

BELIZE'S AUTOMATED CHEQUE PROCESSING



CENTRAL BANK
of BELIZE

Central Banks Operations Conference
Port of Spain, Trinidad & Tobago
24 April 2018



AGENDA

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Legal Framework

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Automated Cheque Processing & Truncation

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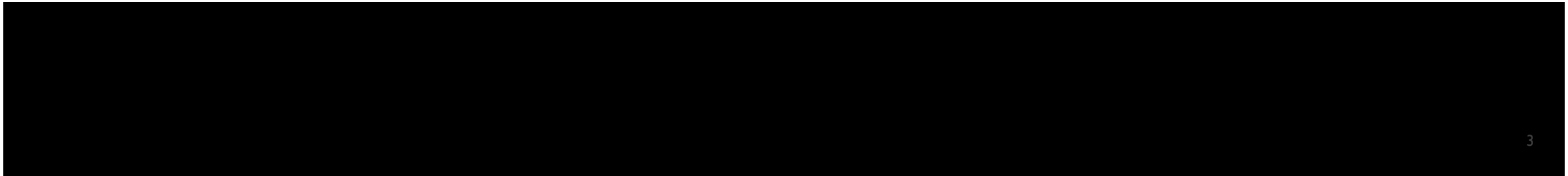
Benefits Realized

5

Discussions



BACKGROUND



PAPER CHEQUE PRESENTMENT EXPERIENCE

- Absence domestically-arranged interoperability and risk management mechanisms
- Need for automated interbank settlement system in Belize because of cheque systemic importance of a clearing system
- Oversight of banking system constrained
 - More difficult to limit credit and liquidity risks since net settlement obligations were harder to predict
- Cheque clearing did not comply with the principles of the Committee on Payments and Market Infrastructures principles (CPMI)

STRATEGIC INITIATIVES

Automated Clearing
House in Production

2017

Adopted CPA Standards and Specifications for MICR
Encoded Documents
Implemented National Transit Numbers
Standardized on two cheque sizes
Established cheque format and quality requirements
Added Magnetic Ink Character Recognition (MICR)
feature

2010

2012

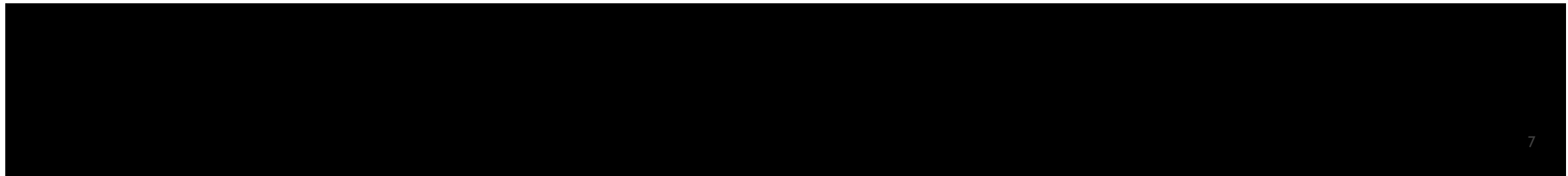
Conducted Country Study
Included automated cheque
clearings as a requirement of
the national payment system
reform project

Formed Working
Group with the
mandate to standardize
paper cheques

2005



LEGAL FRAMEWORK



LEGISLATION




National Payment System ACT Commenced in February 2017

- Authorizes the Central Bank to establish, regulate, and oversee the National Payment System
- Provides for the presentment of electronic image and data as payment instruments
- Provides for electronic presentment to be subject to the same duties in relation to the collection and payment of the cheque as if the paper cheque itself had been presented for payment.

Electronic Transactions Act Amendment of 2017

- Provides for negotiable instruments to include payment instruments under the National Payment System.

AUTOMATED CHEQUE PROCESSING




NEW

AUTOMATED CHEQUE PROCESSING

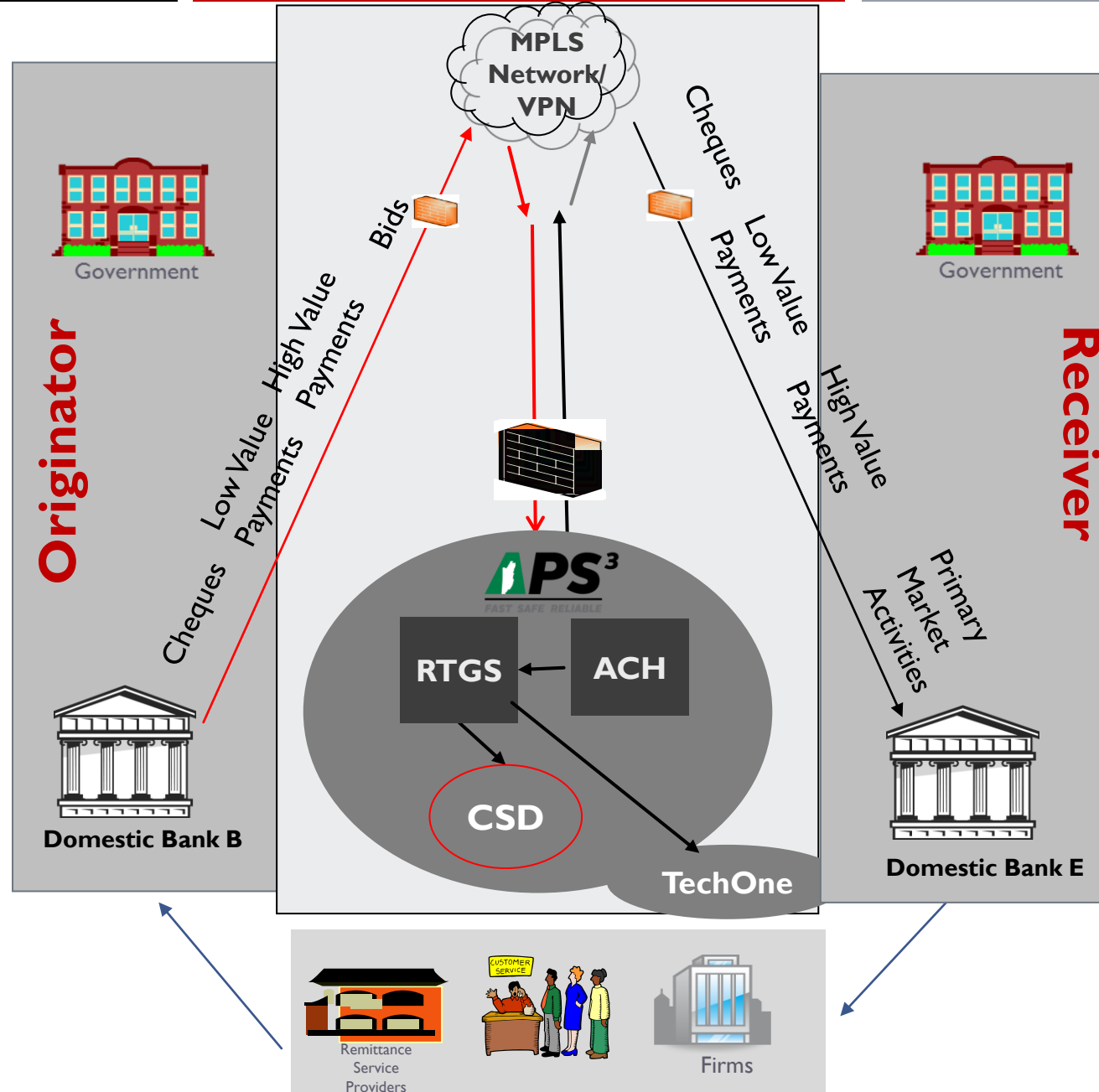
What is this about?

Deposited cheques will be processed electronically for quicker availability of funds. Banks can now give customers online access to cheque images.

APS³
FAST SAFE RELIABLE

 CENTRAL BANK
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Automated Payment and Securities Settlement System (APSSS)

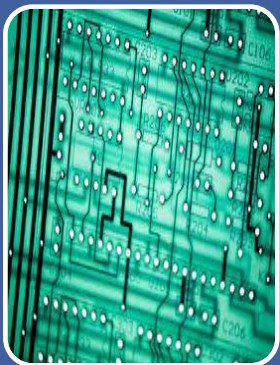


APSSS KEY TECHNOLOGICAL FEATURES



Highly Secured

- Digital signing using PKI
- Encryption using standard protocols
- User authentication using digital certificates
- Closed User Group
- Four-eyes principle for all transactions



Technologically advanced

- High Availability
- Streamlined web-based user interface
- D/R Site forwarding
- Database Replication
- Straight Through Processing (STP)

APSSS PRODUCTS



Automated
Clearing House

Low Value
Payment

Real-time Gross
Settlement System

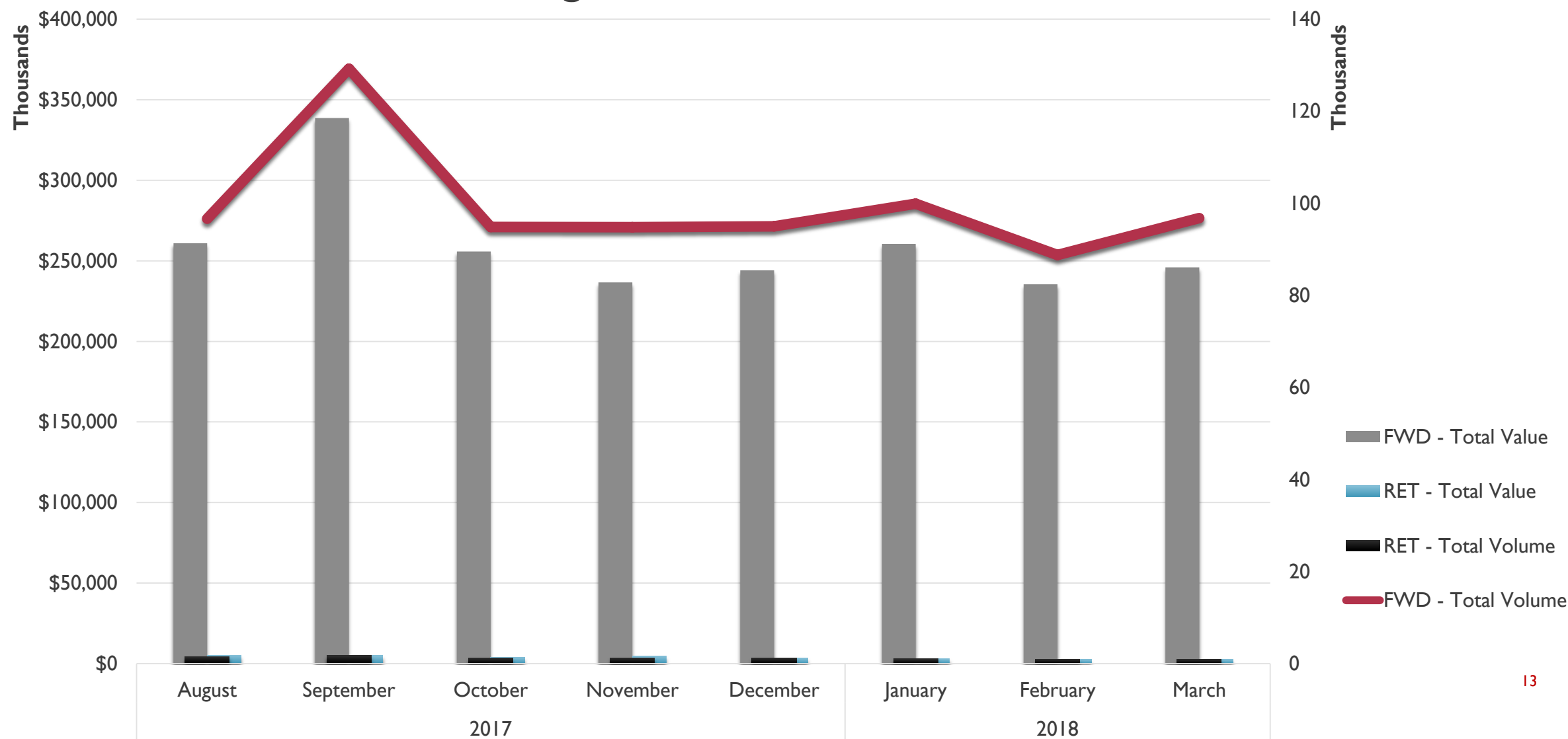
High Value
Payments

Central Securities
Depository

Electronic
Securities
Registry

- Processes Electronic Funds Transfer
 - **Bulk Payments**
 - Payroll
 - Accounts Payables
 - Instant Funds Transfer (24/7)
 - **Cheque Clearing and Settlements**
- Processes net settlement instructions from clearing houses
- Settle individual large-value payments in real-time
- Electronic Auction process
- Manages Primary Market Activities
- Calculates and executes automatically interest & coupon payment events
- Provides online enquiry to Banks

X9 Transactions
August 2017 to March 2018



CHEQUE TRUNCATION

What do I need to do?

- ✓ **Cheques:** Protect the MICR line. Do not fold cheques or write on the MICR line.
- ✓ **Electronic Funds Transfer:** Provide the correct bank account number for electronic payments.



For more information click here: www.centralbank.org.bz



CHEQUE TRUNCATION CONCEPT

A process where physical cheques presented for payment in a bank by individuals or corporate bodies are converted into electronic form and the cheque image and cheque data are transmitted electronically to the Clearing House for processing and eventual payment by the paying bank (i.e. the drawer's bank).

ELECTRONIC PROCESSING

Requirements

- Cheque Scanner
- Interface
- Network
- X9.100-187 Message format

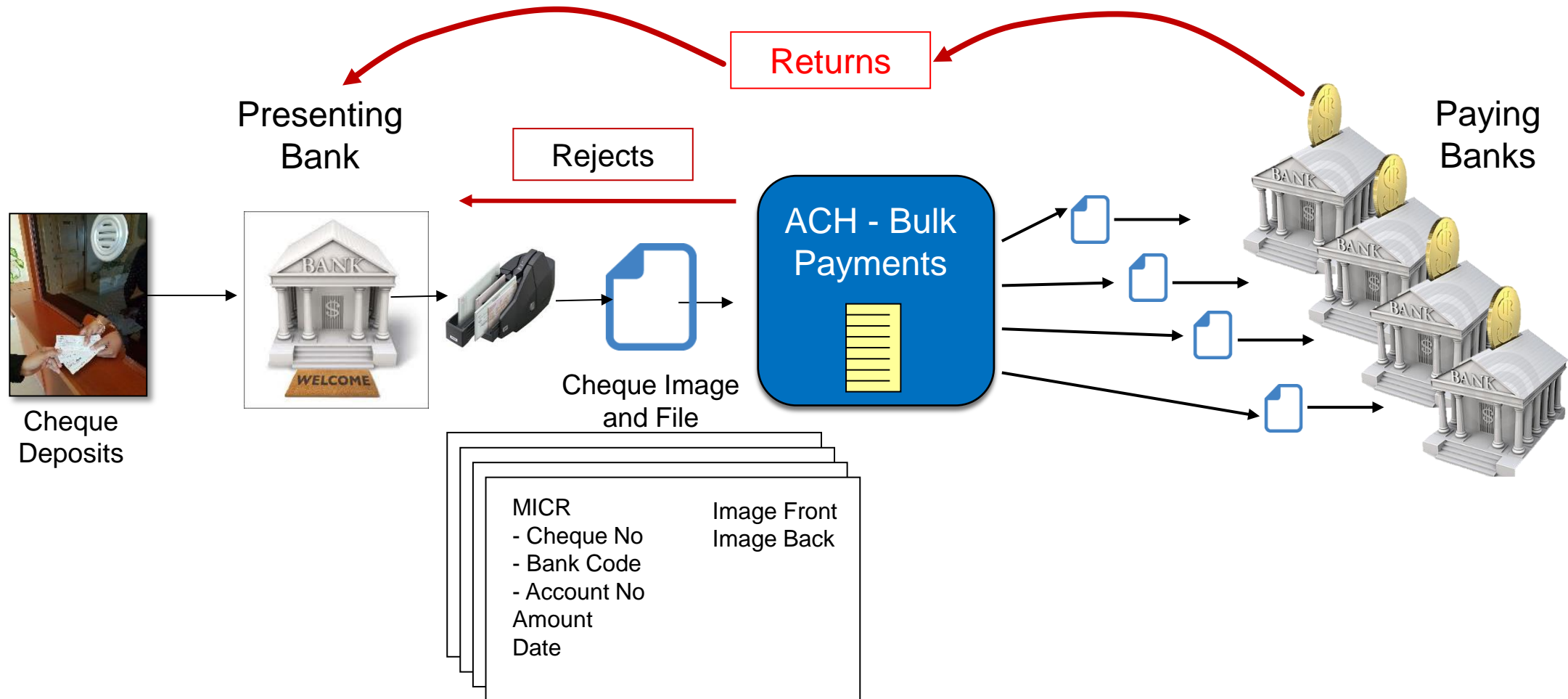
Image Standards

- Image quality
- Image Specifications
- Rejections
- Returns
- Cheque Duplication

No.	Image Type	Minimum DPI	Format	Compression
1.	Front Grayscale	100 DPI	JFIF	JPEG
2.	Back Grayscale	100 DPI	JFIF	JPEG
3.	Front B&W	200 DPI	TIFF	CCITT G4
4.	Front UV	100 DPI	JFIF	JPEG

The image quality of the grayscale images (1&2 above) shall be 8bits/pixel.

AUTOMATED CHEQUE PROCESS FLOW



APSSS OPERATING RULES

- Cheque files are encapsulated in Electronic Cheque Presentment (ECP) files with both cheque data and cheque images (front and rear).
- The files are subsequently exchanged through a dedicated Virtual Private Network (VPN).
- Cheques must be presented for processing within the first and second clearing sessions within APSSS and will be settled in the third session the following business day (T+1).
- Returns for cheques will be processed in the third session the following business day (T+1).
 - Cheques presented to banks before 2:00pm, will be sent to APSSS on the same day (T) and credit will be applied at the end of the next day (T+1).
 - Cheques presented to banks after 2:00pm, will be sent to APSSS the next business day and credit will be applied (T) and credit will be applied at the end of the next day (T+1).
- **A “substitute cheque” – a system generated paper reproduction of the original paper cheque is a legal equivalent of the original cheque.**
- **Participants must store paper instruments for a minimum of 90 days.**

CHEQUE CLEARING TIMINGS

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APS³
FAST SAFE RELIABLE

APSSS
Daily Timetable

ATS

Hours

CSD

	START	END	
	00:00		
Start of Day/Overnight IFT Clearing	08:30		
Open for Business	09:00		
	09:15		Start of Day
	09:30		Start of Business Day
1 st Bulk Clearing Session	10:10	11:00	
2 nd Bulk Clearing Session	12:40	13:50	
3 rd Bulk Clearing Session	14:40	15:30	
Initial Cut-off	15:40		
	15:45		Intra-day Auction Cut-off
Final Cut-off	15:55		
	16:10		DvP Cut-off
	16:20		FoP Cut-off
	16:40		End of Business Day
	16:50		End of Day
End of Day	17:00		
	24:00		

IFT Session

X9 Files

Route files with correct
Business Date 24 x 7

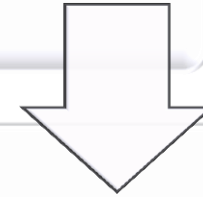
14:40 – 15:30

On T+1 Process RETURNS
from transactions with
Business Date T

CHEQUE CLEARING CYCLE

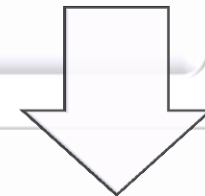
Monday (T)

- Customers deposit new cheques at bank branch before 2:00pm
- Receiving Bank Captures Cheque Images and Data
- Data files and images are presented to APSSS Clearing House
- Data files and images are routed to Paying Bank



Tuesday (T+1)

- Paying Banks to RETURN unpaid instruments before 15:30pm
- If no RETURN presented, Paying Bank gets value
- Beneficiaries account credited



Wednesday (T+2)

- At the latest, bank customer receives value for cheques that are not RETURNED

SUBSTITUTE CHEQUE

Printed on date 2018-04-17

This is a LEGAL COPY of
the original cheque
processed in APSSS on 2018-04-16

Presenting Bank
[Redacted]

Presenting Bank Routing
No. 00100003

Receiving Bank
[Redacted]

Receiving Bank Routing
No. 00300695

Return payment
A - Not Sufficient Funds

697

DATE 29 3 20 18
DAY MONTH YEAR

PAY TO THE ORDER OF [Redacted] BZ \$ 1,544.00

One Thousand five hundred forty four ⁰⁰/₁₀₀ BZ DOLLARS

[Redacted Signature]

Belize City, Belize

6977 00003-0016 1002273277

ENDORSE HERE 5229803

DO NOT WRITE, STAMP OR SIGN BELOW THIS LINE
RESERVE FOR FINANCIAL INSTITUTION USE

THE BELIZE BANK LTD.
Belize City, Belize
PAID TO THE ORDER OF [Redacted Signature]
13 APR 2018 018

For Deposit Only
Farmers Trading Center
WOLFE'S GARAGE

BENEFITS REALIZED

**Try a new payment option;
gain a new experience!**



- ✓ Automated Cheque Processing
- ✓ Electronic Funds Transfer
- ✓ Instant Funds Transfer



For more information contact your bank or
the Central Bank at www.centralbank.org.bz



BENEFITS OF CHEQUE TRUNCATION

- Eliminates the manual cheque clearing by automating the entire clearing cycle.
- Curtails the movement of the physical instrument
- Processes data from the cheque and MICR line
- Provides the image of the paper payment instrument
- Produces efficiencies in clearing and settlement based on the electronic data and cheque image

BENEFITS TO THE CUSTOMERS OF BANKS

Fast

- Funds available in less time.

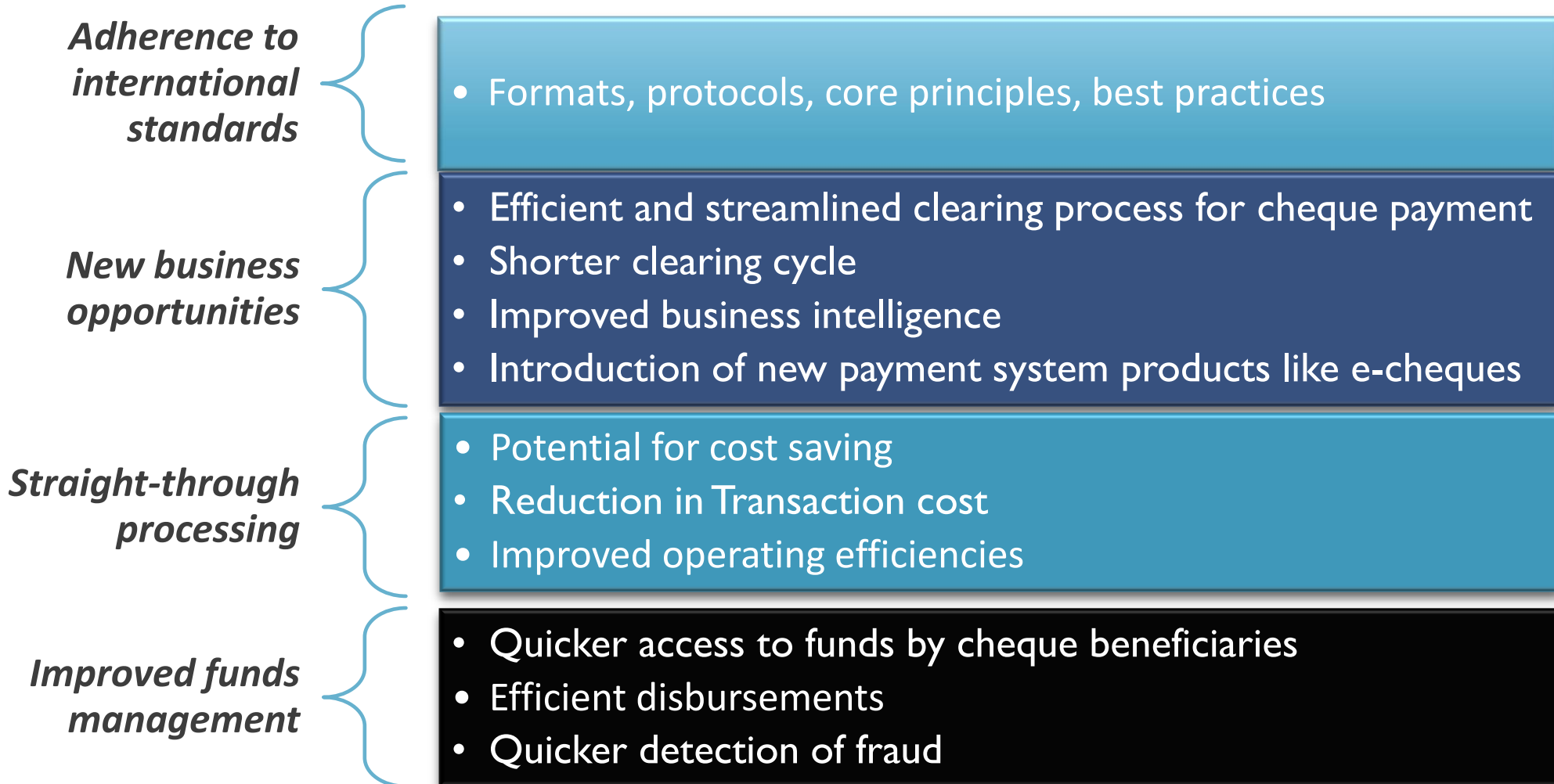
Safe

- Secure payment and information.

Reliable

- Efficient processing

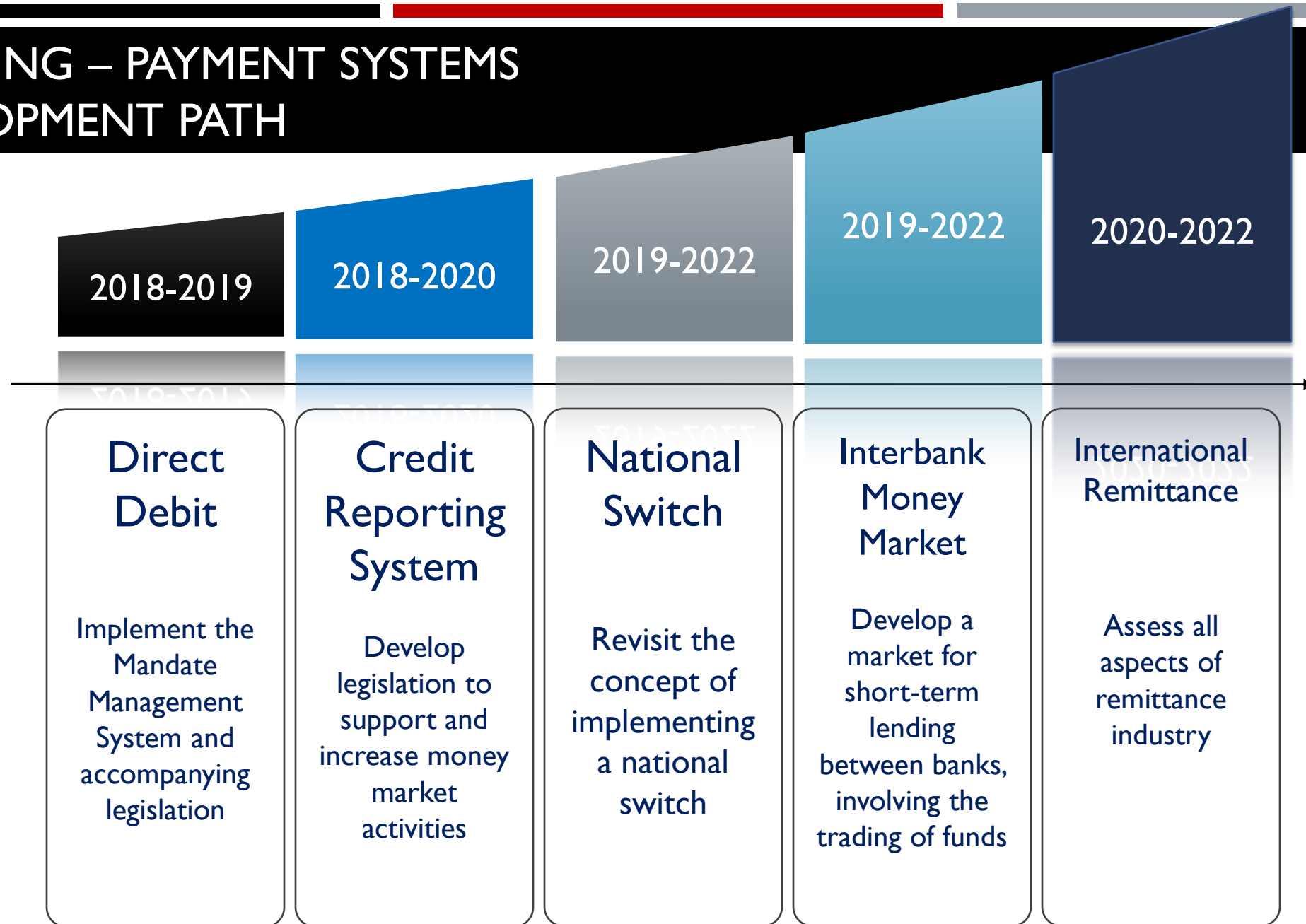
BENEFITS TO THE PARTICIPANTS



LESSONS LEARNED

- **Implement Change Management, early**
 - Educate customers of their responsibilities
- **Monitor participants closely**
 - Perform site visits
 - Ensure execution of UAT using structured test scripts with deadlines
 - Provide frequent updates to bank executive
 - Monitor banks' training programme for front line staff

VISIONING – PAYMENT SYSTEMS DEVELOPMENT PATH







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THANK YOU