National Payment Switch
Agenda

› **Concept of Payment Switch**
  - Retail Payments
  - The current payment landscape
  - The case for a National Payment Switch

› **Key Benefits**
  - For Customers
  - For Operators

› **Value added services**
What is a switch?

› It is not a power switch

› It has a network switch connotation

A device where messages are centrally routed

A Switch is a central **domestic** point where all electronic payment messages will be routed from one bank to another.
National Payment Switch

- Card Payment System (CPS)
- Instant Payment System (IPS)
Retail payments

› Cash, cheques, cards and mobile payments

› Cash in circulation
  – Rs 36.4 billion

› Cheques
  – 4.1 million cheques for value Rs254 billion per year

› Card payments
  – At POS: Rs69 billion per year
  – Cash withdrawal at ATM: Rs 102 billion per year
Bank in Mauritius?

N

POS
Card Holder

our Card?

N

International Payment Gateway

Approval

3rd party processor

Approval

non-bank processor

Approval

Issuer

Bank

Bank
The current card payment landscape

Acquiring/Issuing Bank With ATM

Core Banking

ATM/POS Switch

3rd party processor

Acquiring/Issuing Bank With ATM

Core Banking

ATM/POS Switch

3rd party processor

New Bank With ATM

Core Banking

Banking System
Current retail payment setup

- Silo Approach
- Institutions operate on a ‘stand-alone’ setup
- Multiplication of resources: network, terminals as well as support services
- Fees are paid to card schemes for MUR transactions in USD
- Direct involvement with card schemes result in royalty fees being paid multiple times
- Barriers to entry for new banks
- Does not cater for the integration of electronic payments made through other means
- Challenging for Government
The current card payment landscape

The SWITCHED card payment landscape

National Payment SWITCH

Local transactions

E-commerce

Acquiring/Issuing Bank With ATM

3rd party processor

New Bank With ATM

Core Banking

Core Banking

Core Banking

Mobile

3rd party processor

Acquiring/Issuing Bank With ATM

ATM/POS Switch

Core Banking

Banking System
The digital payment landscape

Value added services
- Govt Pay
- Bill Pay

Backend Process
- ATM/Debit/Credit/SMART cards
- Merchant & Acquiring services
- Reconciliation
- Journal
- EFT
- Fraud detection and prevention

Domestic and Regional interchange
- SWITCH

Remittances
- ATM and POS Deployment Managed services

Internet Payment Gateway

Mobile Payments

RTGS & ACH
National Payment Switch Concept

› Streamlined process
› Economies of scale
› Optimized use of resources
› Level playing field for banks and new players
› Switching of mobile payment transaction and e-payment gateways
› Increase electronic transactions and reduce cash issuance
› Low cost sharing of ATMS
› Room for added services (National Card, Pre-paid cards, pension cards, fidelity cards, etc.)
The National Payment Switch – Instant Payment System

› One of the objectives of the NPS - inter-bank switching platform for various payment channels
  - Switch was designed on the ISO 8385 message format (card messages)
  - Demand from banks to have direct interface with core banking

![Diagram showing bank's core banking and internal switch connected through API and ISO 8583, payment channels for mobile and non-card, and card and card emulated]
Current landscape

Bank’s Core Banking

- Interbank real time
- Interbank batch
- Cheque
- EFT
- Direct Debit

Interface 1

Interface 2

Interface 3

Interface 4

Interface 5

Bulk Clearing (cycle based, 8x5)

MACSS

Bulk Clearing (cycle based, 8x5)

Interface 1

Interface 2

Interface 3

Interface 4

Interface 5

Interbank real time

Interbank batch

Cheque

EFT

Direct Debit

Bank’s Core Banking
Proposed landscape

Bank’s Core Banking

Interbank real time
Interbank batch
cheque
EFT
Direct Debit
Inst. Fund transfer
Instant D D

Onimbus channel
Unified interface (Middleware) with integration to CB

Interface 1

MACS

Bulk Clearing + Instant Payment System (IPS) Real Time 24x7

Interface 1

Onimbus channel
Unified interface (Middleware) with integration to CB

Interface 1

Interbank real time
Interbank batch
cheque
EFT
Direct Debit
Inst. Fund transfer
Instant D D

Bank’s Core Banking
Main features

› Real time, 24x7 instant fund transfer system
› Standard interface with all banks to ensure standard response times.
› Real time direct debit and direct credits
› Payment by alias
› An implementation of the European PSD2
› Rapid integration with any Core Banking to be carried out by the service provider
National Payment Switch – complete picture

National Payment Switch

Card Payment System (CPS)
- Currently under pilot operation with 2 banks
- On-boarding of other banks to start as from June 2019

Instant Payment System (IPS)
- Under pilot with 2 banks and one mobile operator
- On-boarding of all banks expected end of June 2019
Benefits of the NPS

› Common state of the art technology
› Direct interface with Bank’s Clearing System (reduce concomitant floats)
› Unified interface to International Payment Networks
› Differential pricing for Debit and Credit cards
  – Standardised fee structure
  – Standard operating rules set by BOM
  – Reduce infrastructure acquisition, ownership or participation costs for all players
  – Reduction in merchant fees and POS installation costs
Value added services of the NPS

› Revenue Generation opportunities
  – POS become active devices and merchants to propose switch supported payment services such as phone cards, gift card trees

› Administrative efficiencies
  – Centralized reporting, integrated POS

› Low cost sharing of ATMs

› National Cards and Store Value
  – Pension cards, transport cards and other social benefits

› Digital integration services
Benefits to corporates

› Shift from a product centric to customer centric approach
› Ability to choose the service of another operator without changing bank
› Wider choice of payment options – Direct Credit and Direct Debits, Instant Credit and Debits
› Bill payments, Person to Person payments
› Wider choice of payment acceptance options (POS, QR code, online payment gateways)
› Avenue for other players such as POS providers, network providers, value added switch enabled services
Thank you

› Questions