments from customers of different participating financial institutions via a unified QR code

- **RENTAS is the real-time gross settlement system** in Malaysia



DuitNow and DuitNow QR

As per the website

- With DuitNow, customers can make payments via easily remembered identifiers such as mobile numbers, as well as National Registration Identity Card (NRIC) numbers, passport numbers, and Business Registration numbers
- Through DuitNow QR, consumers can make payment from any participating Banks or e-Wallets mobile apps. Merchants would only need to display one QR Code, thus lessening confusion amongst consumers

RENTAS

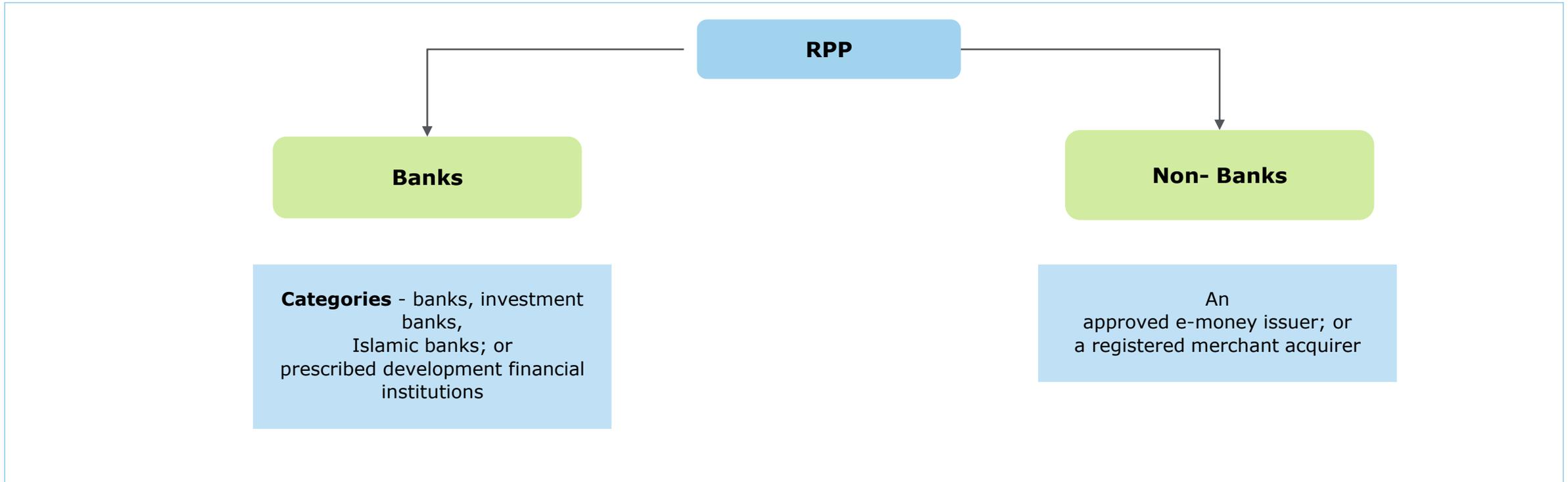
As per the website

- The RENTAS system is a real time gross settlement system (RTGS) for the transfer and settlement of high value ringgit denominated interbank funds and securities transactions. RENTAS System will enable payment instructions between the participants of the System to be processed and settled individually and continuously during the working hours

2.2. Participants (1/2)



Banks and non-banks PSPs can participate in RPP, with a detailed set of description for both categories below



Adoption Statistics (as at end-Sep 2020)

30 Major Banks

6 Non-Banks¹

These 30 banks account for over 99.9% of total current and savings accounts in Malaysia

¹ Admitted as a participant in the RPP and in the process of rolling out the DuitNow and DuitNow QR services

2.2. Participants (2/2)



- RPP regulations and access framework **provide the additional requirements** for Non-Bank Participants to be eligible as a RPP member
- ICTF mandates PayNet to provide an open and fair access regime for banks and non-bank participants

Eligibility Considerations

As per the PayNet Website :

Approved E-Money Issuers must be an established company and shall demonstrate the ability to comply with at least one of the following minimum requirements to be considered for admission:

- Must be an established company with at least 500,000 active users (defined as having at least one financial transaction per month) for a consecutive period of six months, or has demonstrated the potential to reach 500,000 active users in the near term
- Achieved a market share of at least 5% of the total e-money transaction volume or transaction value in Malaysia for a given year beginning 2017
- Achieved a market share of at least 5% of the total outstanding e-money liabilities in Malaysia for a given year beginning 2017
- Is an affiliate of an Eligible Issuer of E-Money as defined in BNM's ICTF

Registered Merchant Acquirers are required to comply with the following minimum requirements to be considered for admission:

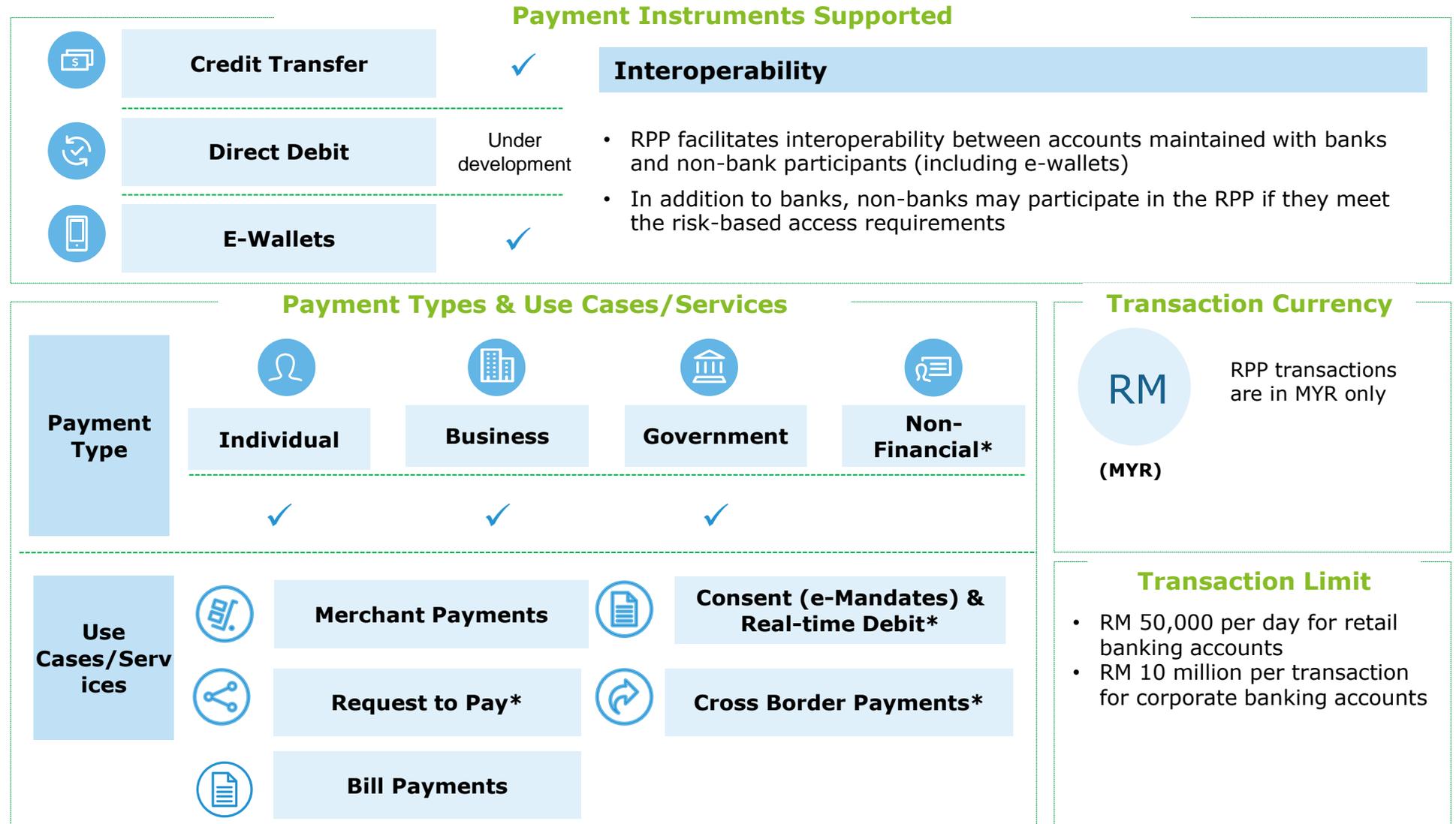
- Must be a company incorporated in Malaysia with at least a three years track record in e-payments and/or merchant acquisition. For an applicant without the requisite track record, the track record of its parent company or controlling shareholder may be taken into consideration
- Possess sufficient financial strength and technical capabilities, with a minimum paid-up capital of RM500,000.00 and at least RM500,000.00 in net shareholders' equity based on its audited financials or unaudited management accounts
- Have a substantial number of merchants already acquired by the Registered Merchant Acquirer
- Commit to provide an initial bank guarantee from a Financial Institution in Malaysia amounting to RM100,000.00 in favour of PayNet and agree that PayNet may draw on the Registered Merchant Acquirer's bank guarantee if the Registered Merchant Acquirer breaches any of its obligations specified in the RPP Scheme Rules
- All Non-Bank Applicants shall provide written consent to allow PayNet to validate the Non-Bank's credit worthiness and financial standing with relevant credit bureaus and credit reporting agencies

2.3. Payment Instruments, Payment Types, and Use Cases/Services



- RPP enables transfers between accounts at **different participating banks** and non-banks
- Currently, there is a maximum **transaction limit of RM 50,000 for retail transactions and RM 10 Million for Corporate Banking transactions**
- Currently, RPP supports **P2P and merchant payments**, while new services, i.e. **Request-To-Pay, Consent (e-Mandates), Real-time Debit** and **cross-border payments** are under development

Source: PayNet| BNM



* Under development

*e.g., Balance Enquiry, Transaction status check, etc.

2.4. Aliases, Overlay & Channels

DuitNow

As per the Website

- DuitNow allows customer to send money instantly on a 24/7 basis to mobile numbers, NRIC numbers, passport numbers or business registration numbers. Customers can send and receive funds instantly anytime, anywhere
- Customers must first register for DuitNow by linking one of the following IDs with their bank account or e-money account at participating banks and payment providers :
 - Customer Mobile number
 - Customer NRIC number
 - Customer Passport number
 - Business registration number
- Once customers have registered, payers can direct payments to them using the registered ID (DuitNow ID)
- DuitNow supports future dated and recurring transfers
- DuitNow is free for individuals and SMEs to send and receive money up to RM 5,000. For transaction above RM 5,000, a 50 sen fee may be applicable. However, some banks are waiving this fee
- Consumers may transfer up to RM 50,000 per day at banks. Businesses may transfer up to RM 10,000,000 per transaction at banks

Aliases

Mobile phone number

National Registration Identity Card/Passport Number

Business Registration Number

- Users can simply transfer funds using Mobile numbers, national registration identity card (NRIC), passport numbers and business registration numbers which acts as a unique no. for them
- PayNet as operator has to comply with all risk management frameworks as mandated by BNM to access the National Addressing Database for aliases
- To enhance security, after maximum number of lookups, the session gets blocked. Lookup session is applicable for all single transactions. For bulk payments, lookup session is optional

Access Channels



Internet Banking



Mobile Banking/Apps



QR Code

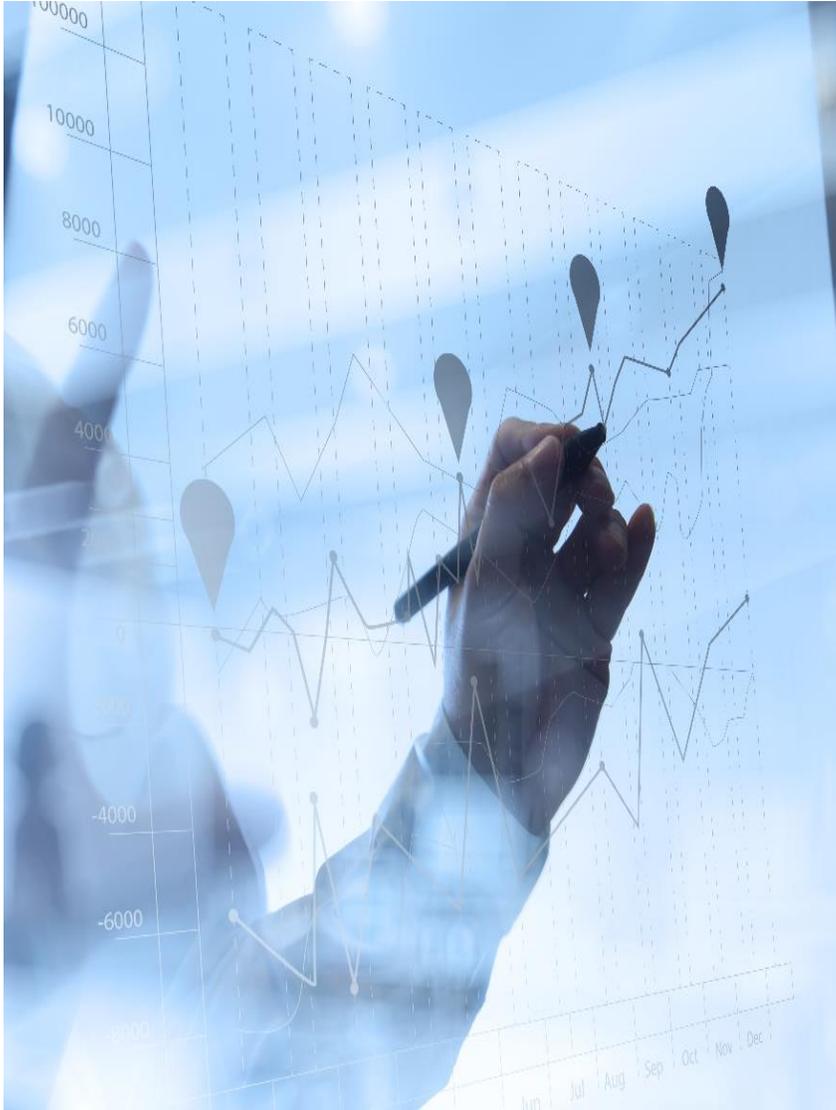


ATM (depending on PSP)



Branch (depending on PSP for DuitNow ID registration)

3. User Adoption



Source: PayNet| BNM

Chapter Summary:

- User adoption of RPP has been encouraging. RPP has witnessed steady growth since its launch
- As at end-September 2020, 30 **major banks accounting for over 99.9% of total current and savings accounts in Malaysia, and 6 non-banks¹** have participated in the RPP

¹ Admitted as a participant in the RPP and in the process of rolling out the DuitNow and DuitNow QR services

4. Technical Details and Payment Process

Chapter sections:

4.1. Technical Details | APIs and QR Codes

4.2. Payment Process (Liquidity Management and Settlement)



Source: PayNet| BNM

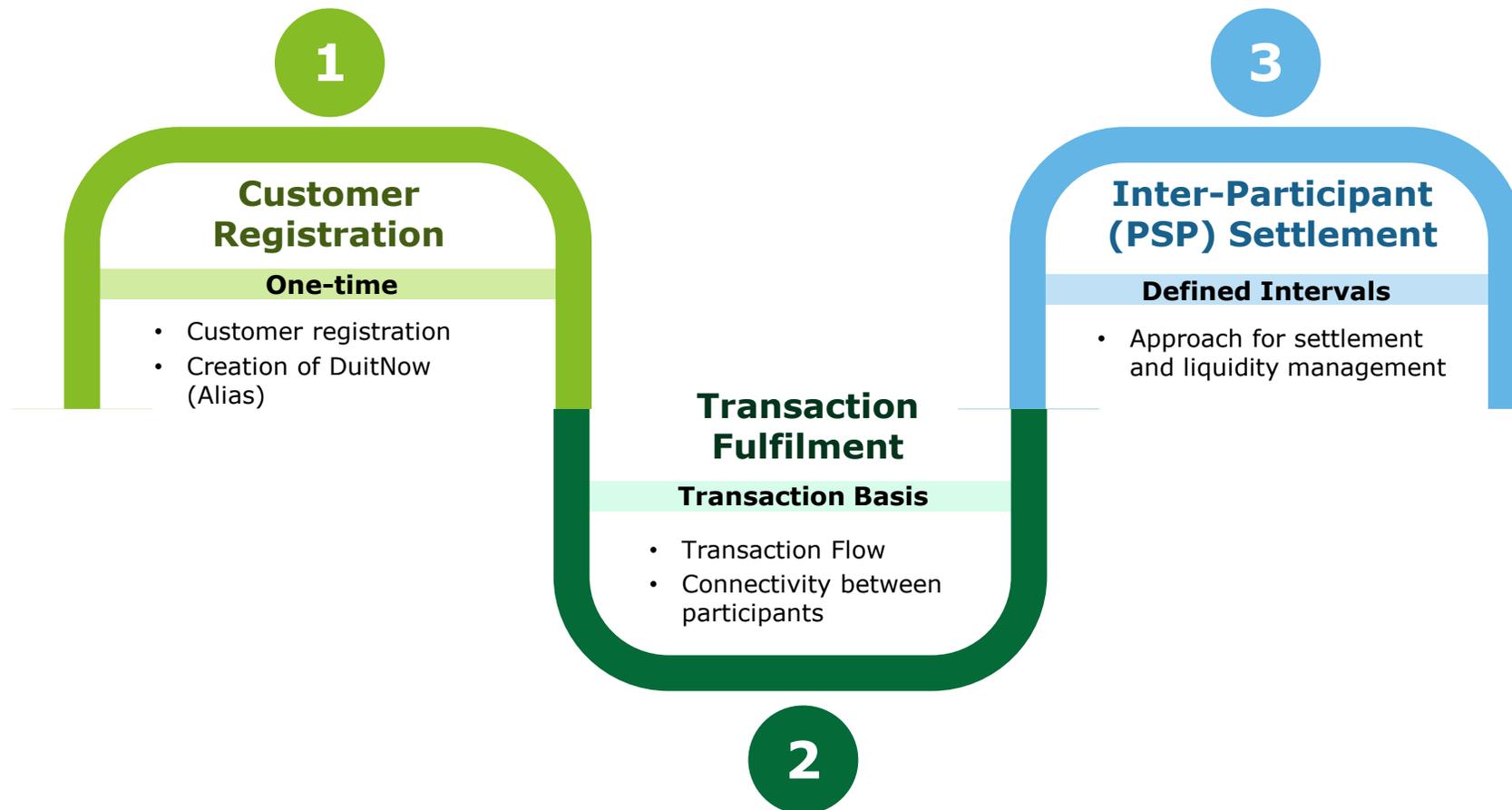
Chapter Summary:

- RPP has adopted **the ISO 20022 messaging standard**, which enables the sending of richer and more complete remittance information with a payment (250 characters)
- **DuitNow QR is Malaysia's National QR Standard and an interoperable QR code payment scheme/service** established by PayNet under the Interoperable Credit Transfer Framework issued by BNM
- Efforts are currently underway to enable cross-border and interoperable QR code payments with other countries in the region including Thailand, Singapore and Indonesia.
- **RPP transactions are subject to the same customer authentication standards** banks use for all its internet and mobile banking transactions
- While Open APIs guidelines are present, Participants' authorization is required for merchants and / other third party to have access to RPP APIs due to security reasons
- RPP transactions are settled via the deferred net **settlement model with 2 cycles daily**
- For **Liquidity, collateralized intra-day credit facility is provided by the central bank**

4.1. Payment Process



The steps in the payment process include **one-time customer registration, payer-payee transaction fulfilment and inter-participant settlement**. Subsequently, various aspects related to these areas are covered



4.2. Payment Process | Liquidity Management and Settlement



- RPP transactions are settled via the **RENTAS**
- For **Liquidity , collateralized intra-day credit facility is provided by BNM**

Settlement Mechanism

Approach	 Hub	Type Time	Deferred Net Settlement 2cycles per day	Settlement Institution	• BNM
<ul style="list-style-type: none"> • Settlement for RPP transactions is via with the Central Bank Accounts (ie via RENTAS which is Malaysia’s RTGS). • Current system is based on a deferred net settlement model (2 cycles daily) The first cycle occurs at 11 AM and the next at 3:50 PM • At this stage, non-bank participants of the RPP do not have direct access to the settlement system or RTGS (RENTAS). In this regard, such non-banks would conduct their settlement of RPP transactions through settlement banks. 					

Liquidity Management

- For RENTAS based transactions banks need to have enough liquidity to settle these transactions
- In addition, collateralized intra-day credit is provided by BNM

5. Governance Framework

Chapter sections:

- 5.1. Legal and Regulatory Aspects
- 5.2. Risk Management
- 5.3. Dispute Resolution & Customer Complaints



Source: PayNet| BNM

Chapter Summary:

- The **legal framework in Malaysia, i.e., the Central Bank of Malaysia Act 2009, the Financial Services Act 2013 and the Islamic Financial Services Act 2013**, provide an explicit mandate to **BNM for promoting safe, efficient and reliable payment systems and instruments.**
- The legal framework has also been enhanced with regulatory standards issued by BNM including the **Interoperable Credit Transfer Framework (ICTF).**
- BNM is responsible for the payment system oversight, and it **also has a catalyst role in the payments system development.**
- Payments Network Malaysia Sdn Bhd (PayNet) is the **operator of Malaysia's national payments network and shared central infrastructure for Malaysia's financial markets.** As the national provider of financial market utilities, PayNet aims to build inclusive, accessible and efficient payments and financial eco-systems for Malaysia.
- **Bank Negara Malaysia (BNM) is PayNet's single largest shareholder, with eleven Malaysian's financial institutions** as joint shareholders.
- Guidelines on operational procedures and dispute resolution among participants are established by PayNet as the operator of the RPP. Customer complaints are handled by the participants themselves.
- **RPP has a privately held Enterprise Risk Management Framework that is shared across to participants and contains the mechanism for handling operational and fraud risk activities.**

5.1. Legal and Regulatory Aspects (1/3)



The legal framework in Malaysia provides an **explicit mandate to BNM** for promoting safe, efficient and reliable payment systems and instruments. Additionally, the legal framework has been enhanced with regulatory standards issued by BNM including **the Interoperable Credit Transfer Framework**

Institutional and Governance Framework

Legal Framework

CBA, FSA and IFSA

Regulator and Overseer

BNM

Owner and Operator

PayNet

As per the BNM Website

- **Central Bank of Malaysia Act 2009 (CBA)** – An Act to provide for the administration, objects, functions and powers of BNM, including to exercise oversight over payment systems
- **Financial Services Act 2013** - An Act to provide for the regulation and supervision of financial institutions, payment systems and other relevant entities and the oversight of the money market and foreign exchange market to promote financial stability and for related, consequential or incidental matters
- **Islamic Financial Services Act 2013** -An Act to provide for the regulation and supervision of Islamic financial institutions, payment systems and other relevant entities and the oversight of the Islamic money market and Islamic foreign exchange market to promote financial stability and compliance with Shariah and for related, consequential or incidental matters.

In carrying out its mandate under the CBA, FSA and IFSA, BNM have issued various regulatory standards including **the ICTF** that seeks to **foster an efficient, competitive and innovative payment landscape in Malaysia by enabling the interoperability of credit transfer services and promoting collaborative competition (co-opetition) between banks and non-bank e-money issuers through fair and open access to shared payment infrastructure.**

The broad areas of policy requirements are in-

- **Interoperable credit transfer services**
- **Fair and open access to a shared payment infrastructure**
- **Innovation sandbox and open APIs**
- **Proportionate risk management**
- **Customer protection**

5.1. Legal and Regulatory Aspects (2/3)



BNM is responsible for the **oversight and regulation of the payments systems and instruments** and is empowered to issue regulatory standards to promote safe, efficient and reliable payment systems and instruments

Institutional and Governance Framework

Legal Framework

CBA, FSA and IFSA

Regulator and Overseer

BNM

Owner and Operator

PayNet

As per the BNM Website

BNM is a statutory body which is mandated **to promote monetary and financial stability**. This is aimed at providing a conducive environment for the sustainable growth of the Malaysian economy.

Besides regulating and overseeing payment systems and instruments to ensure their safety, efficiency and reliability, BNM also plays a developmental role to promote a sound, progressive and inclusive financial system which includes fostering continuous improvements to and future-proof the payments infrastructure to meet the emerging and future needs of the economy

There are several aspects to the BNM's role in payment systems

- **Regulation and oversight** Develop policies and issue regulatory standards to promote safe, efficient and reliable payment systems and instruments in Malaysia
- **Supervision** -Develop, enhance and implement an effective surveillance and supervision framework over operators of payment system, issuers of designated payment instruments and registered merchant acquirers
- **Catalyst:** Promote an enabling environment to accelerate migration to e-payments, and foster continuous enhancements and future-proofing of key payments infrastructure to meet the needs of the economy
- As BNM is both regulator and a shareholder in PayNet , it has put in place robust governance controls in order to avoid conflict of interest

5.1. Legal and Regulatory Aspects (3/3)



PayNet is the operator of Malaysia's payments network and shared central infrastructure for financial markets with a mission of being trusted enabler of inclusive and collaborative financial ecosystem and vision of empowering Malaysia digital economy

Institutional and Governance Framework

Legal Framework

CBA, FSA and IFSA

Regulator and Overseer

BNM

Owner and Operator

PayNet

As per the PayNet Website

PayNet is the operator of the national payments network and shared central infrastructure for Malaysia's financial markets. As the national provider of financial market utilities, PayNet aims to build inclusive, accessible and efficient payments and financial ecosystems for Malaysia

BNM is PayNet's single largest shareholder, with eleven Malaysian's financial institutions namely, Malayan Banking Berhad, RHB Bank Berhad, Public Bank Berhad, CIMB Bank Berhad, AmBank (M) Berhad, Hong Leong Bank Berhad, Affin Bank Berhad, Alliance Bank Malaysia Berhad, Bank Islam Malaysia Berhad, Bank Muamalat Malaysia Berhad and Bank Kerjasama Rakyat Malaysia Berhad, as joint shareholders

In line with this developmental objective, PayNet's shareholders do not receive dividends, and surplus profits are instead re-invested to ensure that the nation's financial market infrastructures and payment eco-systems are resilient, competitive and accessible to all

PayNet's **Board of Directors comprises representatives from Bank Negara Malaysia (BNM), Financial Institutions and independent members**. The Board of Directors is primarily responsible to govern and set the strategic direction of PayNet and is responsible to oversee the activities of the Management in managing PayNet in accordance with the strategic direction and delegation of the Board.

The Board is assisted by three Board Committees, namely the Nomination and Remuneration Committee, Board Risk Committee and Board Rules Committee

The PayNet Group Management Committee (PGMC) is the decision-making body of the Company. PGMC is responsible for formulating procedural policies and making decision for day-to-day operations, management and administrative issues based on delegation of all powers, authorities and discretion by the Board

5.2 Risk Management



RPP has a privately held Enterprise Risk Management(ERM) Framework that is shared across to participants and contains the mechanism for handling operational and fraud risk activities

Security & Technology Risk

- RMIT has been mandated across banks and payment operators
- Apart from RMIT, details included as part of the Enterprise Risk Management Framework needs to be followed

Operational & Fraud Risk

- **The Financial Services Act 2013 (FSA 2013) sets** out prudential requirements on an operator of a payment system including the requirement to implement measures to ensure the safety, security and operational reliability of payment system. To this end, **PayNet as the operator of the RPP has established scheme rules to manage potential operational and fraud risks among its participants**
- **PayNet has laid out an extensive ERM** and has many interrelated components which needs to be followed

KYC / AML

- **The Anti-Money Laundering, Anti-Terrorism Financing and Proceeds of Unlawful Activities Act 2001 (AMLA)** is the primary statute governing the AML/CFT regime in Malaysia. **The AMLA provides for the offence of money laundering and terrorism financing** and the measures to be undertaken for the prevention of money laundering and terrorism financing offence

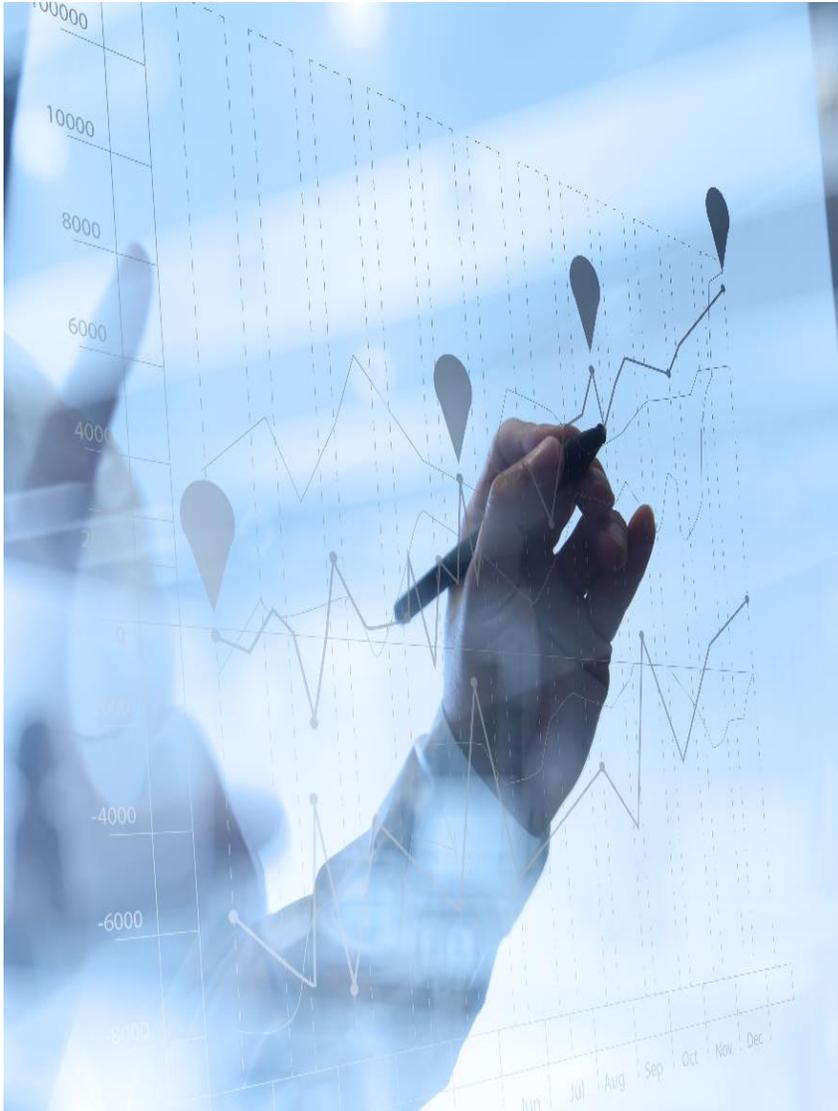
Liquidity & Settlement Risk

- Commercial banks are required to have robust liquidity strategies, internal control measures and processes to manage liquidity needs
- In the event of liquidity shortages, banks may utilize the intraday credit facility (collateralized and interest-free) and the standing facilities provided by BNM

Cyber Security

- RPP is an active platform, and 4 nodes are running simultaneously
- There are various other areas to take cognizance of including governance and technology risk perspective as part of RMIT
- Includes mechanism defined as part of the Enterprise Risk Management Framework

6. Annexure



Chapter sections:

6.1. Key Features

6.1. Key Features

👤 Features

Key Highlights

	Operating hours	<ul style="list-style-type: none"> • 24*7 including weekends and bank holidays
	Payment Speed	<ul style="list-style-type: none"> • Real Time
	Transaction limit (DuitNow*)	<ul style="list-style-type: none"> • Consumers may transfer up to RM 50,000 per day at banks. • Businesses may transfer up to RM 10,000,000 per transaction at banks.
	Alias	<ul style="list-style-type: none"> • Mobile numbers, national registration identity card numbers (NRIC), passport numbers, business registration numbers
	Channel	<ul style="list-style-type: none"> • Internet, Mobile, QR code, ATM and branch channels
	User Charges (DuitNow*)	<ul style="list-style-type: none"> • For transaction up to RM 5,000, fee is waived for individuals and • For transaction above RM 5,000, a 50 sen fee may be applicable
	Infrastructure setup	<ul style="list-style-type: none"> • Built as a new system
	Messaging format	<ul style="list-style-type: none"> • ISO 20022
	Use of Open APIs	<ul style="list-style-type: none"> • Allowed (being developed)
	Authentication	<ul style="list-style-type: none"> • As per the BNM Guidelines

Payment Types & Use Cases/Services

 Individual	 Business	 Government
 P2P & Merchant payments	 Bulk / Batch Payment	
 Schedule future payments	 Request to Pay (including Bill Payments*)	
 Consent (e-Mandates and Real-time Debits*)	 Cross-Border payments	

* Under development

Settlement

Approach	 Hub	 RTGS	 Distributed clearing
Type Time	Deferred Net Settlement	2 Cycles per day	