

**JUST - IN - TIME SOLUTIONS**

Address: 3rd floor, Sunrise City - North Towers, 27 Nguyen Huu Tho Street,  
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# **SPECIFICATION DOCUMENT**

## **<PAYMENT-FAST-CONNECT>**

**<SBILH-FAST-CONNECT>**

**Version 1.3**

**12/2021**

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**JUST-IN-TIME  
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Full name NGUYEN MAU LUU Date \_\_\_\_\_

Position PROJECT DIRECTOR 15/12/2021

**Approver  
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Signature \_\_\_\_\_

Full name Date \_\_\_\_\_

Position

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## VERSION HISTORY

Version	Maker	Make date	Reviewer	Review date	Document changes
1.0	BEN	02-11-2020	HUNTER	02-11-2020	Created document
1.1	BEN	05-11-2020	HUNTER	05-11-2020	Edited document
<b>1.2</b>	BEN	15-12-2021	HUNTER	15-12-2021	Edited document Remove item SDR file
<b>1.3</b>	BEN	27-12-2021	HUNTER	27-12-2021	Edited document Change approve & reject screening to transaction



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## 1. INTRODUCTION

### 1.1 PURPOSE

- This document is a details description of Payment application functions and features provided by Optimal9 system associated with Cheque application, Fast payment, Remittance (domestic/international)
- The description encompasses payment categories information, Banker cheque/Demand draft/Travelers' cheque/Local cheque/Telegraphic transfer information, transaction description, automation processing for all kinds of payment.
- This document also refers to other applications of Optimal9 in relation

### 1.2 PROJECT SCOPE

- The scope of the project includes all functional upgrades for the Payment module
- Some sub-module included
  - o FAST
  - o REMITTANCE
  - o SDR file

### 1.3 REFERENCES

Document name	Description
PMT_ENSPECv1.0.1	Speciation of Payment module

### 1.4 TERMINOLOGY

Term	Definition
DPT	Deposit
CRD	Credit
PMT	Payment
RM	Remittance
FAST	Fast and Secure Transfer
FX	Foreign Exchange
CE	Core Engine
CM	Client Module
ACSP	Accepted Settlement in Process
STP	Straight Through Processing
IBT	Inter-branch transaction
PII	Payment instruction item
PIG	Payment instruction group
MT	SWIFT message
ISO	International Organization for Standardization



## 2. OVERALL DESCRIPTION

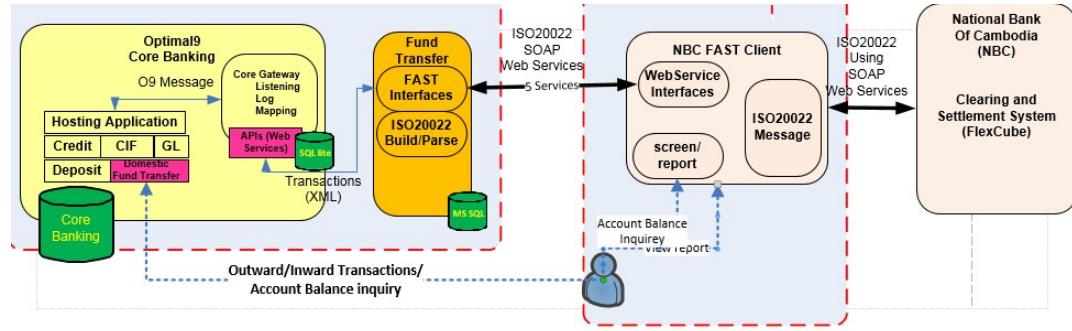
### 2.1 PRODUCT PERSPECTIVE

- These are the functions in the Payment module upgrade include **FAST payment**.
- **FAST payment:** "Fast Payment" is a fund transfer and payment services in Khmer Riel across institutions, which enable customers to receive funds immediately. With "Fast Payment", customers can transfer funds to relatives or friends or make payment on the purchase of goods and services within Kingdom of Cambodia.



## 2.2 PRODUCT FEATURES

- Preliminary description about **FAST payment** feature



- FAST (Fast and Secure Transfer) payment system is the low-value payment system which processes payment transactions between participant banking institution on real-time basis.
- The maximum amount for each domestic transaction is capped at 40 million Riel (Khmer Riel)
- In the first phase, customers can access this service through all the counters at offices or branches of member institutions across Cambodia. In future, however, they will be able to do this online or through mobile banking.



### 3. SYSTEM FEATURES

#### 3.1 FAST PAYMENT

##### 3.2.1 **Definition**

- What's fast payment
  - "Fast Payment" is a fund transfer and payment services in Khmer Riel across institutions, which enable customers to receive funds immediately.
  - With "Fast Payment", customers can transfer funds to relatives or friends or make payment on the purchase of goods and services within Kingdom of Cambodia.
  - Operation of FAST is available at 24/7, yet settlement is conducted on business day at a time specified by NBC
- How do customers access this service?
  - To access this service, customers just reach the nearest member commercial banks or microfinance deposit-taking institutions (MDIs) or their branches located all over Cambodia, and provide information about your transaction to service officer; then, follow the officer's instruction to have your transaction completed.
- Which institutions are the member of "Fast Payment"?
  - Currently, customers are able to use this service at offices or branches of over 13 institutions; namely, ACLEDA, Cambodian Public Bank, Canadian, ABA, BIDC, Phillip, Sathapana; AMK, Vision Fund, Prasad, Amret, Kredit, and Hathakaksekar. Sooner, customers can use this service at offices or branches of all commercial banks and MDIs, as other commercial banks and MDIs are now applying for the membership of "Fast Payment".
- What are the channels that customers can access this service?
  - In the first phase, customers can access this service through all the counters at offices or branches of member institutions across Cambodia. For the next phase, the service will be accessible via mobile phone, computer, and so on, according the available channels offered by individual member institutions.
- Are customers required to have bank accounts?
  - For customers who make fund transfer or initiate the transactions, it may be or may not (walk-in customer) be required to have bank account depending on the different terms and conditions of individual member institutions. However, for fund receivers or beneficiaries, it is required to have bank accounts in Khmer Riel held at any member institutions in order to receive funds.

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### ➤ How much is the processing fee for using "Fast Payment"?

- Customers who make fund transfer or initiate the transactions have to pay processing fee in accordance to progressive transaction amount as following:

<b>- ≤ 4,000,000 Riel</b>	: fee = <b>4,000 Riel</b>
<b>- &gt; 4,000,000 Riel ≤ 20,000,000 Riel</b>	: fee = 8,000 Riel
<b>- &gt; 20,000,000 Riel ≤ 40,000,000 Riel</b>	: fee = 12,000 Riel

<b>- ≤ 1,000 USD</b>	: fee = <b>1 USD</b>
<b>- &gt; 1,000.01 USD ≤ 5 ,000 USD</b>	: fee = 2 USD
<b>- &gt; 5,000.01 USD ≤ 10,000.00 USD</b>	: fee = 3 USD

### ➤ What is the maximum amount for each transaction?

- The maximum amount for each transaction is capped at 40 million Riel and 10K \$

### ➤ What are the benefits from using "Fast Payment"?

- The use of "Fast Payment" is convenient, fast, effective, and reliable. Particularly, customers are able to receive funds immediately to respond to their liquidity need.



### 3.2.2 FAST payment full model

#### 3.2.2.1 NBC FAST Message Flow



Figure 1 NBC FAST Message Flow

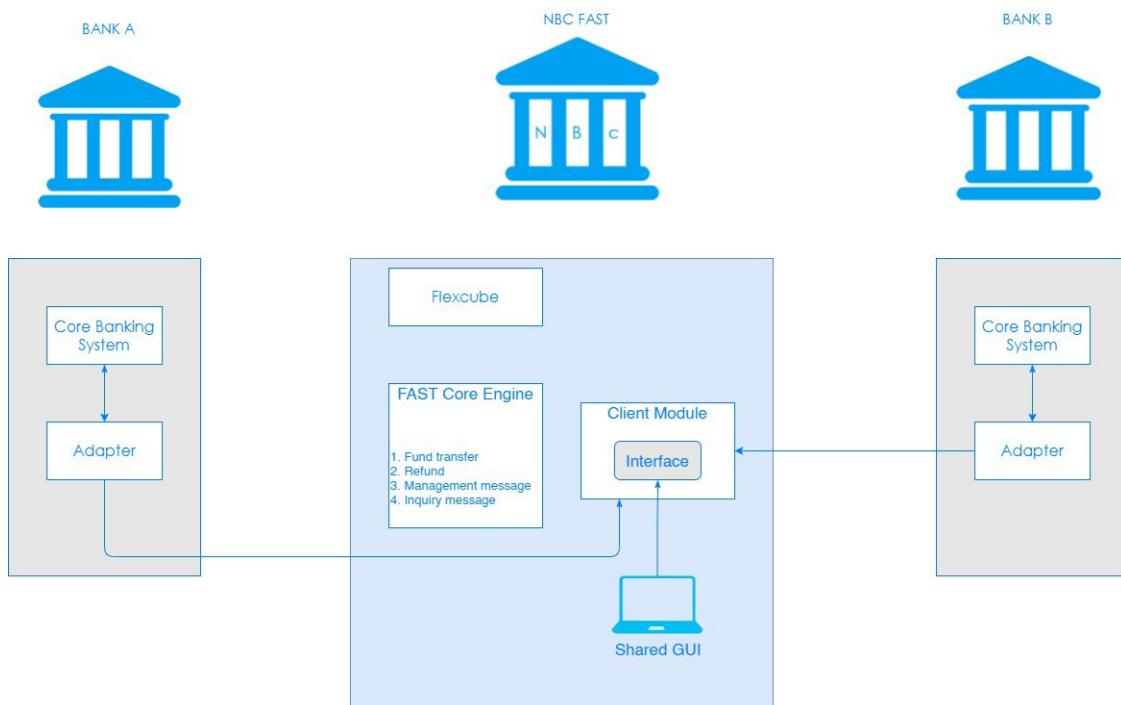


Figure 2 FAST System model

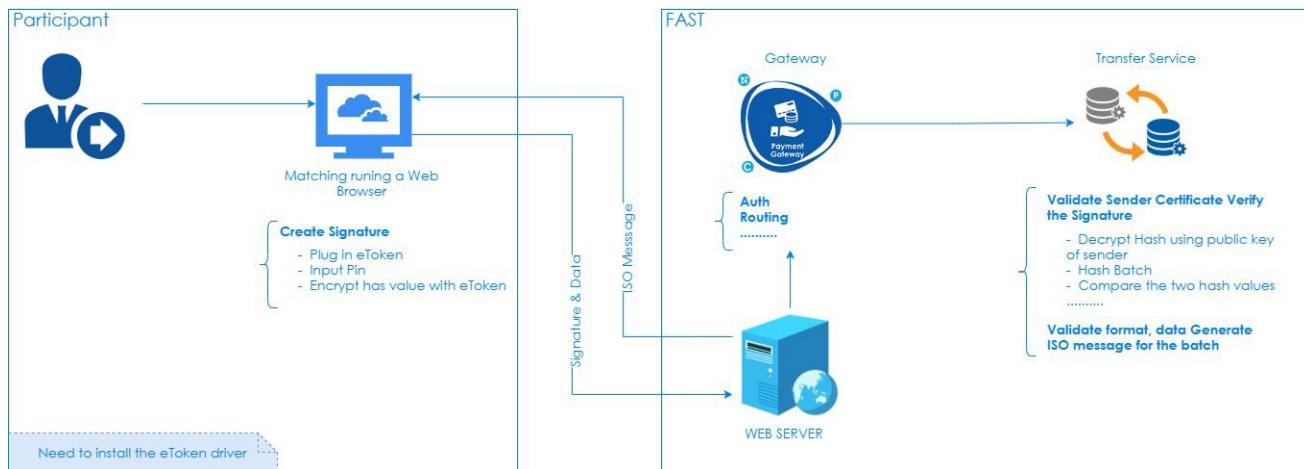


Figure 3 Manual Transfer

#### Straight Through Processing (STP)

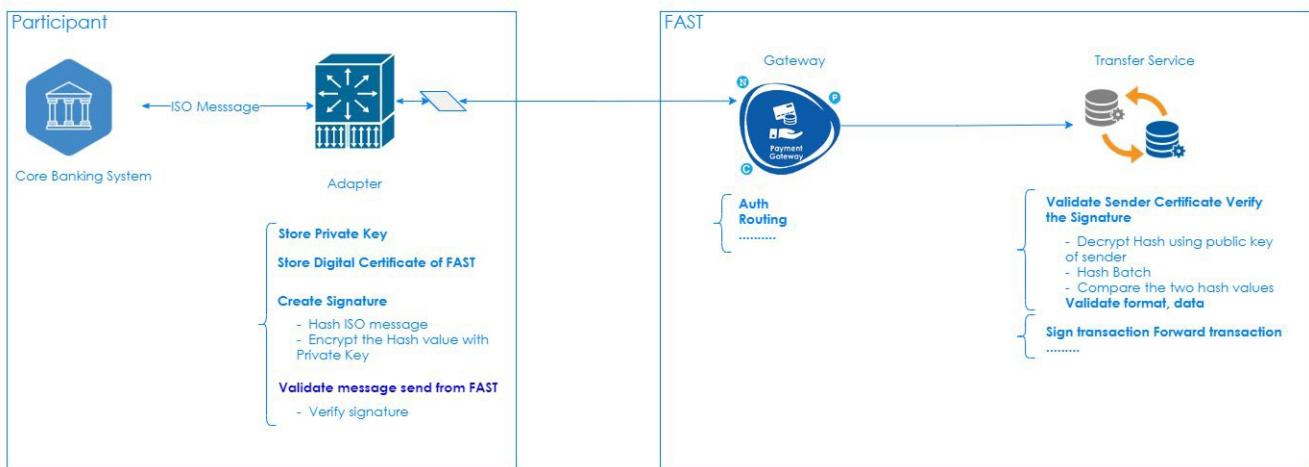


Figure 4 Straight Through Processing (STP)



### 3.2.2.2. Customer Account Inquiry STP

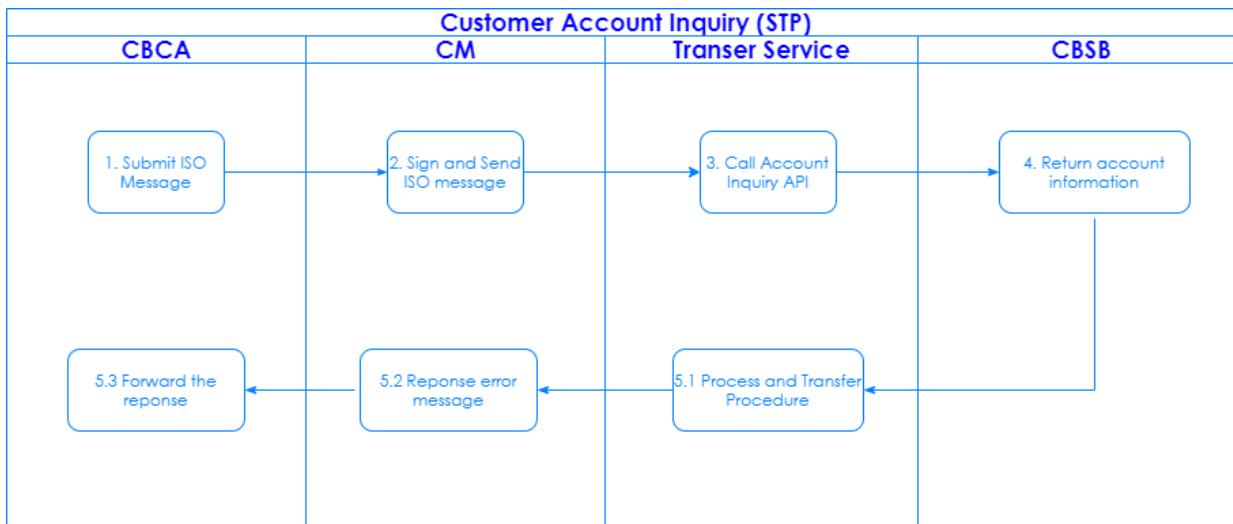


Figure 5 Customer Account Inquiry STP

**Step 1:** CBS of Bank A submits a fund transfer message [ISO 20022 \(pain 001.001.05\)](#) via SOAP web service into Bank A Client Module ([CM](#))

**Step 2:** Bank A [CM](#) hashes and signs the message using the private key of the FI and sends to [FAST Core Engine \(CE\) Transfer Service](#)

**Step 3:** [Transfer Service](#) applies all the validation rules on the message and checks if it complies (message WSDL, digital signature, receiver account, receiver bank status, currency, operation limit, ability to pay). For receiver account validation, [Transfer Service](#) calls the Customer Account Inquiry API of the receiver [Bank B](#) to check the status of the receiver bank and the validity of the receiver customer account

**Step 4:** If it is valid (including others validations), Transfer Service responses a corresponding successful message to sender Bank A using [pain 002.001.06](#) with transaction status ([TXSTS](#)) of Accepted Settlement in Process ([ACSP](#)) and proceed with the transfer procedure (See 2.3 Account-based Transfer (Full STP - Success))

**Step 5:** If it is invalid, Transfer Service responds with a corresponding error message to Sender Bank A using [pain 002.001.06](#) message with transaction status ([TXSTS](#)) of Rejected ([RJCT](#)). The message also provides the additional message offering the reason for the rejection.



### 3.2.2.3. Account-based transfer (Full STP - Success)

Account-based Transfer (Full STP - Success)

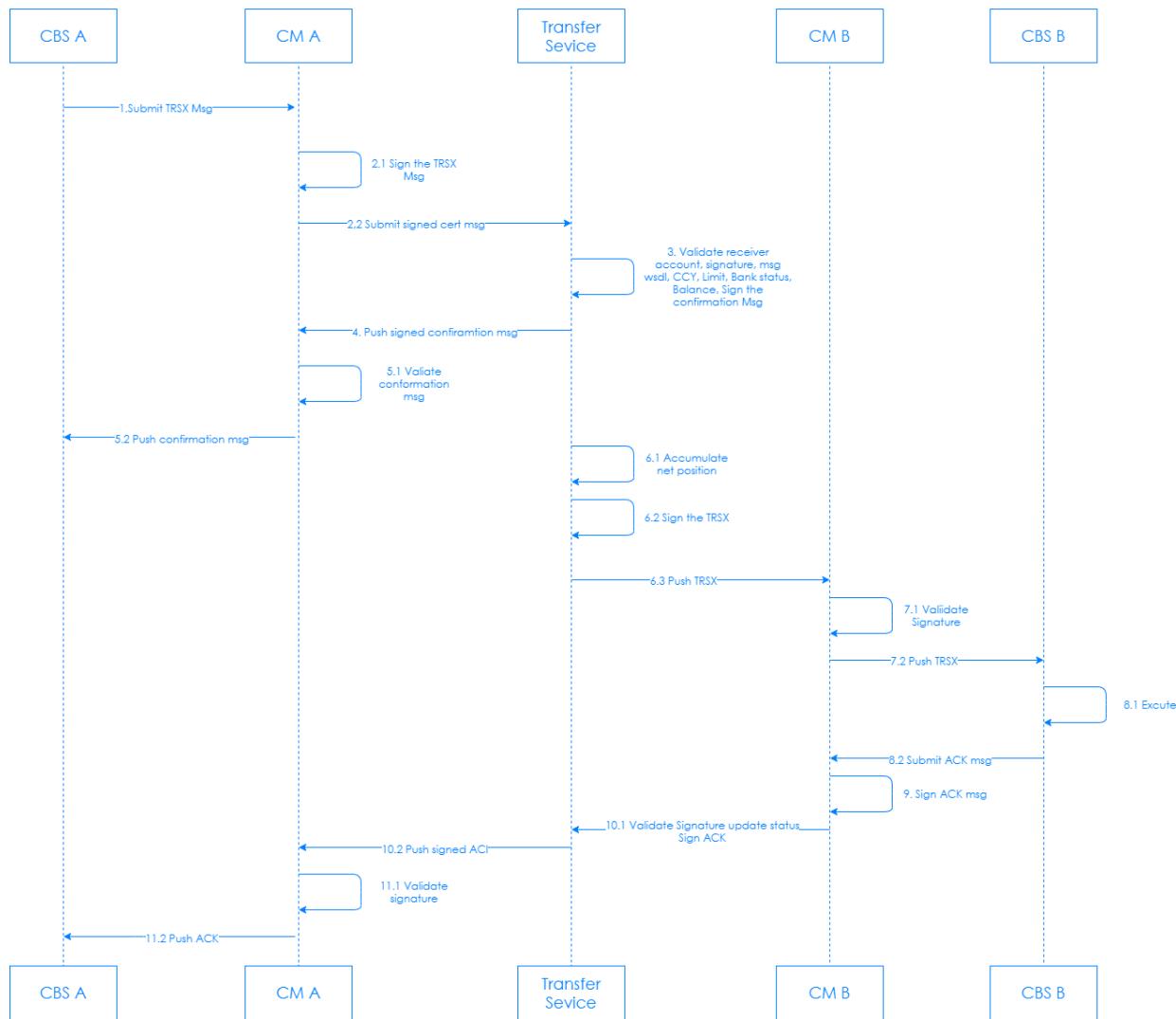


Figure 6 Account-based Transfer (Full STP - Success)

**Step 1:** The CBS of Bank A submits a fund transfer message using ISO 20022 format (pain 001.001.05) by calling [makeFullFundTransfer] via SOAP web service into Bank A CM

**Step 2:** The Bank A CM hashes the message and signs it using the private key of the FI and sends it to FAST Core Engine (CE) Transfer Service (The private key is stored in the FI CM)

**Step 3:** Transfer Service applies all the validation rules on the message and checks if it complies (message WSDL, digital signature, receiver account, receiver bank status, currency, operation limit, ability to pay)

**Step 4:** If it is valid, Transfer Service hashes and signs a confirmation message pain 002.001.06 with transaction status (TXSTS) of Accepted Settlement in Process (ACSP) using FAST system private key,



and sends it to sender Bank A CM. In case of invalid, please refer to 2.4 Account-based Transfer (Full STP - Rejected at Core)

**Step 5:** CM of Bank A will validate the signature of the received confirmation message and send it to its own CBS

**Step 6:** Transfer Service will accumulate the net position, signs the transfer message (outgoing batch) using the **FAST private key** and send to CM of Bank B

**Step 7:** CM of Bank B validates the signature on the message and sends it to CBS of Bank B by calling **[makeFullFundTransfer]** via SOAP

**Step 8.** CBS of Bank B bears the responsibility to validate and verify the incoming message. If it is valid, Bank B has to credit the fund into its customer account and notify the customer. At this stage, the transaction is counted as a successful transaction. After crediting, Bank B sends an acknowledgment message **pain 002.001.06** to its CM by calling **[makeAcknowledgement]** via SOAP.

**Step 9:** CM of Bank B signs on the message and sends to FAST Transfer Service.

**Step 10:** Transfer Service updates the transaction status to Acknowledged by FI, signs the acknowledgement message using the FAST private key and sends it to the CM of Bank A

**Step 11:** CM of Bank A validates the message and pushes to its own CBS by calling **[makeAcknowledgement]** via SOAP

### 3.2.2.4. **Pull Incoming Transfer [getIncomingTransaction]**

#### Pull Incoming Transfer [getIncomingTransaction]

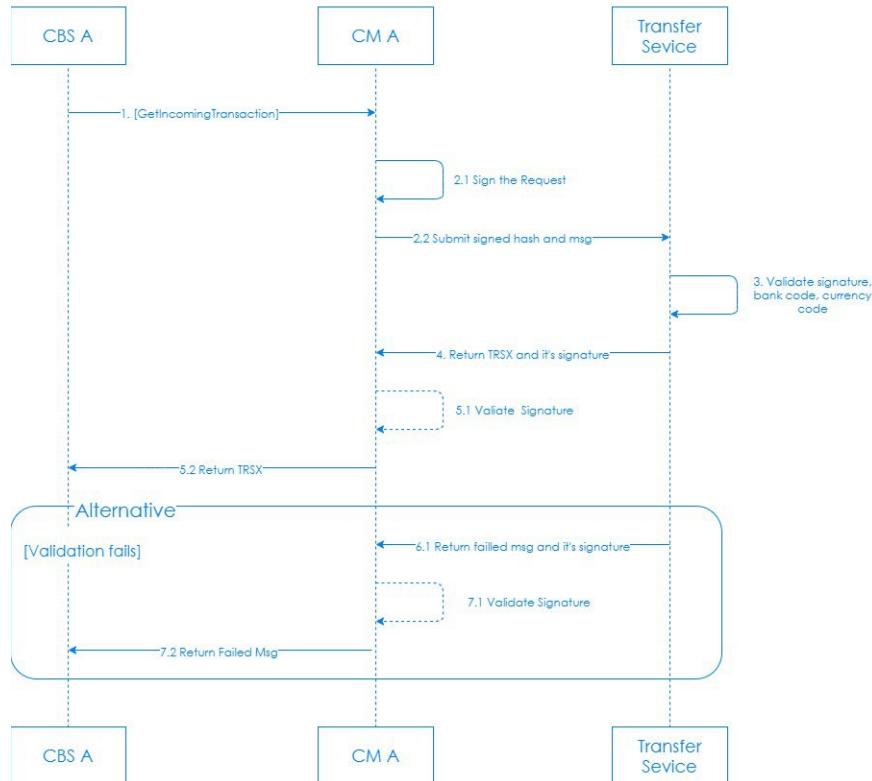


Figure 7 Pull Incoming Transfer [getIncomingTransaction]



**Step 1:** The CBS of Bank A submits a request go get incoming transactions by calling [getIncomingTransaction] via SOAP web service into Bank A CM

**Step 2:** Bank A CM hashes and signs on the request using the private key stored in CM sends it to **FAST Core Engine (CE) Transfer Service**

**Step 3:** Transfer Service applies all the validation rules on the message and checks if it complies (message WSDL, digital signature, currency, bank code)

**Step 4:** If it is valid, Transfer Service will return the signed and sent transactions of the bank with current business day to Bank A CM, and updates those transactions to **Received at FI**

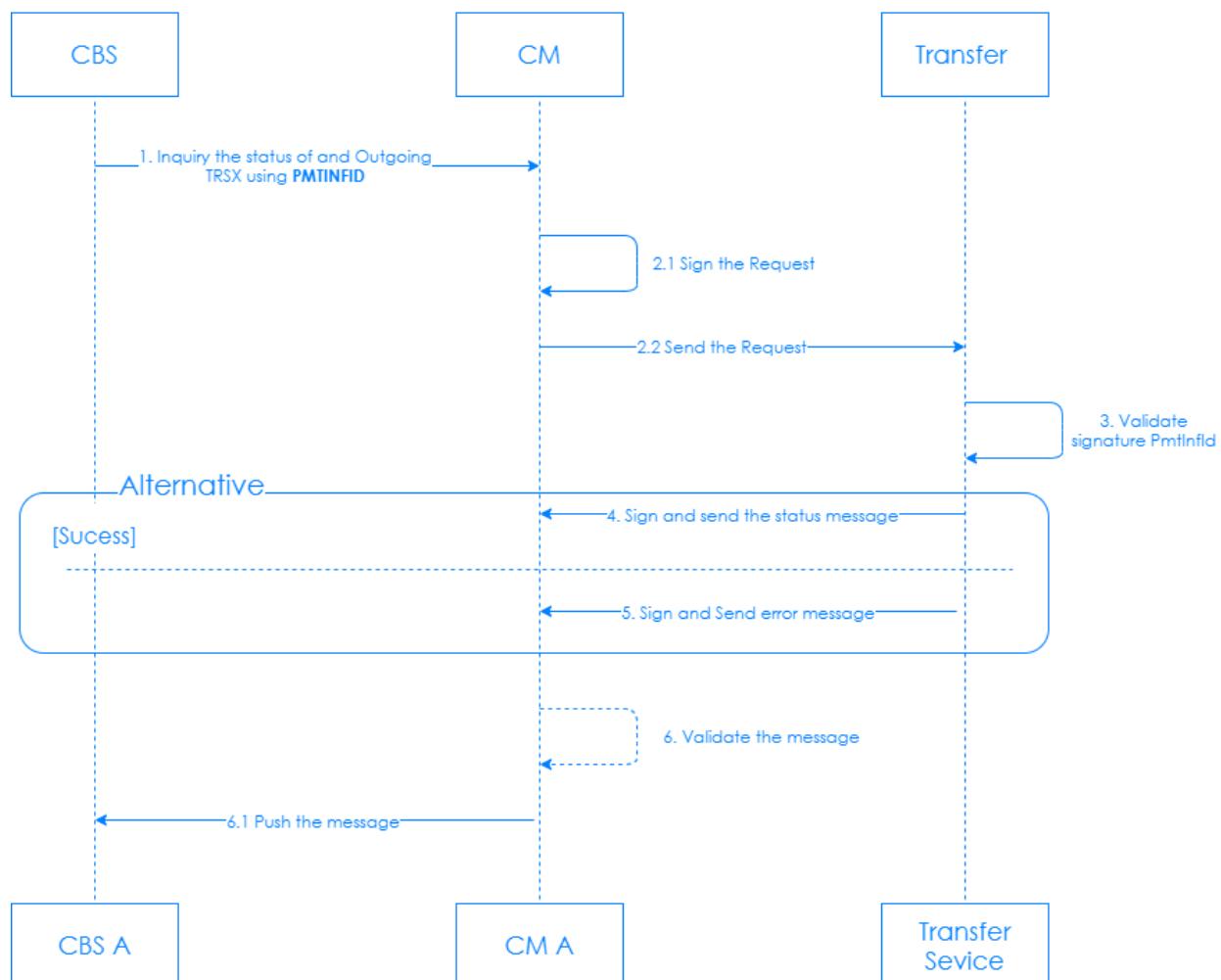
**Step 5:** Bank A CM validates the message signature and pushes to CBS, and thus CBS can credit their customer accordingly. To finalize the transaction flow, CBS also need to [makeAcknowledgement] over the transactions it received via SOAP web service

**Step 6:** If it is invalid, Transfer Service will construct an error message and respond to Bank A CM

**Step 7:** Bank A CM validates the signature and returns the failed message to the CBS

### 3.2.2.5. **Sender Bank Pulls Outgoing Transfers**

#### Sender Bank Pulls Outgoing Transfers





- Step 1:** CBS of the sender bank calls [getOutgoingTransactionByPmtInflId] via SOAP web service to retrieve the status of an outgoing transaction by PmtInflId
- Step 2:** CM of the sender bank signs the request and sends to the Transfer Service
- Step 3:** Transfer Service validates the signature and the PmtInflId
- Step 4:** If it is valid, Transfer Service will sign and send the corresponding transaction using pain.001.001.05
- Step 5:** If it is invalid, Transfer Service will construct an error message and sends back to Bank A CM
- Step 6:** CM of the sender bank validates the message and sends to its CBS

### 3.2.2.6. Non-account-based transfer

Non-account based transfer

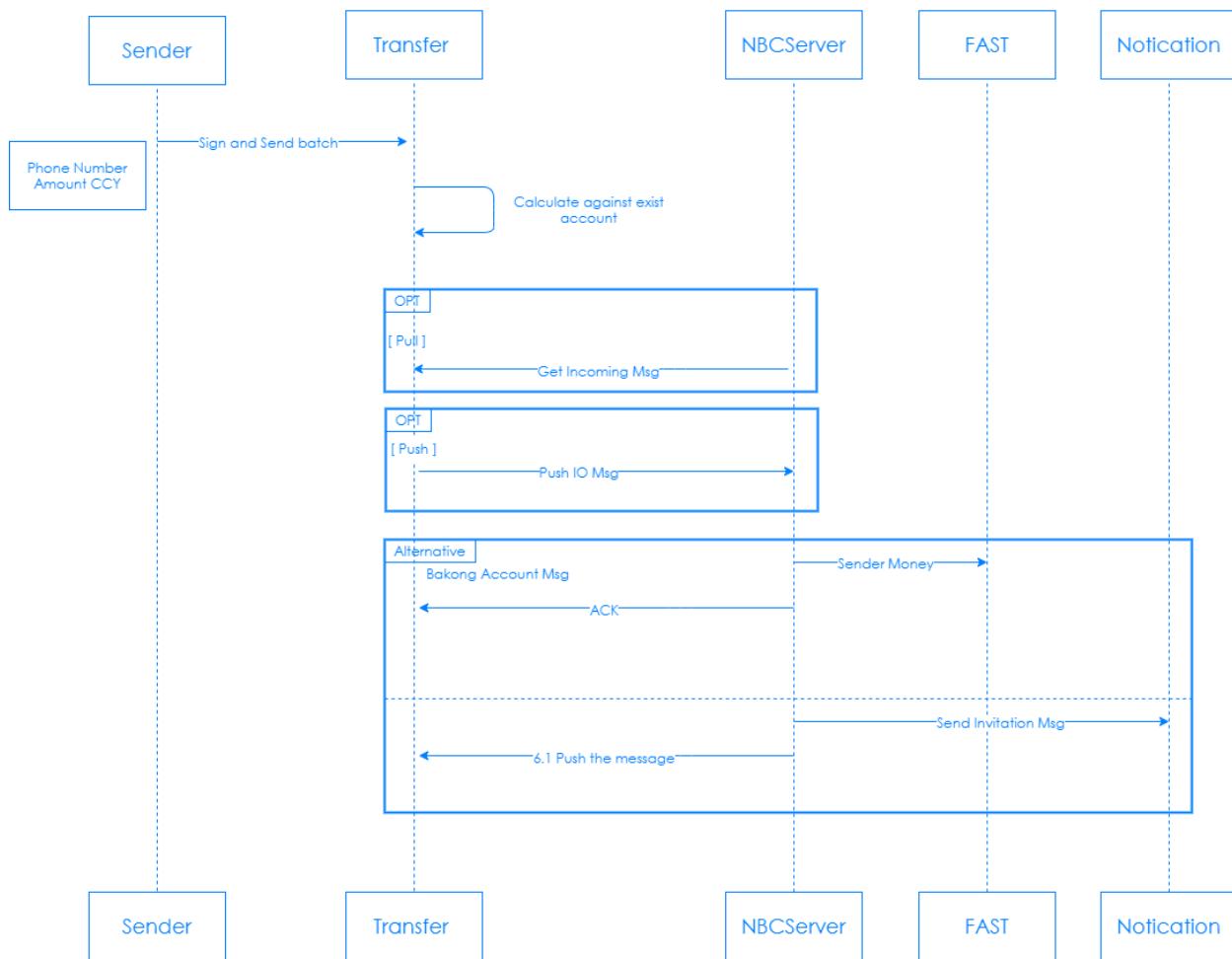


Figure 8 Non-account-based transfer



**Step 1:** To simplify the diagram, the details step started from the Operator is omitted. Please refer to 2.7 Account-based Transfer (Semi STP - Manual Input, Straight-through Output - Success) for the description of the message flow (step 1 to step 20.2)

**Step 2:**

a. CBS (NBC Server) of the particular bank operated by NBC fetches the incoming transactions, which are not yet acknowledged, from FAST Transfer Service in the format of **pain 001.001.05** by calling **[makeFullFundTransfer]** via SOAP

b. If the STP method is chosen, CM is needed for NBC, and it will be operated in the same manner as the other FIs, in which Transfer Service signs the message **pain 001.001.05** using the FAST private key and sends it to the CM. CM validates the signature on the message and sends it to its CBS using **pain 001.001.05** by calling **[makeFullFundTransfer]** via SOAP

### 3.2.2.7. Refund (STP via API)

Refund (STP via API)

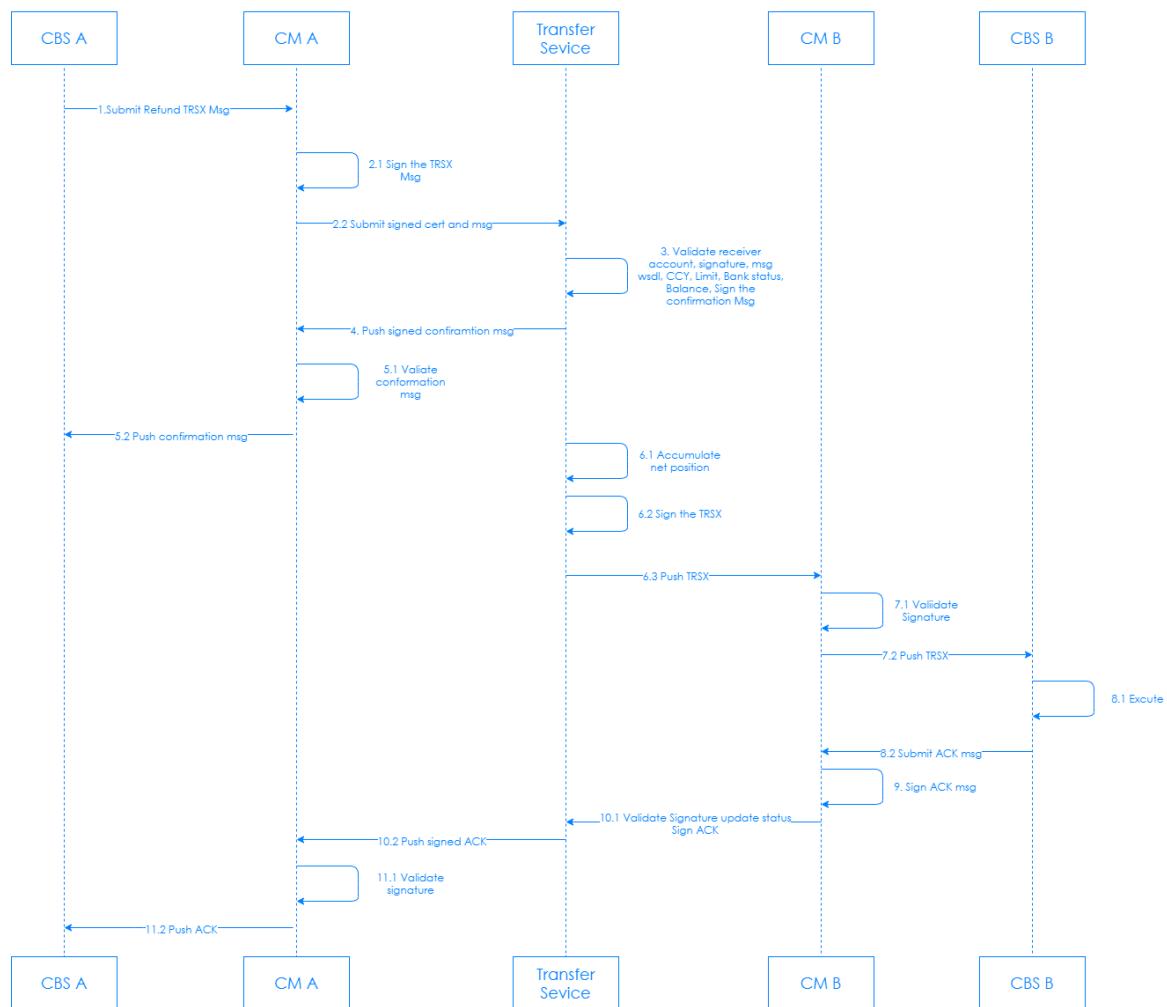


Figure 9 Refund (STP via API)



**Step 1:** CBS of Bank A submits a refund message ISO 20022 (pain 007.001.05) by calling [makeReverseTransaction] via SOAP web service into Bank A CM

**Step 2:** CM validates and sends to FAST, and FAST will construct, sign, and send an outgoing message pain 001.001.05 to the receiver bank B. For the detailed flow of validation and signing. Please refer to 2.3 Account-based Transfer (Full STP - Success)

**Step 3:** Note: When the transaction is signed and sent (payment status is ACSP), the original transaction will be updated to Refunded.

### 3.2.2.8. Acknowledgement (STP via API)

Acknowledgement (STP via API)

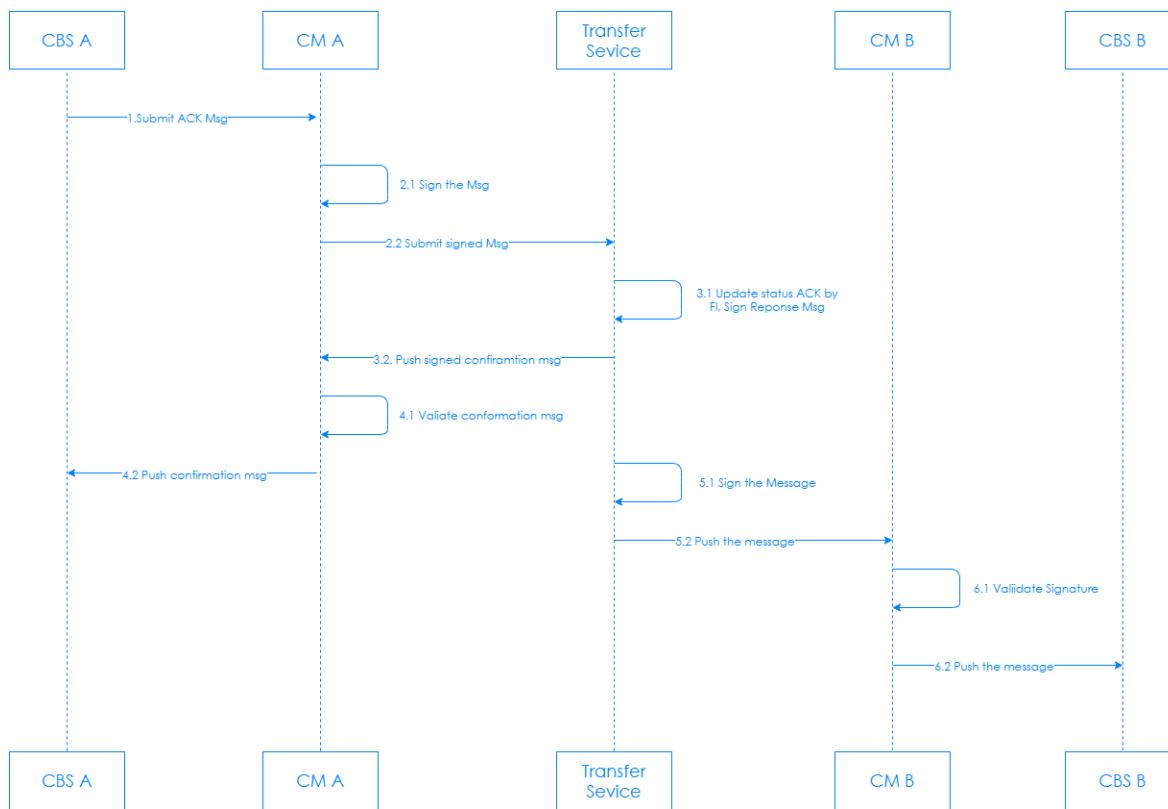


Figure 10 Acknowledgement (STP via API)

**Step 1:** CBS of Bank A submits an acknowledge message pain 002.001.06 by calling [makeAcknowledgement] via SOAP web service into Bank A CM

**Step 2:** Bank A CM signs on the message using the private key of the FI and sends to FAST Transfer Service

**Step 3:** Transfer Service validates the signature and updates the status of the transaction to Acknowledged by FI, signs and sends the response message to the Sender Bank CM

**Step 4:** The sender bank CM validates the message and sends it to its CBS

**Step 5:** Transfer Service signs this message pain 002.001.06 using the FAST private key and sends it to the receiver bank B CM

**Step 6:** Bank B CM validates the signature on the message and sends it to CBS of Bank B by calling [makeAcknowledgement] via SOAP



### 3.2.2.9. Participant Bank Account Balance Inquiry

#### Participant Bank Account Balance Inquiry

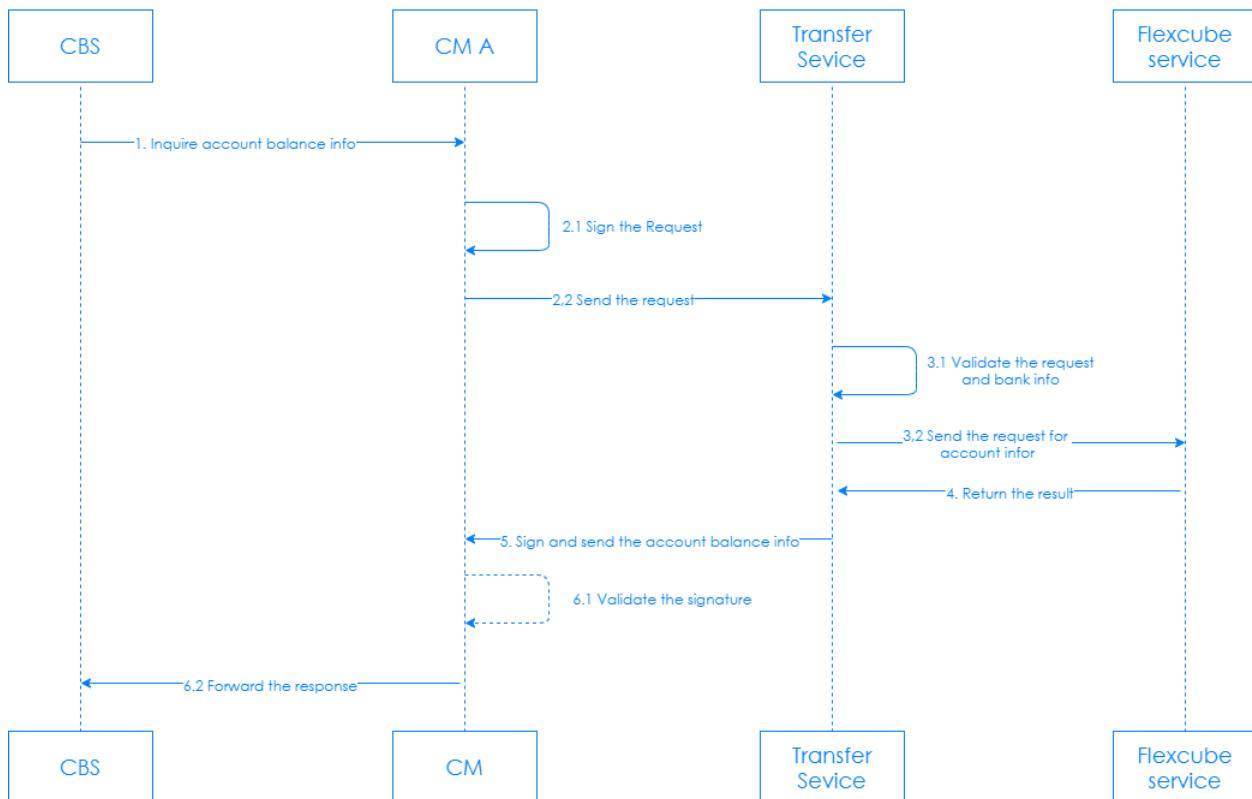


Figure 11 Participant Bank Account Balance Inquiry

**Step 1:** The sender bank CBS inquires its account balance info by calling [getAccountInquiry] via SOAP web service

**Step 2:** The sender bank CM sign the request and sends it to the Transfer Service

**Step 3:** Transfer Service validates the request and the bank info. If it is valid, the Transfer Service requests the [FlexCube] Service for the account information of the requested bank

**Step 4:** The FlexCube Service returns the result to the Transfer Service

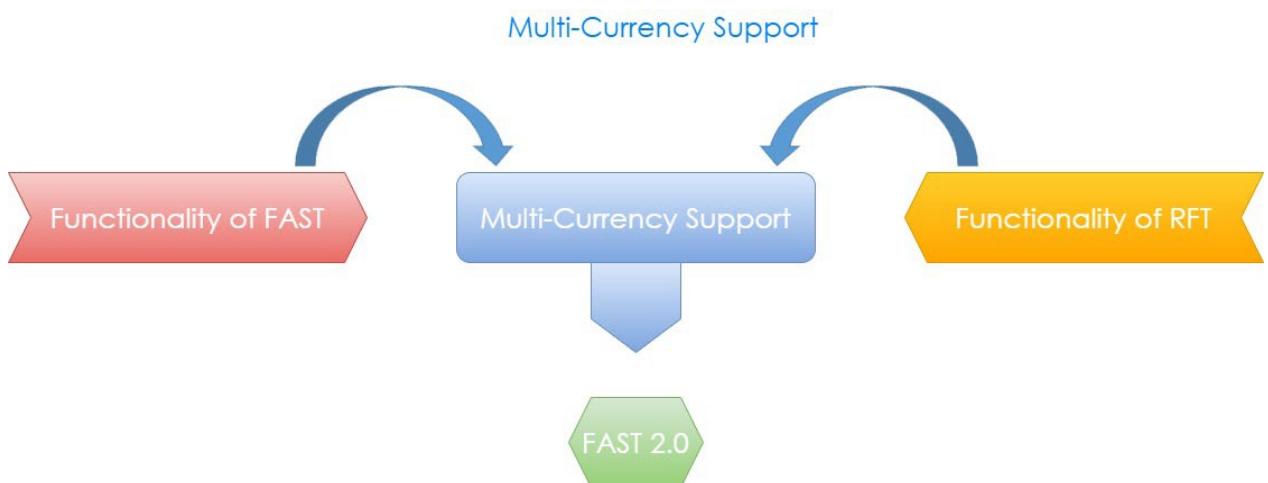
**Step 5:** Transfer Service signs and sends the response to the sender bank CM

**Step 6:** The sender bank CM validates the signature and sends it to the sender bank CBS



### 3.2.3 Scope of functional requirements

- Following the standard model of FAST connect. Requires middleware system to process FAST web link with O9Core system via Core gateway
- JITS supports transactions within the core as
  - o Outward request fund transfer
  - o Inward fund transfer
  - o Management FAST payment (View/Approve/Reject)
  - o Some of transaction record status via FAST as: Received at ACH 66962, Failed at ACH, settled at FI, failed at FI, acknowledge by FI, Acknowledge and Settled
- Upgraded from current FAST system and combined some functions of Retail Pay System



- New Features for FAST 2.0 System

	Current FAST	FAST 2.0
Support Multi-Currency	No	Yes
Admin can Set Operation Limit, Fee Sharing and NBC Fee (Billing Fee)	No	Yes
FI Admin can set Bank Setting itself	No	Yes
Support sending TXN to Non-Account Based	No	Yes
Have User Roles (Read-Only and Auditor) for NBC	No	Yes
Notification Management Feature	No	Yes
NBC Admin, Auditor and FI Admin can tracking TXN log	No	Yes
Define Password Policy	No	Yes
Define Threshold Setting	No	Yes
Have Unexecuted Session, Re-execute and Force Settlement functionality	No	Yes



### 3.2.3.1 Scope of outward flow

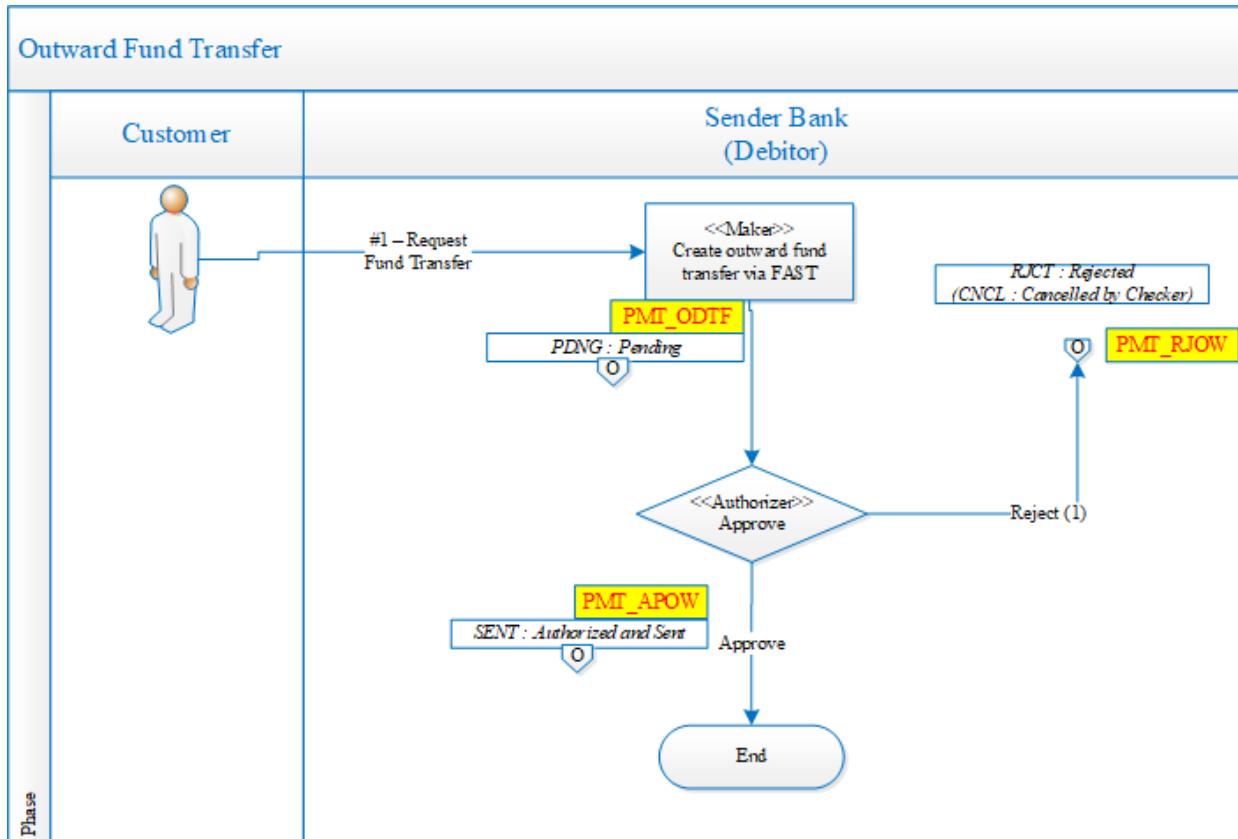


Figure 12 Scope of Outward flow



### 3.2.3.2 Scope of inward flow

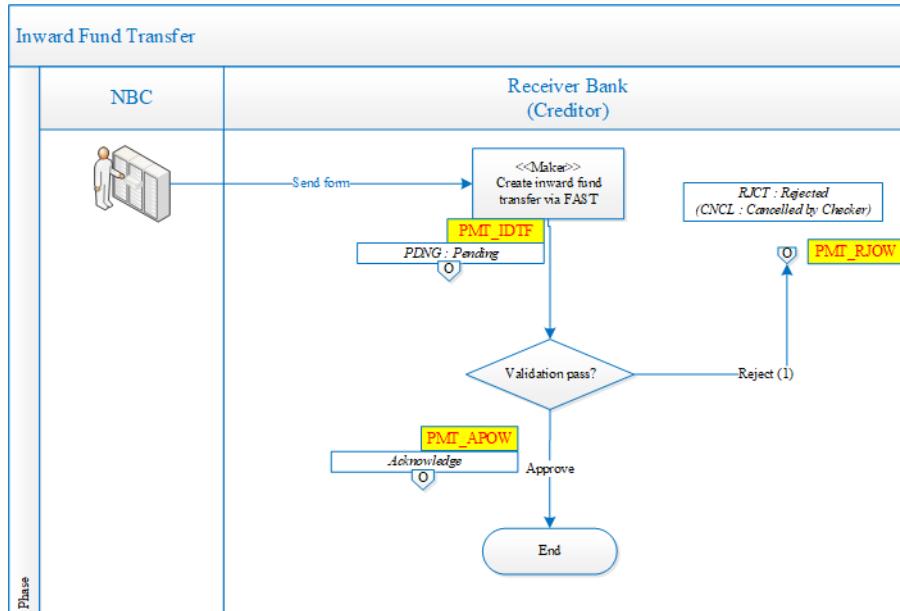


Figure 13 Scope of inward flow

### 3.2.3.3 Scope of sync status transaction flow

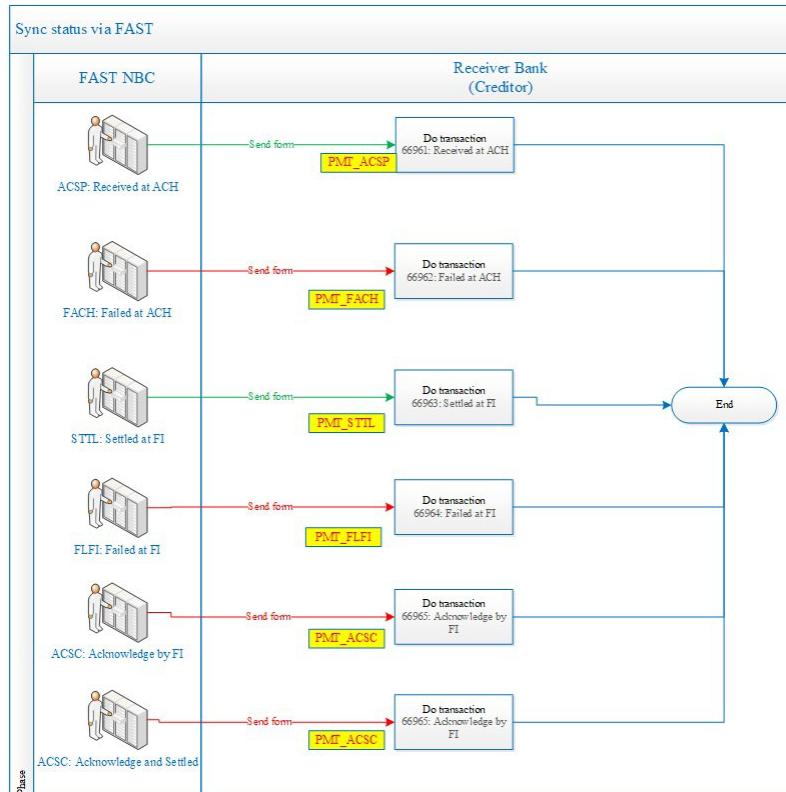


Figure 14 Scope of sync status transaction flow



### **3.2.4 FAST payment transaction list**

#### **3.2.4.1 Outgoing (SBILH to Others bank)**

<b>WBS</b>	<b>Transaction code</b>	<b>Transaction name</b>	<b>Type</b>
1	PMT_ODTF	6693: Outward Fund Transfer via Fast	Booking
2	PMT_APOW	Approve transfer message via fast	Booking
3	PMT_RJOW	Reject transfer message via fast	Auto
4	PMT_GOL	FAST - Get List Outward	Auto
5	PMT_USTF	6696: Update transaction status via fast	Auto

#### **3.2.4.2 Incoming (Others bank to SBILH)**

<b>WBS</b>	<b>Transaction code</b>	<b>Transaction name</b>	<b>Type</b>
1	PMT_RFT	PMT_RFT - Request inward fund transfer via fast	Auto
2	PMT_IDTF	6695: Inward Fund Transfer via Fast	Auto
3	PMT_GIL	SWIFT - Get List Inward	Auto

#### **3.2.4.3 Transaction sync status via FAST**

<b>WBS</b>	<b>Transaction code</b>	<b>Transaction name</b>	<b>Type</b>
1	PMT_ACSP	66961: Received at ACH	Auto
2	PMT_FACH	66962: Failed at ACH	Auto
3	PMT_STTL	66963: Settled at FI	Auto
4	PMT_FLFI	66964: Failed at FI	Auto
5	PMT_ACSC	66965: Acknowledge by FI	Auto
6	PMT_ACST	66966: Acknowledge and Settled	Auto



### 3.2.5 FAST payment transaction

#### 3.2.5.1 Outgoing transaction

a) PMT\_ODTF: 6693: Outward Fund Transfer via Fast

- Purpose: Create new fund transfer from SBILH to another bank via FAST
- GUI information

6693: Outward Fund Transfer via Fast

Reference number	2408309999001022																		
Internal reference number	9999-FAST110421-001 (*)																		
Product code	00012																		
Product type	FAST PAYMENT																		
Sender's currency	USD																		
Sequence unique account number	999910007 (*)																		
Sender account number	9999-02-12100-00021-1 (*)																		
Sender's name	Ash Ben (*)																		
Sender address	Phnom Penh (*)																		
Available balance	10,000.00																		
Sender's type	Transf. FAST																		
Beneficiary bank	14																		
Receiver Bank code	041																		
Swift code	ACLBKHP																		
Receiver Bank name	041																		
Bank address	Address #61, Phnom Penh Blvd.																		
Receiver's currency	KHR																		
Receiver account number	6050510561051 (*)																		
Receiver account name	DAVID																		
Receiver address	Phnom Penh																		
Receiver type	FAST																		
Purpose of transfer	Other service																		
Country	Cambodia																		
Amount send	10,000.00 (*)																		
Cross rate	4.120.000004601																		
Amount Debited	41,200,000.00																		
Total fee (100%)	100.00																		
Fee SBILH (50%)	50.00																		
Fee sharing to receiver's bank (50%)	50.00																		
Fee debit SBILH (50%)	50.00																		
Fee debit for sharing to Receiver Bank (50%)	50.00																		
Total fee debited from customer	50.00																		
Exchange rate	4.120.000004601																		
Nostro account	9999-01-56932-56951-1																		
<b>Fee</b>																			
<table border="1"><tr><td>Add</td><td>Modify</td><td>Apply</td><td>Remove</td></tr><tr><td>IFC code</td><td>Value type</td><td>Value</td><td>Fee</td><td>Floor</td><td>Ceiling</td><td>Currency</td></tr><tr><td colspan="7">Total cash: 0.00 Total deposit: 0.00 Total accounting: 0.00 Total interest: 0.00 Total principal: 0.00</td></tr></table>		Add	Modify	Apply	Remove	IFC code	Value type	Value	Fee	Floor	Ceiling	Currency	Total cash: 0.00 Total deposit: 0.00 Total accounting: 0.00 Total interest: 0.00 Total principal: 0.00						
Add	Modify	Apply	Remove																
IFC code	Value type	Value	Fee	Floor	Ceiling	Currency													
Total cash: 0.00 Total deposit: 0.00 Total accounting: 0.00 Total interest: 0.00 Total principal: 0.00																			
<input type="button" value="Accept"/> <input type="button" value="Clear"/>																			



□ Meaning of field

Field	Description
Reference number	<ul style="list-style-type: none"> <li>- References number generate by system</li> <li>- Internal reference number generate by system follow by format <b>XXXX-YYYYMMDD-ZZZ</b></li> <li><i>XXXX: Branch code</i></li> <li><i>YY: Payment type</i></li> <li><i>TT: Year</i></li> <li><i>MM: Month</i></li> <li><i>DD: Days</i></li> <li><i>ZZZ: Number of sequences</i></li> </ul>
Internal reference number	
Product Code	Default 00012. <b>Outward via FAST connect</b>
Product type	Domestic
Sequence unique account number	Deposit account number. 9 digit account number. The teller will input this value
Sender account number	Load from Sequence unique account number (17 Digits)
Sender's currency	Load from Sequence unique account number
Sender account name	Load from Sequence unique account number
Sender address	Load from Sequence unique account number
Available balance	Load from Sequence unique account number
Beneficiary bank	Receiver's bank
Receiver Bank code	Bank code load from Beneficiary bank
Swift code	Load from Beneficiary bank
Receiver Bank name	Load from Beneficiary bank
Bank address	Load from Beneficiary bank
Receive currency	Receiver's currency. The teller choose. Default NBC FAST is KHR / USD
Receiver account number	Receiver's account number. The teller input this account
Receiver account name	Receiver's account name. The teller input
Receiver address	Receiver's account address. The teller input
Receiver type	Receiver's type. The teller input
Purpose of transfer	The teller choose purpose of transfer: <b>Others service</b>
Amount send	Sending amount to be settled with settlement account NBC (NBC)
Cross rate	Exchange rate between sender currency and receiver currency
Amount debited	Amount debit from customer deposit account at SBILH
Total fee (100%)	Total fee from sender
Fee SBILH (50%)	Fee for SBILH - 50%
Fee sharing to receiver's bank (50%)	Fee sharing with receiver's bank, to be settled with currency account NBC - 50%
Fee debit SBILH (50%)	Fee debit to SBILH - 50%
Fee debit for sharing to receiver's bank (50%)	Fee debit for sharing to receiver's bank (50%)
Total fee debited from customer	Total fee debited from customer
Nostro account	Auto pick up nostro account settlement NBC

□ Execution conditions

1. Teller:

- + Booking transaction in core banking
- + Account inquiry with beneficiary bank
- + Show beneficiary name
- + Show account currency of beneficiary

2. Teller Sup:

- + Approve
- + Transaction auto generated to Fast Online NBC

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- Sender's deposit account type is different from "Saving/Current/Flexible"
- Sender's deposit account status is restricted for "Block/Closed/Suspend/Dormant"
- Total amount convert to KHR must smaller than 40,000,000 KHR and smaller than 10,000\$.
- Total amount transfers each transaction not allow large than 40,000,000 KHR and  
10,000\$
- Sender's deposit available balance must be large than total debit amount.
- Receiver Currency only allow choice USD/KHR

Transaction processing

- Update transaction information after success:
  - o Decrease balance amount follow by debit amount.
  - o Create new fast connect information
  - o Update account history information

Posting entry

(Outward Fast process at branch side only)

Group	Index	Side	Account	Amount
1	1	Debit	DEPOSIT	Transfer amount
	2	Credit	NBC	Transfer amount
2	1	Debit	DEPOSIT	Total Fee amount (100%)
	2	Credit	SUSPENSE	Total Fee amount (100%)
3	1	Debit	SUSPENSE	SBILH Fee amount (50%)
	2	Credit	INCOME	SBILH Fee amount (50%)
4	1	Debit	SUSPENSE	Fee sharing to NBC (50%)
	2	Credit	NOSTRO	Fee sharing to NBC (50%)

\*\*\* Note:

**DEPOSIT:** Customer Account

**NBC:** NBC Settlement Account

**SUSPENSE:** GL suspense **29691121**

**INCOME:** GL income **57319116**

**NOSTRO:** Nostro NBC (Current Account)

**b) PMT\_APOW: Approve transfer message via fast**

- Purpose:** Approve outward fund transfer via FAST
- GUI information**

66931: Approve Outward Fund Transfer via Fast

Reference number	2008309999001022
Internal reference number	9999-FAST210421-001 (*)
Product code	00012
Product type	FAST PAYMENT
Sender's currency	USD
Sequence unique account number	999910007 (*)
Sender account number	9999-02-12100-00021-1 (*)
Sender's name	Anh Ben (*)
Sender address	Phnom penh (*)
Available balance	10,000.00
Sender's type	Transfer FAST
Beneficiary bank	14
Receiver Bank code	041
Swift code	ACLBKHP
Receiver Bank name	041
Bank address	Address:=61, Preah monivong Blvd.
Receiver's currency	KHR
Receiver account number	6050510561051 (*)
Receiver account name	DAVID (*)
Receiver address	Phnom Penh
Receiver type	FAST
Purpose of transfer	Others service
Country	Cambodia
Amount send	10,000.00 (*)
Cross rate	4,120.000060601
Amount Debited	41,200,000.00
Total fee (100%)	100.00 (*)
Fee SBILH (50%)	50.00 (*)
Fee sharing to receiver's bank (50%)	50.00 (*)
Fee debit SBILH (50%)	50.00
Fee debit for sharing to Receiver Bank (50%)	50.00
Total fee debited from customer	50.00
Exchange rate	4,120.000060601
Nostro account	9999-01-56952-56951-1

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- Execution conditions
  - Message code must exist in system
  - Payment not process yet.
- Transaction processing
  - Update transaction information after success:
    - Update fast message status to “Authorized and Sent”
    - Update core message status “Outward Approved”
    - Update account history information



c) PMT\_RJOW: Reject transfer message via fast

- Purpose: Reject outward fund transfer via FAST.

[Core Banking O9](#)

- Request to have one folder Outward Fast Payment > Incomplete transaction (For unsuccessful transaction)
- Transaction error due to incorrect account number
- Status show Failed in O9 while incorrect account number
- Fund auto returned from receiver bank in Fast Online.
- Fee will not return to sender

[FAST Online NBC](#)

- Fund has returned from receiver bank in Fast Online due to the receiver account is incorrect
- Status changed from settled to **Refund** for unsuccessful transaction

 GUI information

66932: Reject Outward Fund Transfer via Fast

Reference number	2008309999001022
Internal reference number	9999-FAST210421-001 (*)
Product code	00012
Product type	FAST PAYMENT
Sender's currency	USD
Sequence unique account number	999910007 (*)
Sender account number	9999-02-12100-00021-1 (*)
Sender's name	AhBn
Sender address	Phnom penh
Available balance	10,000.00
Sender's type	Transfer FAST
Beneficiary bank	14
Receiver Bank code	041
Swift code	ACLBKHPP
Receiver Bank name	041
Bank address	Address #61, Fresh moniving Blvd.
Receiver's currency	KHR
Receiver account number	6050510561051 (*)
Receiver account name	DAVID
Receiver address	Phnom Penh
Receiver type	FAST
Purpose of transfer	Others service
Country	Cambodia
Amount send	10,000.00 (*)
Cross rate	4,120.000060601
Amount Debited	41,200,000.00
Total fee (100%)	100.00
Fee SBILH (50%)	50.00
Fee sharing to receiver's bank (50%)	50.00
Fee debit SBILH (50%)	50.00
Fee debit for sharing to Receiver Bank (50%)	50.00
Total fee debited from customer	50.00
Exchange rate	4,120.000060601
Nostro account	9999-01-56952-56951-1

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**JUST-IN-TIME®  
SOLUTIONS** Execution conditions

- Message code must exist in system
- Payment not process yet.

 Transaction processing

- Update transaction information after success:
  - o Update fast message status is "Rejected"
  - o Update core message status is "Failed"
  - o Update account history information

 Posting Entry

Group	Index	Side	Account	Amount
1	1	Credit	DEPOSIT	Remittance amount
	2	Debit	NBC	Remittance amount



### 3.2.5.2 Incoming transaction

a) PMT\_ODTF: 6695: Inward Fund Transfer via Fast (Auto generate by system)

- Purpose: Create new fund transfer inward from another bank to SBILH via FAST.  
This transaction has been auto generated by system.
- GUI information

6695 Inward Fund Transfer via Fast

Reference number	2008309959001022																		
Internal Reference number	ITTFAST-202110-001																		
Product code	00013																		
Product type	Domestic																		
Sender account number	5325235235252																		
Sender account name	Arnh Ben																		
Sender's currency	KHR																		
Sender address	Phnom penh																		
Sender type																			
Sender bank	14																		
Sender bank code	041																		
Sender bank Swift code / BIC	ACLBKHPK																		
Sender bank name	041																		
Sender bank address	Address #61, Preah monivong Blvd.																		
Receiver's currency	USD																		
Sequence unique account number (9 digits)	020310007																		
Receiver account (17 digits)	1203-02-12100-00021-1																		
Receiver's name	DAVID																		
Receiver type	Local banks																		
Available balance	10,000.00																		
Purpose	Other service																		
Sender to receiver information	TRANSFER FAST PAYMENT																		
Amount receive	4,098,000.00																		
Cross rate	4,098.000060801																		
Amount credited	1000.00																		
Total fee (100%)	8,000.00																		
Fee SBILH (50%)	4,000.00																		
Fee SBILH debited (50%)	4,000.00																		
Nostro account	9999-01-56952-56951-1																		
Fee	<table border="1"><tr><td>Add</td><td>Modify</td><td>Apply</td><td>Remove</td></tr><tr><td>IFC code</td><td>Value type</td><td>Value</td><td>Fee</td><td>Floor</td><td>Ceiling</td><td>Currency</td></tr><tr><td colspan="7">Total cash: 0.00 Total deposit: 0.00 Total accounting: 0.00 Total interest: 0.00 Total principal: 0.00</td></tr></table>	Add	Modify	Apply	Remove	IFC code	Value type	Value	Fee	Floor	Ceiling	Currency	Total cash: 0.00 Total deposit: 0.00 Total accounting: 0.00 Total interest: 0.00 Total principal: 0.00						
Add	Modify	Apply	Remove																
IFC code	Value type	Value	Fee	Floor	Ceiling	Currency													
Total cash: 0.00 Total deposit: 0.00 Total accounting: 0.00 Total interest: 0.00 Total principal: 0.00																			
<input type="button" value="Accept"/> <input type="button" value="Clear"/>																			



□ Meaning of field

Field	Description
Reference number	- References number generate by system  - Internal reference number generate by system follow by format  XXXX-YYYYMMDD-ZZZ XXXX: Branch code YY: Payment type YY: Year MM: Month DD: Days ZZZ: Number of sequences
Internal reference number	
Product Code	Default 00013: Inward via FAST payment
Product type	Domestic
Sender's account number	The teller input from FAST payment
Sender's currency	The teller choose currency of sender's payment
Sender account name	The teller input from FAST payment
Sender address	The teller input from FAST payment
Sender bank	Receiver's bank
Sender bank code	Bank code load from Beneficiary bank
Sender bank Swift code / BIC	Load from Beneficiary bank
Sender bank name	Load from Beneficiary bank
Sender bank address	Load from Beneficiary bank
Sequence unique account number	Receiver's account number. The teller input this account
Receiver account number	Load from Sequence unique account number
Available balance	Load from Sequence unique account number
Receive currency	Load from Sequence unique account number
Receiver name	Load from Sequence unique account number
Receiver address	Load from Sequence unique account number
Receiver type	The teller choose currency of receiver type
Purpose of transfer	The teller choose purpose of transfer. <b>Others service</b>
Amount receive	Amount receive from FAST NBC payment
Cross rate	Exchange rate between sender currency and receiver currency
Amount credit	Total amount after exchange will credit to customer
	Total fee auto calculate from Amount credited  <b>0 - 4,000,000.00 -&gt; 4,000 4,000,000.00 - 20,000,000.00 -&gt; 8,000 20,000,000.00 - 40,000,000.00 -&gt; 12,000</b>
Total fee amount	Commission for SBILH 50% total fee amount
Commission SBILH (50%)	
Nostro account	Auto pick up nostro account settlement NBC
Description	Description

□ Execution conditions

- Sender's deposit account type has to “Saving/Current/Flexible”
- Sender's deposit account status Restrict for “Block/closed/ suspense/fixed deposit” are restricted

□ Transaction processing

- Update transaction information after success:
  - o Create new fast connect information
  - o Increase balance amount follow by credited amount.
  - o Decrease balance amount follow by fee amount
  - o Update account history information

□ Posting entry

Group	Index	Side	Account	Amount
<b>1</b>	1	Debit	NOSTRO	Cheque amount
	2	Credit	DEPOSIT <i>NBC settlement account</i>	Cheque amount
<b>2</b>	1	Debit	DEPOSIT <i>Nostro Current account</i>	Fee amount 50%
	2	Credit	IFCMAST	Fee amount 50%

\*\*\* Note:

**DEPOSIT: NBC settlement account**

**IFCMAST: G.L income for inward Fast payment (57319117)**



### 3.2.6 Integration O9Core API gateway & FAST system (AUTO)

#### 3.2.6.1 System Architecture

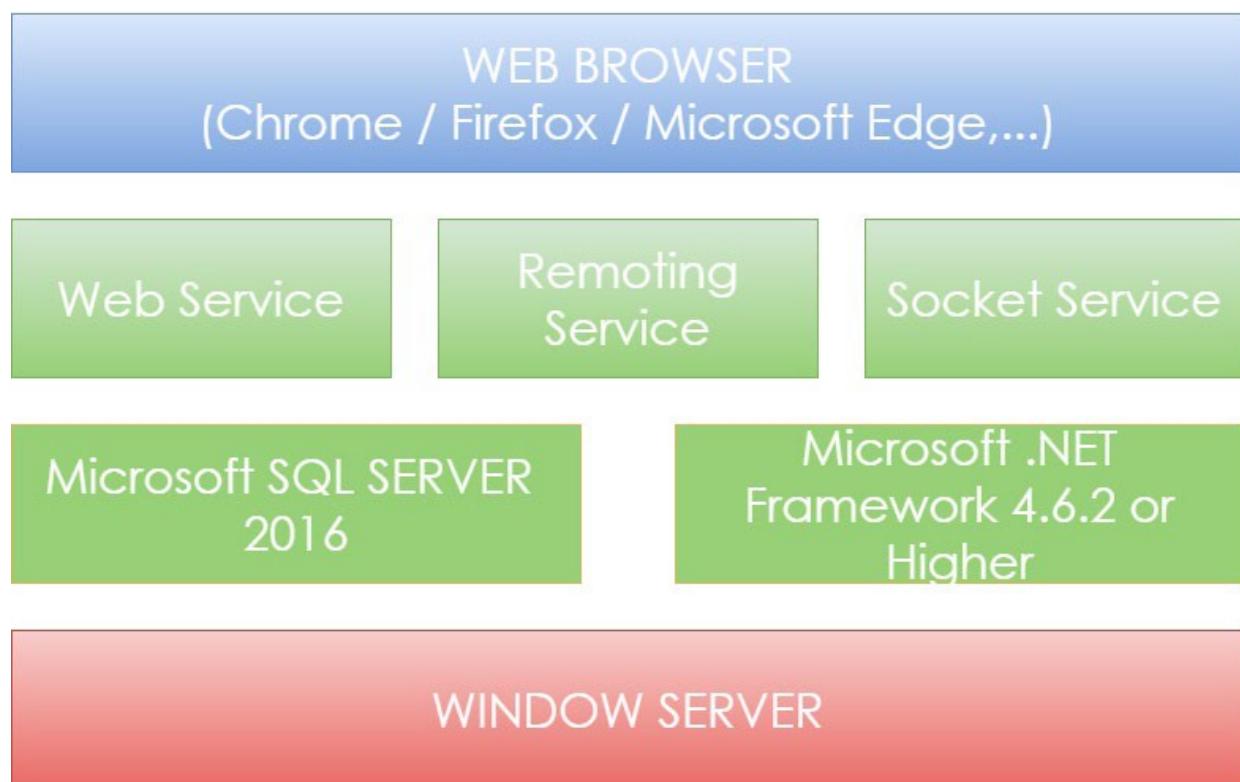
##### System Design Principles

O9Core API gateway - FAST system is designed to obtain the following objectives:

- Open, independent with core system
- High availability
- Scalable.
- High security
- Easy deployment
- Low total cost of ownership
- User friendly in maintenance

##### Technical Architecture

## O9Core API gateway - FAST system

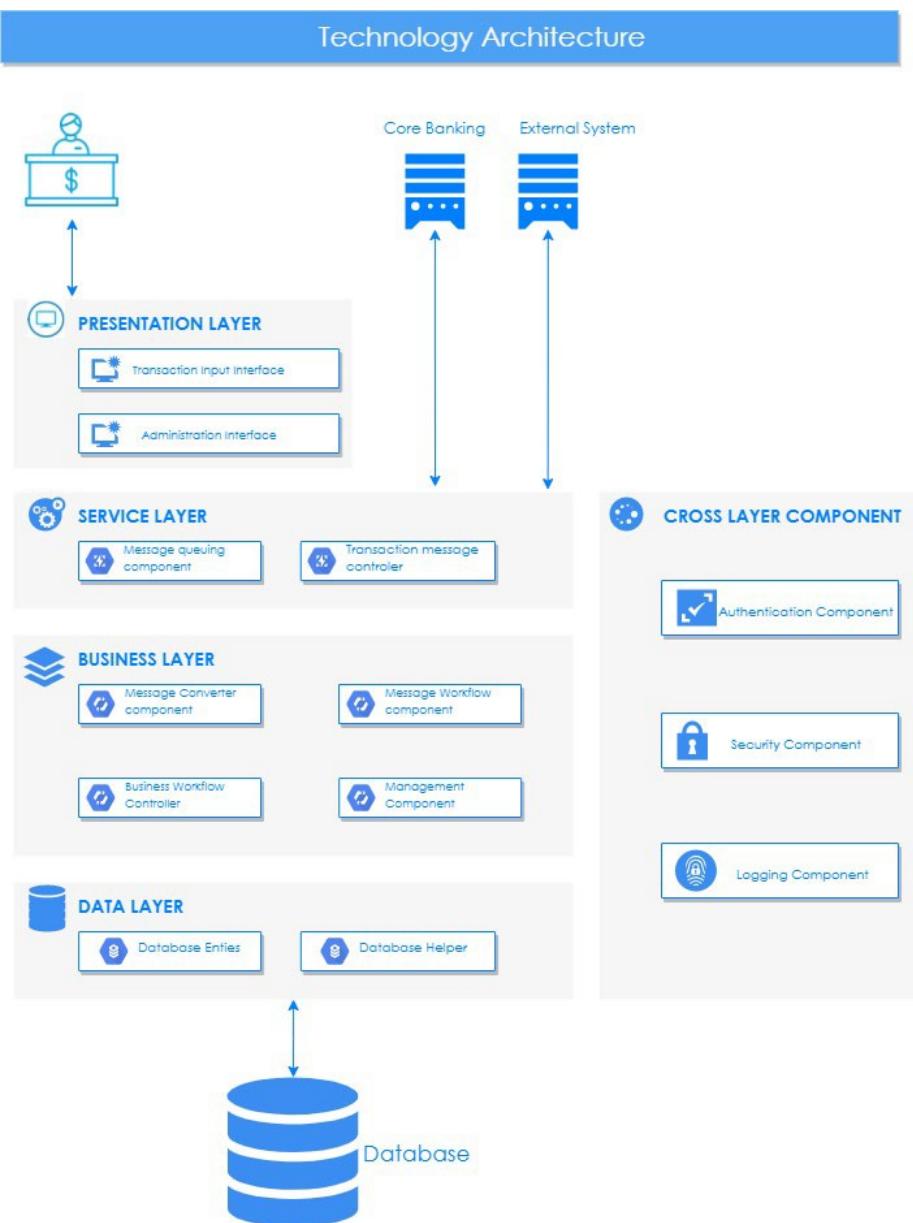




## Framework Architecture

No	Component	Technology	Remark
1	Hosting Framework	Windows Server, .NET 4.6.2 or Higher, Windows Services, IIS .NET Core 5.0	
2	Database Framework	SQL server 2016	
3	Client	Web client	

## Technology Architecture





## Security Architecture

### **Layer 1: Secure Connection.**

- Connection security layer:** Using SSL protocol (AES-256) for securing and encrypting information incoming and outgoing the system.
- System also allowed to executing other security protocol based on SSL such as S/MIME in sending/receiving electronic mail, HTTPS in exchanging information through Web, WS-security security protocol of Web service.
- Connection security layer also allow to link servers together through physical lock system (IIOP/SSL, CSIV2) for preventing danger of hacker's intrusion.

### **Layer 2: User Authentication.**

- System providing user authentication and user access permissions through user name and password.
- User information encrypted in the system using encryption method with key generated randomly by program or key generation device

### **Layer 3: User Authorization.**

- Enterprise has to register using System with the bank then the bank allows the company using its service system. Only bank employees can grant access permission in the system.

### **Layer 4: Server Access.**

- Using firewall for protecting connection between servers inside and outside system, through IP address authentication mechanism, protesting against from DOS attack, preventing from backdoor connection or virus attack.

### **Layer 5: System Architecture.**

- Using n-tier architecture for distributed deploying system components in different hardware platforms for protecting system components.
- System architecture separating different components ensuring upgrading and loading capacity of components without changing system architecture
- Applications encryption and information encryption ensuring system integrity and security.

### **Layer 6: Application Architecture.**

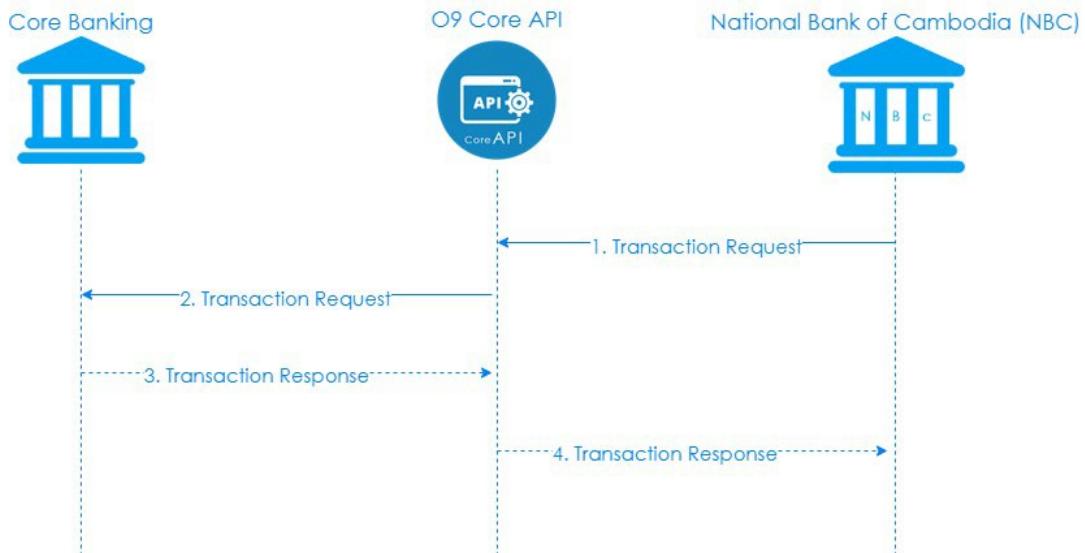
- Using mechanism logging system history and status any time allowing tracking and recovering system to desired point of time, avoiding danger of data loss, detecting system intrusion in a timely manner
- Sensitive data: customer account balance, transaction history... encrypted by encryption algorithm such as RSA 1024 bit or MD5 ensuring data not modified unauthorized



### 3.2.6.2 Main Workflow

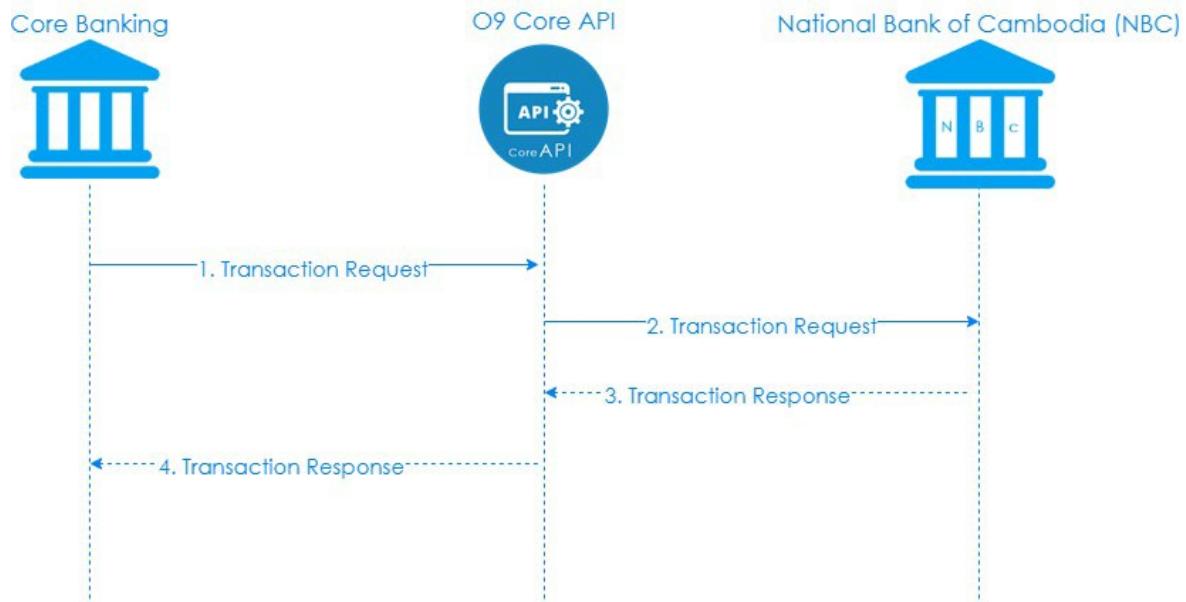
#### ■ Inbound Flow Control

#### Inbound Flow Control



#### ■ Outbound Flow Control

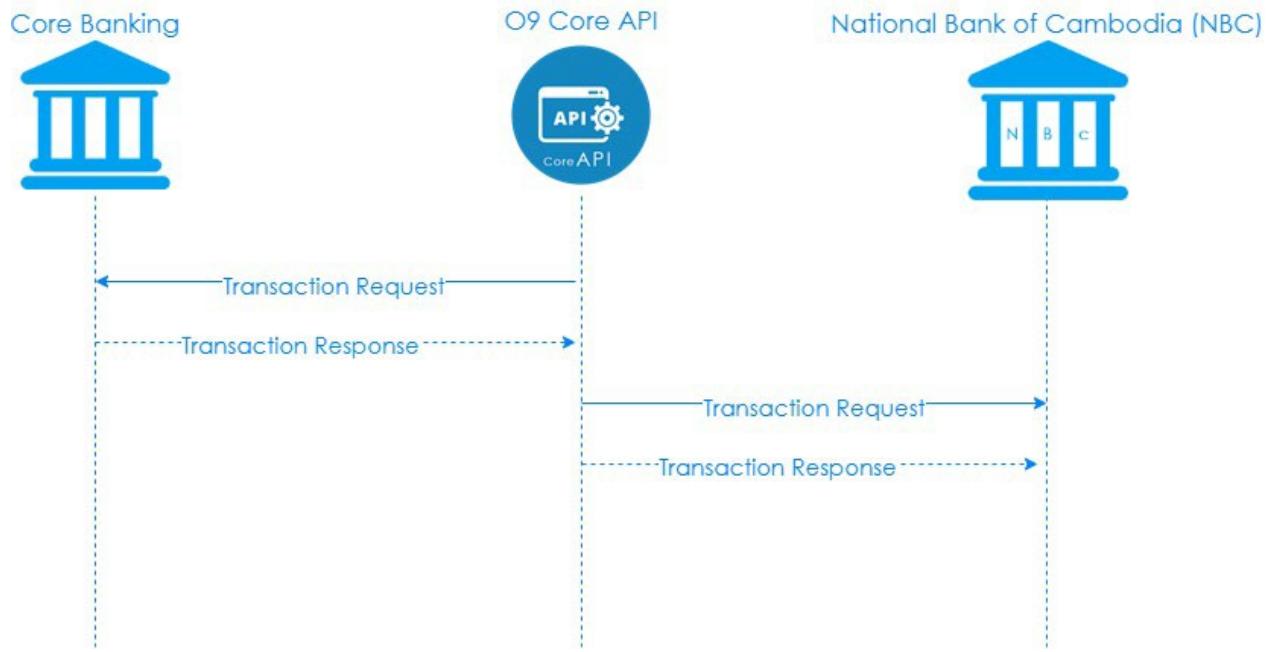
#### Outbound Flow Control





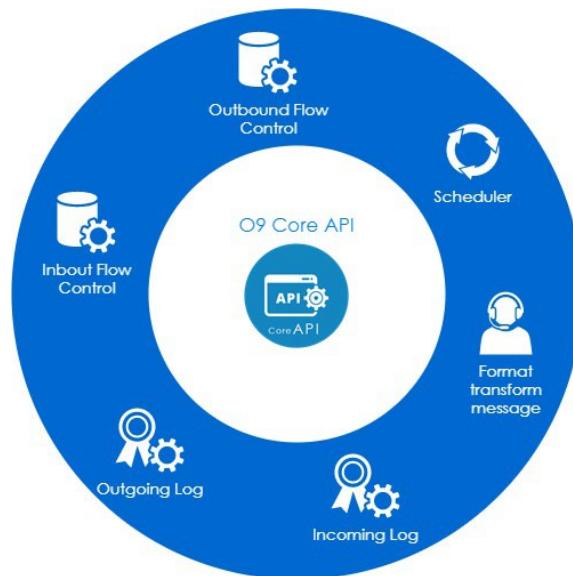
Scheduler Flow

## Scheduler Flow



### 3.2.6.3 System function

System function model





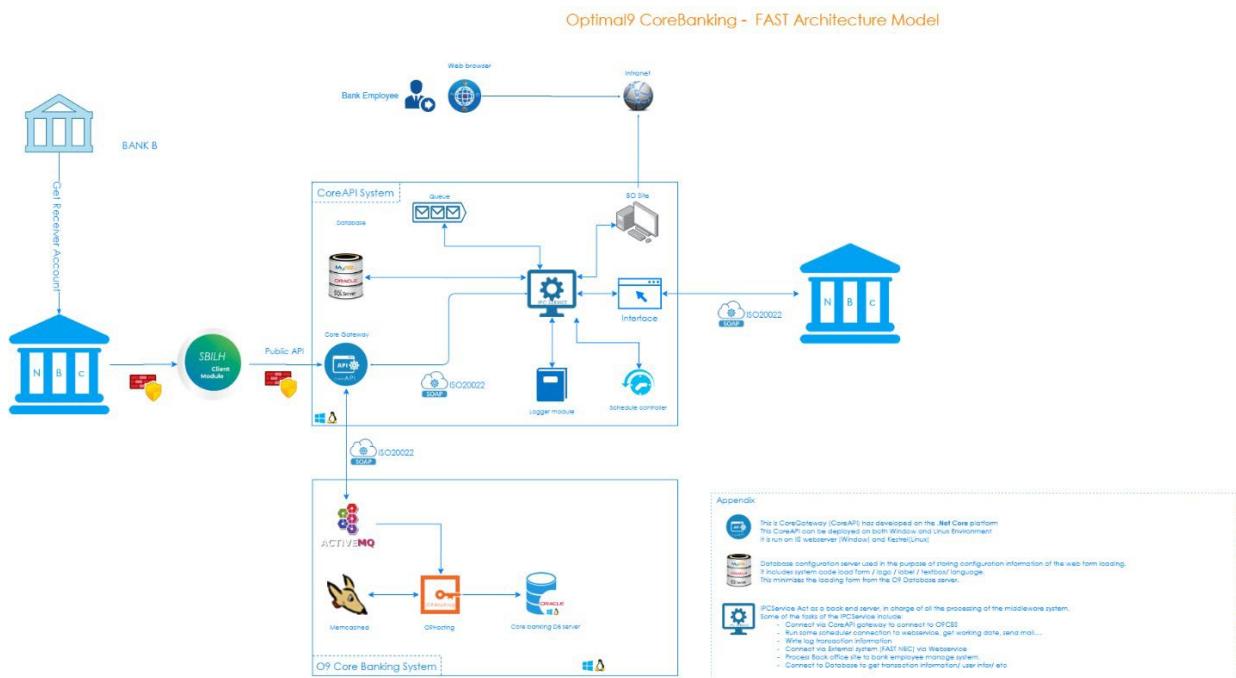
 System function model detail

No	Functions	Description
1	Outbound Flow Control	When teller do transaction on core banking, core banking will post transaction to CoreAPI system. CoreAPI system will format/mapping/convert transaction message to match with NBC message format ( <a href="#">ISO 20022</a> ) and post it to NBC. After that it will wait until transaction finish on NBC and update transaction result to whole system.
2	Inbound Flow Control	CoreAPI – FAST have interface for listening income transaction request from NBC. When NBC post a transaction to CoreAPI - FAST, system will validate/format/convert NBC message ( <a href="#">ISO20022</a> ) to match with Core Banking transaction request (O9 Message) and post it to Core Banking via CoreAPI Gateway. After Core Banking processed transaction already, O9 CoreAPI – FAST will forward transaction result from core banking to NBC and update transaction state.
3	Scheduler	Bank staff can setup a scheduler on O9CoreAPI back office site to perform transaction by calendar (one time, daily, weekly, monthly). System will control and process transaction as configuration and show transaction result on report.
4	Format/Transform Message	CoreAPI have a powerful mapping module, it can be format/convert input/output message to match with other system. It's make easy to communicate between systems.
5	Incoming Log	System automatic log detail of incoming transaction to file and database for tracking and monitoring
6	Outgoing Log	System automatic log detail of outgoing transaction to file and database for tracking and monitoring



### 3.2.6.4 O9CoreAPI – FAST system Specification

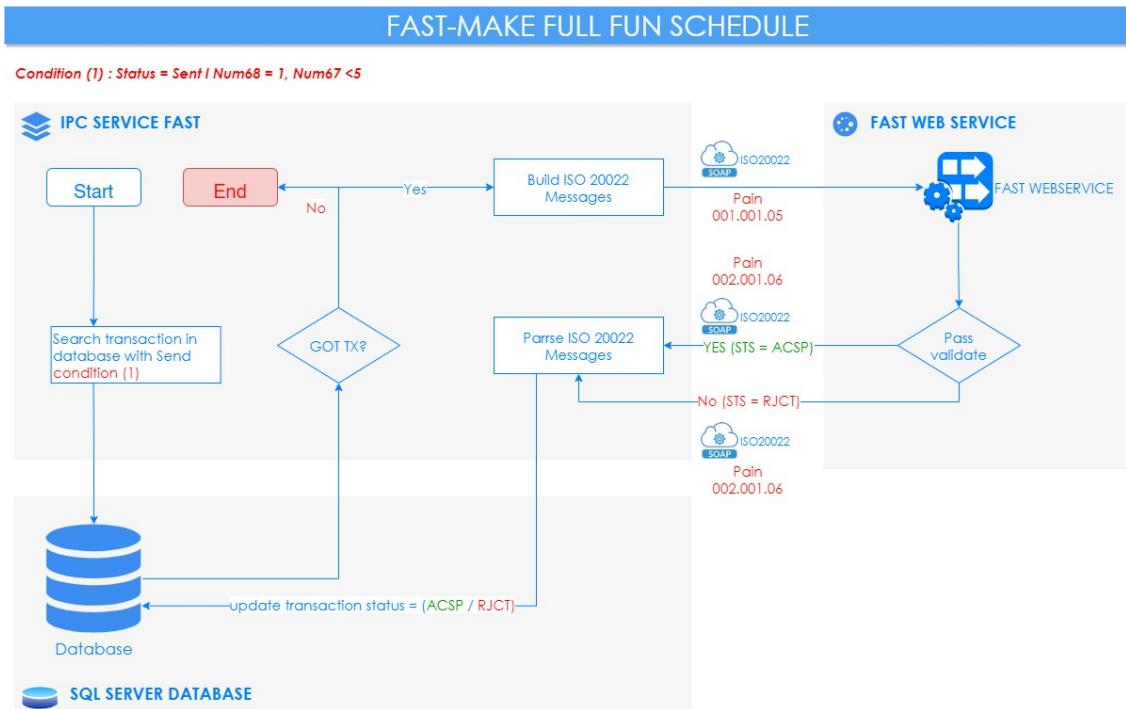
#### 3.2.6.4.1 Architecture model



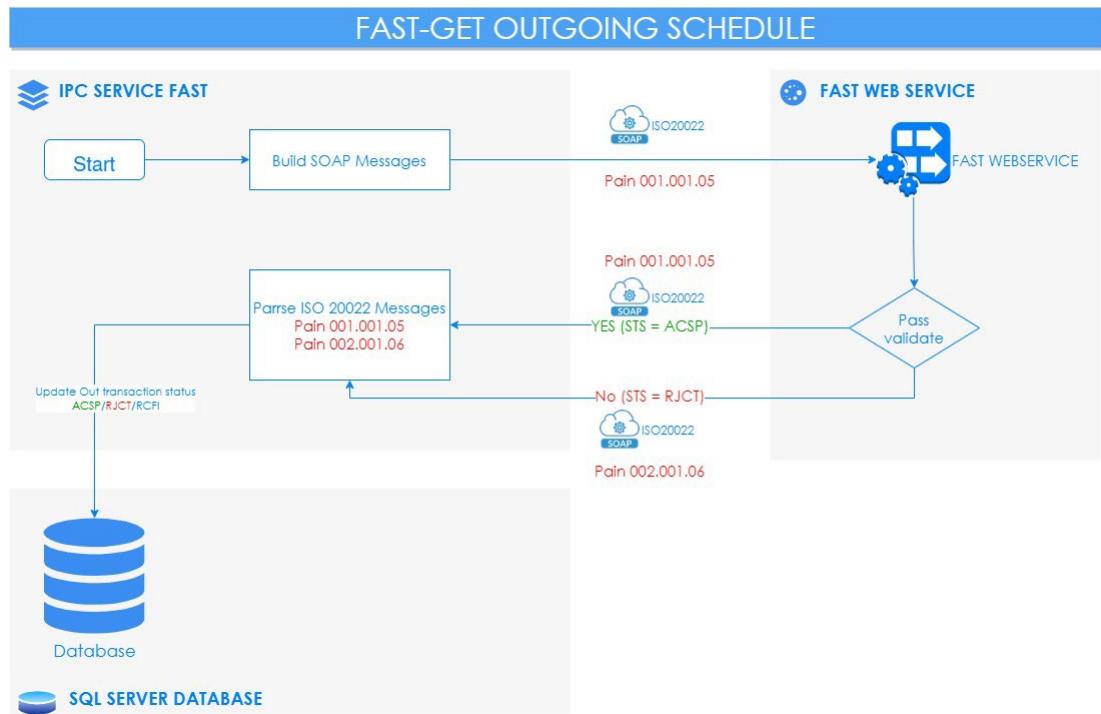


### 3.2.6.4.2 O9CoreAPI – Detail flow control all function

#### FAST-MAKE FULL FUN SCHEDULE

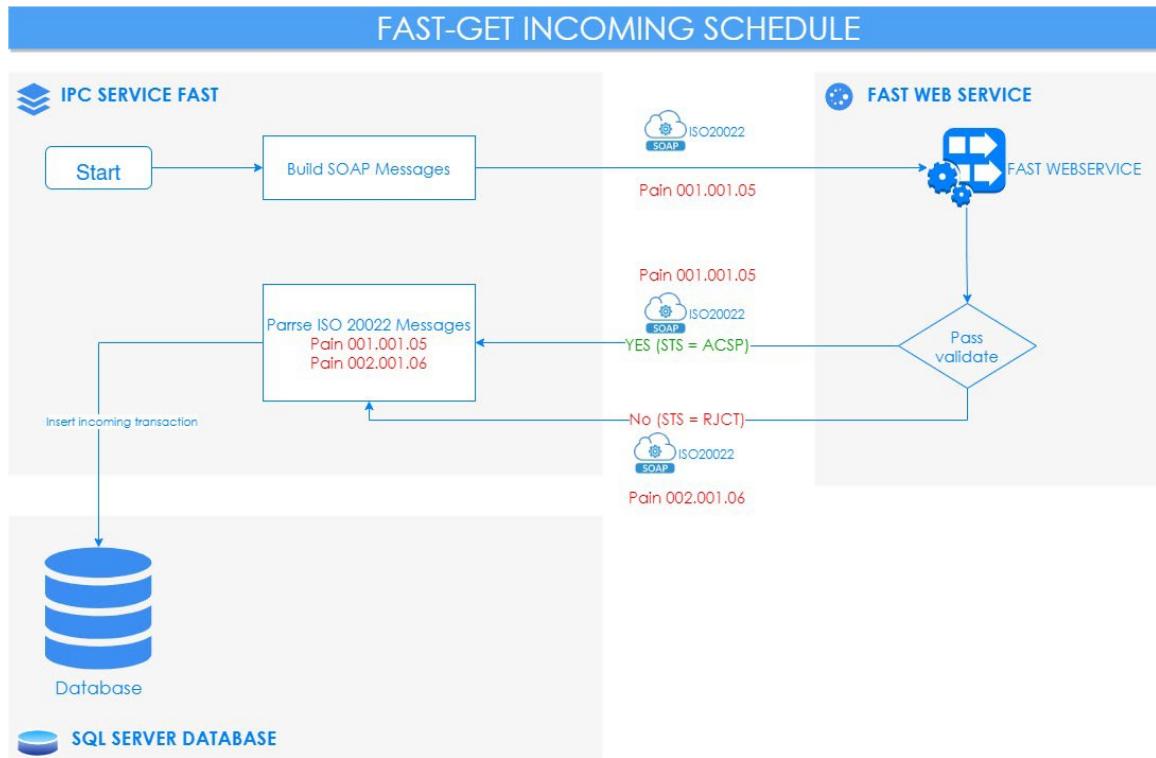


#### FAST-GET OUTGOING SCHEDULE

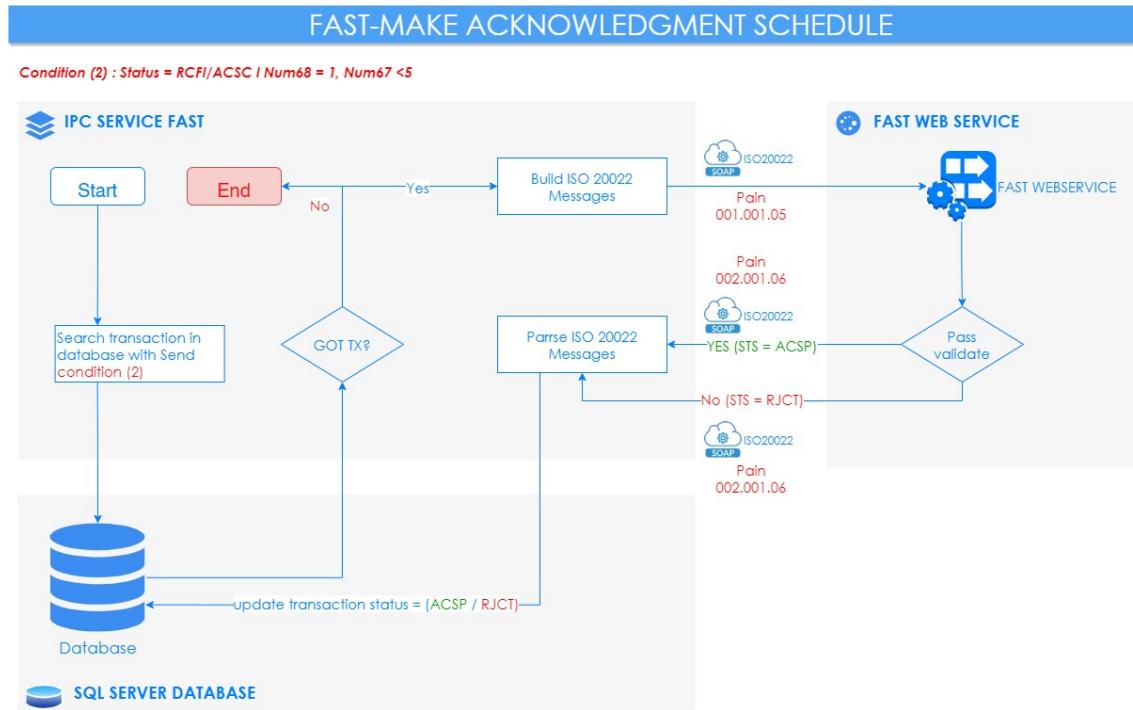




❖ FAST-GET INCOMING SCHEDULE



❖ FAST-MAKE ACKNOWLEDGMENT SCHEDULE



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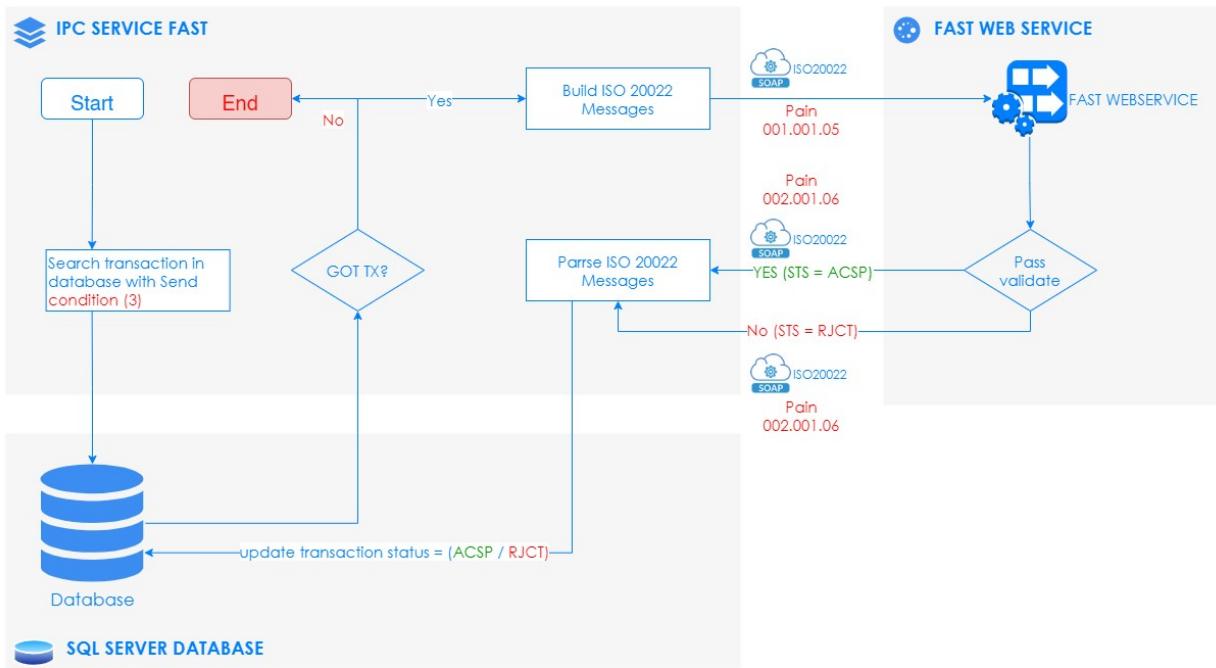


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### FAST-MAKE REFUND SCHEDULE

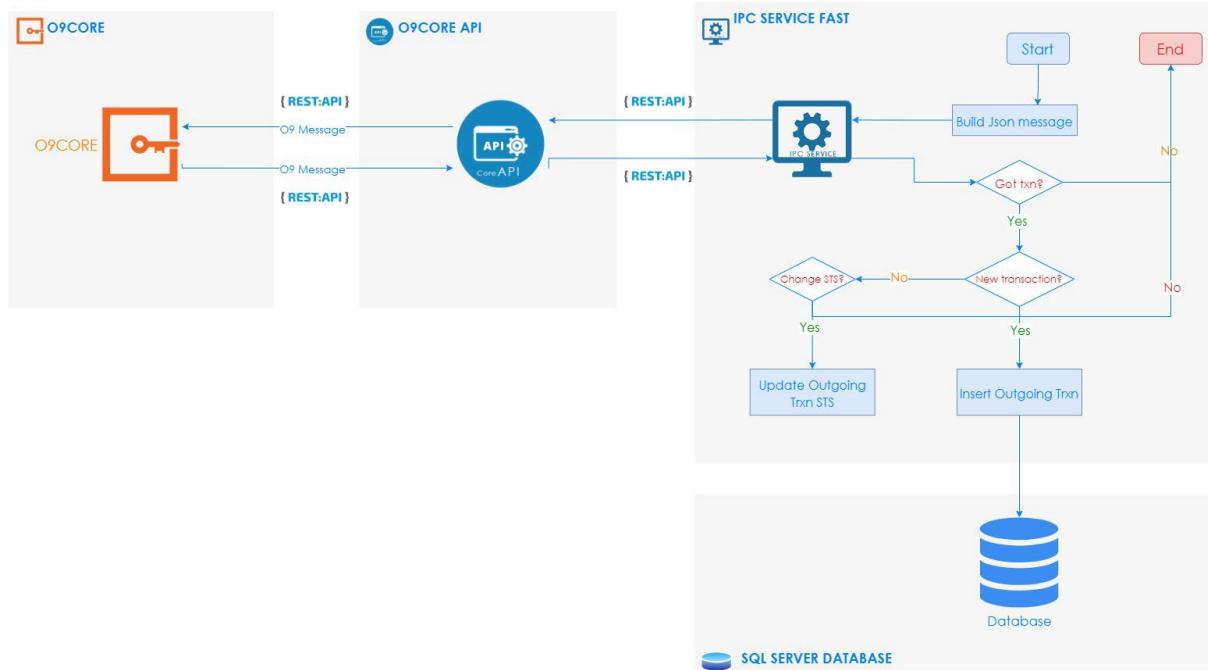
#### FAST-MAKE ACKNOWLEDGMENT SCHEDULE

Condition (3) : Status = FLFI / Num68 = 1, Num67 <5



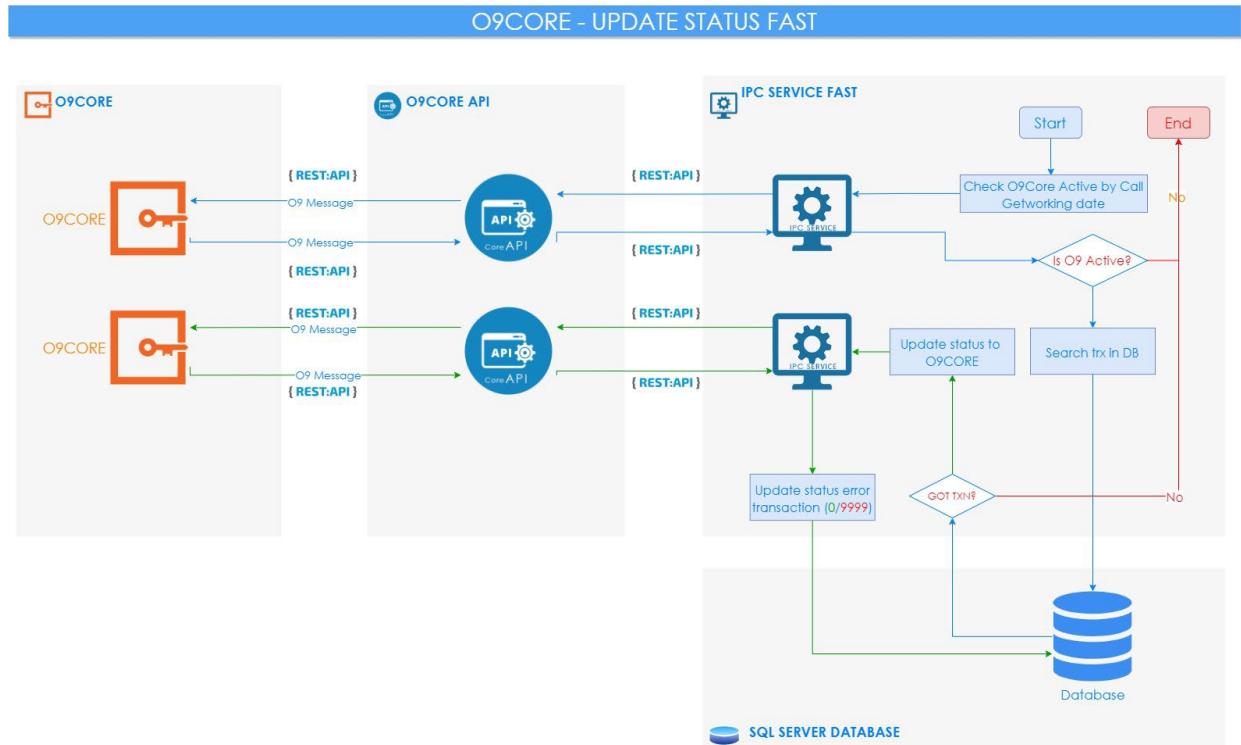
### O9CORE-GET LIST OUTWARD SCHEDULE

#### O9CORE-GET LIST OUTWARD SCHEDULE

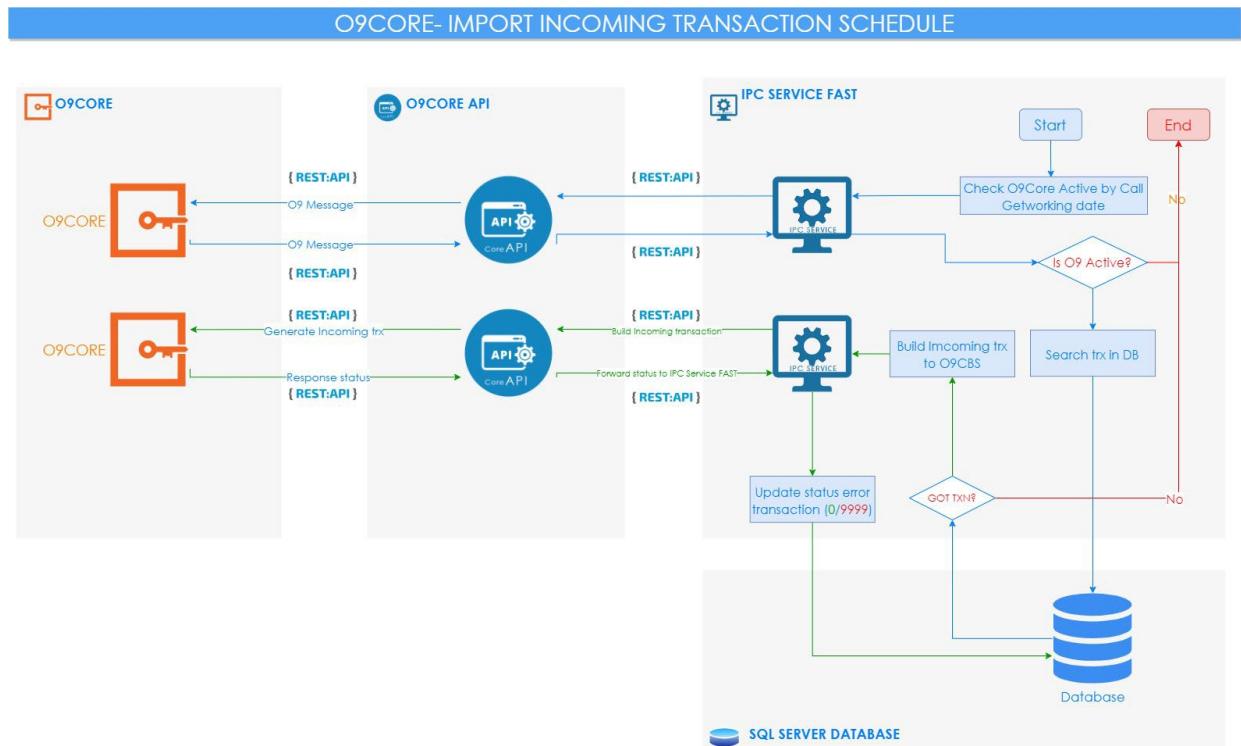




❖ O9CORE-Update status FAST



❖ O9Core – Import Inward transaction schedule



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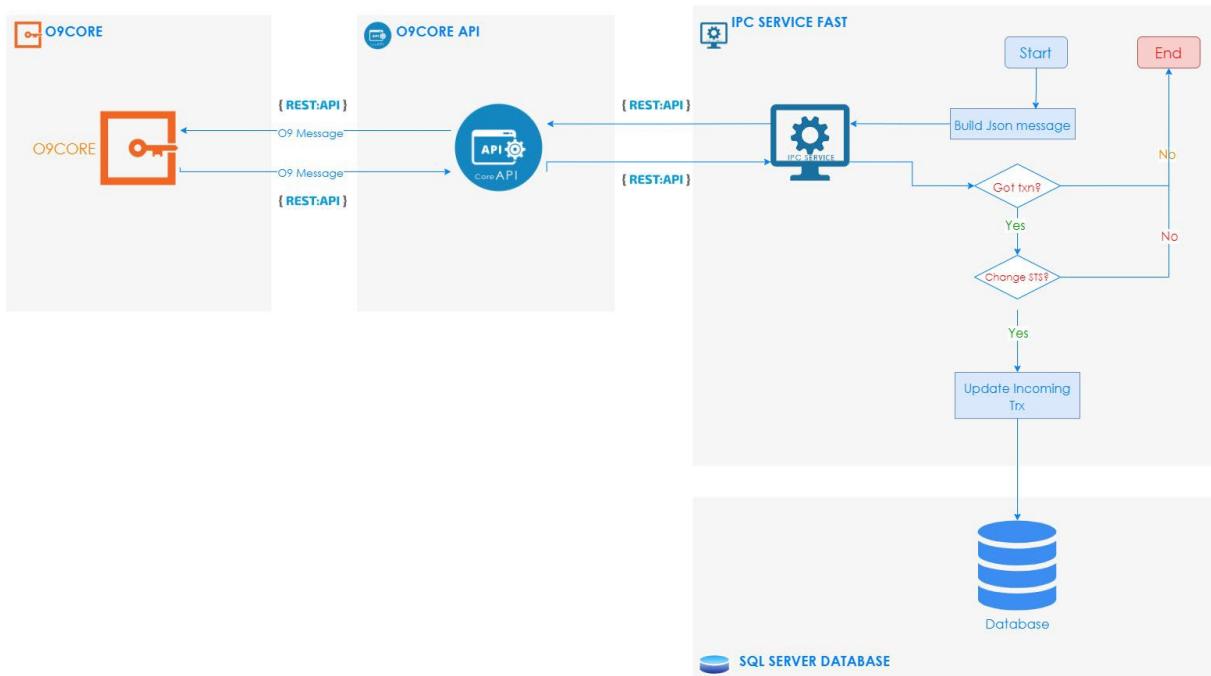
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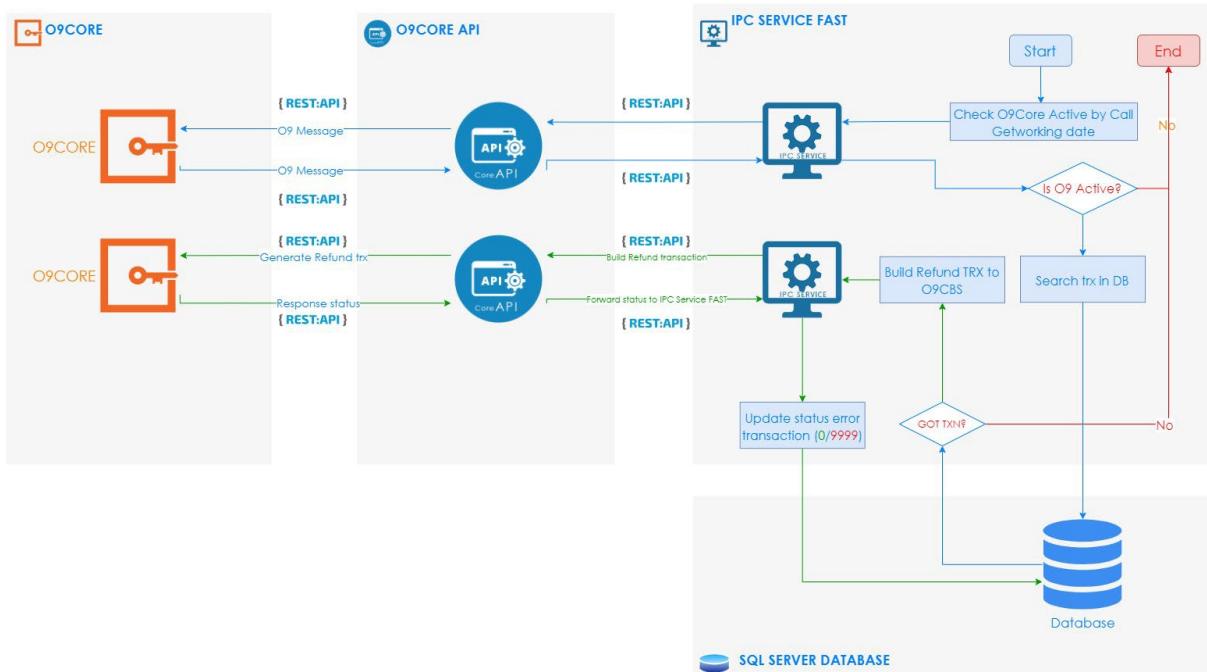
### ❖ O9CORE-GET LIST INWARD SCHEDULE

#### O9CORE-GET LIST INWARD SCHEDULE



### ❖ O9CORE – REQUEST REFUND FAST SCHEDULE

#### O9CORE - REQUEST REFUND FAST SCHEDULE





### 3.2.6.5 O9CoreAPI – FAST system Management

#### 3.2.6.5.1 Introduce function

No	Menu	Functions	Description	Object
1	BO Transaction	Transaction Management	View transaction list	<b>Teller</b>
2		Transaction detail	View transaction detail	<b>Teller</b>
3	System	List of roles	Role management	<b>Teller</b>
4		User policy	User policy management	<b>Manager</b>
5		Set role for group	Setup role for group	<b>Teller</b>
6		Users list	User management	<b>Teller</b>
7		Menus list	Menu management	<b>Teller</b>
8		Set role for menu	Setup role for menu	<b>Teller</b>
9		Unblock account	Unblock account	<b>Teller</b>
10		Reset password for SEMS users	Reset password for sems users	<b>Admin, SEMS admin</b>
11	Report	Report		
12		Reports management	Reports management	<b>Teller</b>
13		Set role for report	Setup role for report	Teller



### 3.2.6.5.2 Common function

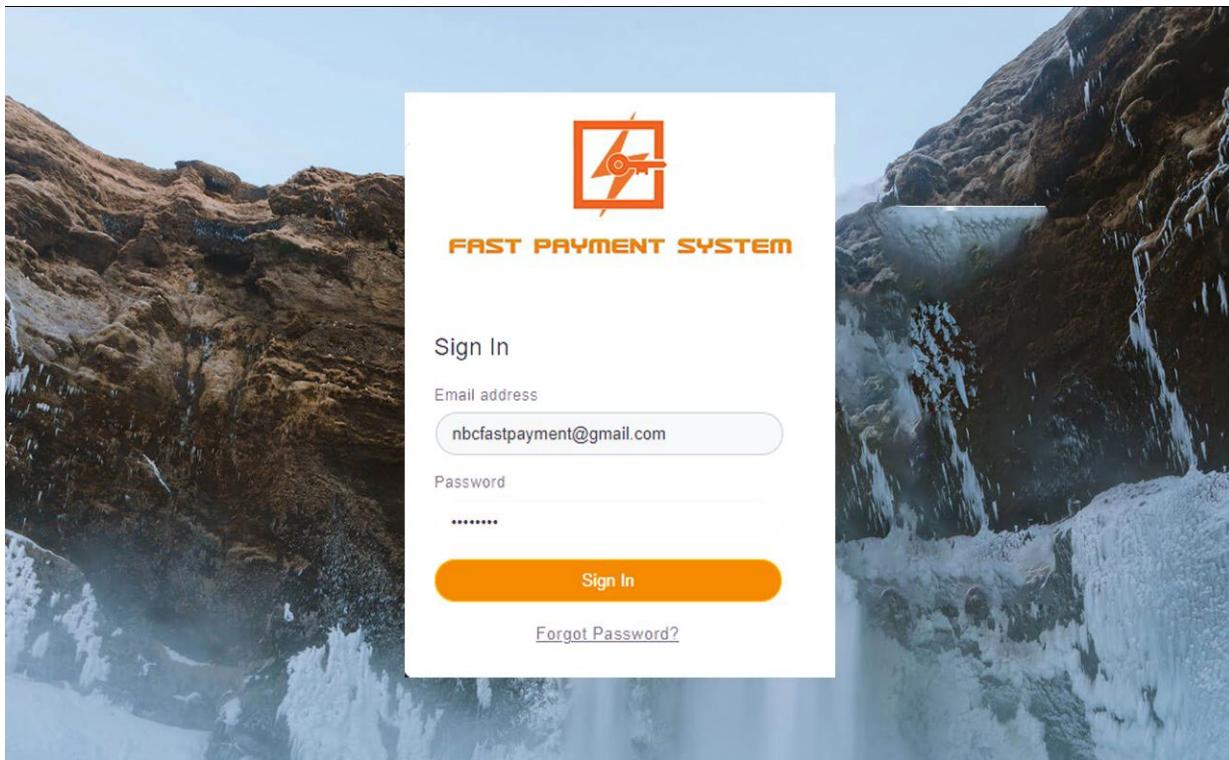
#### Starting the O9 CORE API (FAST) System

- The System menu contains commands that facilitate logging in, changing passwords, and logging out.
  - o **Log in** – Allows the user to log on to the system.
  - o **Log out** – Allows the user to log off the system.
  - o **Change Password** – Select to change the password for the user that is currently logged in.
- To start the O9 CORE API (Fast) system, Open Any Browser (Chrome / Firefox) and type system address: e.g. <http://192.168.1.225/Default.aspx?po=4&p=159>. The O9 CORE API (FAST) System Login dialog box displays.

*Picture 1: Here*

#### Login into the O9 CORE API (FAST) System

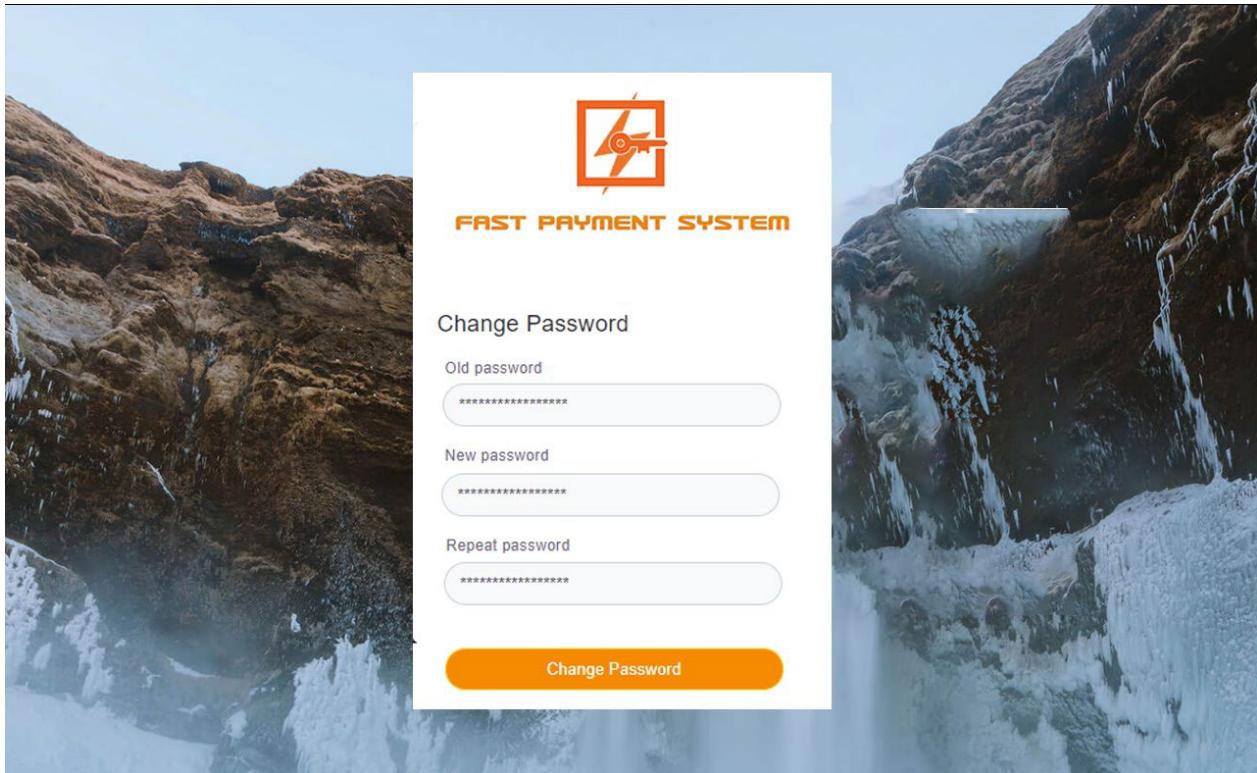
- To Log in to the O9 CORE API (FAST) System:
  - o In the User name field, type the user name.
  - o In the Password field, type the password.  
Both the user name and password are case sensitive.
  - o Click on Login. The O9 Connect (FAST) System Window displays:





### Change password

- To change a password:
  - o From the user information on window, select **Change Password**. The Password Change window displays.



- o In the Old Password field, type the old password.
- o In the New Password field, type the new password.
- o In the Re - Password field, type the new password again.
  - o The passwords typed IN the New Password and Re - Password fields must be exactly the same.
  - o All user passwords created are encoded before they are posted to database, adding an additional layer of system security.
  - o Passwords are case sensitive.
- o Click on Change. A successful password change message displays to confirm the change.



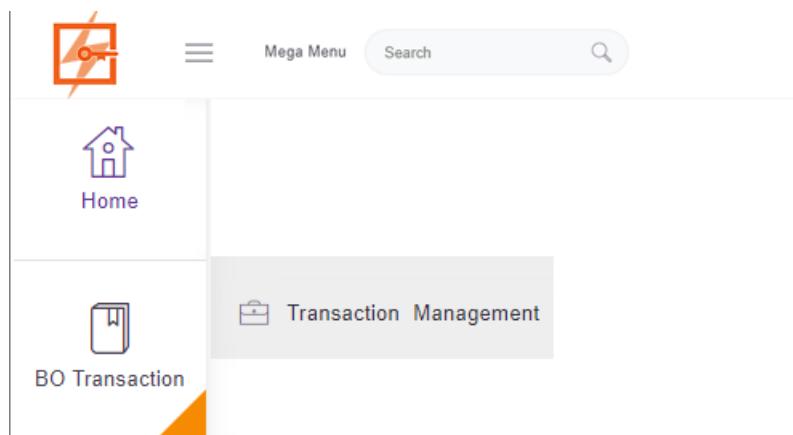
### 3.2.6.5.3 System function

#### A. Menu BO function

##### ➤ Transaction list

- ❖ Transaction search:

Step 1: Go to menu BO Transaction/ Transaction Management.



Step 2: Input transaction information to search:

#	Transaction date	Transaction no	Payment ID	Transaction status	Amount	Currency	Sender account	Receiver account	Sender bank	Receiver bank	Action
1	19/04/2021 16:50	9999-FAST210419-001	VBLCKH/SBILH	active	10.000.00	USD	999999515	99573639515	SBILHBANK	TPBANK	
2	19/04/2021 16:30	9999-FAST210419-002	VBLCKH/SBILH	pending	12.000.00	USSD	962469534	962489464534	SBILHBANK	TPBANK	
3	19/04/2021 16:00	9999-FAST210419-003	VBLCKH/SBILH	inactive	12.000.00	USSD	962469534	962489464534	SBILHBANK	TPBANK	

Figure 15 Transaction Management Screen

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WBS	Field	Description
1	Transaction No	Transaction Number
2	Status	Transaction status:
3	From date	Transaction From date
4	To date	Transaction To Date
5	Sender account	Sender Account Number
6	Receiver account	Receiver Account Number
7	Transaction type	Transaction type
8	Send to Fast or O9 Core	FAST Status



Step 3: Click [Search] button, data display on gridview:

Step 4: Search for “Send to FAST or O9 condition”. Choose success.

Step 5: Click [Search] button, data display on grid view:

The screenshot shows the 'FAST PAYMENT SYSTEM' interface. On the left is a sidebar with icons for Home, BO Transaction, FO Transaction, System, User management, and Report. The main area has a title 'Transacion management'. It contains several search filters: 'Transacion number', 'Sender account', 'Receiver account', 'Status' (with 'From date' and 'To date' dropdowns), 'Transaction type', 'Currency', and two dropdowns for 'Send to FAST or O9 Core'. Below these is a large orange 'Search' button. Underneath is a section titled 'Transaction Detail' with a grid table. The table has columns: #, Transaction date, Transaction no, Payment ID, Transaction status, Transaction type, Amount, Currency, Sender account, Receiver account, Sender bank, Receiver bank, and Action. Three rows of transaction data are listed:

#	Transaction date	Transaction no	Payment ID	Transaction status	Transaction type	Amount	Currency	Sender account	Receiver account	Sender bank	Receiver bank	Action
1	19/04/2021 16:50	9999-FAST210419-001	VBLCKH/SBILH	active	Incoming	10,000.00	USD	999999515	99573639515	SBILHBANK	TPBANK	
2	19/04/2021 16:30	9999-FAST210419-002	VBLCKH/SBILH	pending	Incoming	12,000.00	USSD	962469534	962489464534	SBILHBANK	TPBANK	
3	19/04/2021 16:00	9999-FAST210419-003	VBLCKH/SBILH	inactive	Incoming	12,000.00	USSD	962469534	962489464534	SBILHBANK	TPBANK	

- Choose Unsuccess. Click [Search] button, data display on grid view:

With the Unsuccess case, the system displays the resend button

Step 6: Select transaction which you want to resend. Click Resend button to resend unsuccess transaction

- System show dialog message: “Are you sure to Resend Selected Transactions?”
- Click OK
- Transaction will resend automatically by schedule.



➤ *Transaction detail*

– Click to Transaction No to view transaction detail

Home
 Mega Menu
Search

### FAST PAYMENT SYSTEM

#### Transaction detail

Transacion code	Sender account	Receiver account			
100683	Sender account	Receiver account			
Instruction ID	Sender bank	Receiver bank			
VLCKHPPXXX/ANZB41708	VBLCXXX	SBILHXXX			
Transaction type	Sender name	Receiver name			
FAST_INCOMING	Anh Ben	David			
Transacion time	Sender currency	Receiver currency			
19/04/2021 07:00 PM	USD	USD			
Status	Sender amount	Receiver amount			
RCVD- RECEIVED	10,000.00	10,000.00			
References number	Sender fee	Receiver fee			
100013131515156	10	10			
Payment ID	VBLCKHPPXXXX/SBILHXXX/ANZB17308	Description	RCVD	Error Description	Message fund transferred

B. System menu

➤ *List of rule*

- Go to menu System/ List of Role

Home
 Mega Menu
Search

### FAST PAYMENT SYSTEM

User 15

Transaction 4021

Incoming 80

Outgoing 120

- [List Of Rules](#)
- [Fast Schedule Configuration](#)
- [Set Role For Group](#)
- [Bank List](#)



- Input role information to search:  
**Keyword**  
**Services: All, FAST**
- Click Search button.

#	Roles name	Role description	Author	Date created	Action
1	Maintenance	For Maintenance	sems	19/04/2021 11:00 PM	
2	Manager	A head of branch who has supper authority of IB Service for customer at repective branch except permission effection the entire IB	sems	19/04/2021 10:55 PM	
3	Teller	A banker has an authority to do only the first basic and necessary IB Service for customers	sems	19/04/2021 10:00 PM	
4	Administrator	System role	SYSTEM	19/04/2021 09:00 PM	

- Add group
- At "EMS - Role info" screen, click Add Group link.
- The screen for adding new as below:

Service	User type
FAST	Bank staff

Role name      Role description

IT	Information Technology
----	------------------------

**Accept**



- Input role information:

Service  
User type  
Role name  
Role description

- Click [Accept] button.

- Modify group

- At "EMS - Role info" screen, choose one role to modify by click Edit link.

- Modify role information:

Service  
User type  
Role name  
Role description.

- Click [Accept] button

- Delete group

- At "EMS – Role info" screen, choose one role to delete by click Delete link.

The screenshot shows the 'List of rules' page of the FAST PAYMENT SYSTEM. The left sidebar has icons for Home, BO Transaction, FO Transaction, System, User management, and Report. The main header says 'FAST PAYMENT SYSTEM'. Below it is a search bar with 'Mega Menu' and 'Search' buttons. The main content area has a title 'List of rules' and two input fields: 'Key word' and 'Service'. A table below lists four rules with columns: #, Roles name, Role description, Author, Date created, and Action (with edit and delete icons). The table rows are:

#	Roles name	Role description	Author	Date created	Action
1	Maintenance	For Maintenance	sems	19/04/2021 11:00 PM	
2	Manager	A head of branch who has supper authority of IB Service for customer at repective branch except permission effection the entire IB	sems	19/04/2021 10:55 PM	
3	Teller	A banker has an authority to do only the first basic and necessary IB Service for customers	sems	19/04/2021 10:00 PM	
4	Administrator	System role	SYSTEM	19/04/2021 09:00 PM	

At the bottom right, there are navigation buttons: 'Previous', page numbers 1 through 5, and 'Next'.



- *Fast schedule configuration*
- Go to menu System/ Fast schedule Configuration

The screenshot shows the main dashboard of the FAST PAYMENT SYSTEM. On the left is a vertical navigation bar with icons for Home, BO Transaction, FO Transaction, System, User management, and Report. The 'System' icon is highlighted with an orange arrow pointing to it. Under 'System', the 'Fast Schedule Configuration' option is also highlighted with an orange arrow. The main area displays four cards: 'User 15', 'Transaction 4021', 'Incoming 80', and 'Outgoing 120'. At the top right, there is a user profile icon.

- Input Schedule information to search:
  - Keyword: Schedule name
  - Status
- Click [Search] button

The screenshot shows the 'FAST SCHEDULE CONFIGURATION' page. The left navigation bar has the same structure as the main dashboard. The main content area has a title 'FAST SCHEDULE CONFIGURATION' with a search icon. Below it is a search form with fields for 'Schedule ID', 'Schedule name', 'Interval', 'From date', 'To Date', and 'Status'. A 'Search' button is located at the bottom of the form. At the bottom, there is a table titled 'Schedule List' with columns: #, Schedule ID, Schedule name, Next datetime execute, Interval, Status, and Action. The table contains four rows of data.

#	Schedule ID	Schedule name	Next datetime execute	Interval	Status	Action
1	SCH0000000001	Get O9 Session (Login O9)	20/04/2021 9:00:00 AM	600	<span>active</span>	<span>edit</span> <span>delete</span>
2	SCH0000000002	O9 Get List Inward	20/04/2021 8:56:00 AM	60	<span>active</span>	<span>edit</span> <span>delete</span>
3	SCH0000000003	Get O9 List Outward	20/04/2021 8:54:00 AM	60	<span>Inactive</span>	<span>edit</span> <span>delete</span>
4	SCH0000000004	Update status to O9	20/04/2021 8:54:00 AM	60	<span>active</span>	<span>edit</span> <span>delete</span>



➤ **Bank List**

- Go to menu System/ Bank List

The screenshot shows the FAST PAYMENT SYSTEM interface. On the left is a vertical sidebar with icons for Home, BO Transaction, FO Transaction, System, User management, and Report. The 'System' icon is highlighted with an orange arrow. A dropdown menu under 'System' lists 'List Of Rules', 'Fast Schedule Configuration', and 'Bank List', with 'Bank List' also highlighted by an orange arrow. The main area displays four cards: 'User 15', 'Transaction 4021', 'Incoming 80', and 'Outgoing 120'. The title bar says 'FAST PAYMENT SYSTEM'.

- Input Schedule information to search:
  - Keyword: Bank name
  - Bank code
- Click [Search] button

The screenshot shows the 'Bank List' search page. The sidebar is identical to the previous one. The main area has a search form with fields for 'Bank ID', 'Bank name', and 'Bank code', and a 'Search' button. Below the form is a table titled 'Bank List' with columns: #, Bank ID, Bank name, Bank code, Status, and Action. The table contains four rows of data:

#	Bank ID	Bank name	Bank code	Status	Action
1	1	SBI Ly Hour Bank (HQ)	SBHRKHPP	active	
2	2	KRUNG THAI BANK PUBLIC COMPANY LIMITED	KRTHTHBK	active	
3	3	CITIBANK N.A.	CITIUS33	inactive	
4	4	TIENPHONG COMMERCIAL JOINT STOCK BANK (TPBANK)	TPBVNVX	active	



### C. User management menu

#### ➤ User list

- Go to menu System/ User List.

The screenshot shows the main dashboard of the 'FAST PAYMENT SYSTEM'. At the top right, there is a user profile icon. Below it, four cards provide real-time data: 'User 15', 'Transaction 4021', 'Incoming 80', and 'Outgoing 120'. On the left, a vertical sidebar lists several menu items: Home, BO Transaction, FO Transaction, System, User management (which is currently selected and highlighted in grey), and Report. The 'User List' option under 'User management' is also highlighted.

- Input user information to search:  
 Keyword: User name  
 Branch  
 User type
- Click Search icon:

The screenshot shows the 'User Management' screen. At the top right, there is a user profile icon. The main area is divided into two sections: 'Users List' on the left and 'User Information' on the right. In the 'Users List' section, there are four user entries: Anna Strong (Visual Designer, Google Inc), Tim Lee (Visual Designer, Facebook Inc), Jessi Warner (Software Designer, Microsoft Inc), and another entry for Tim Lee (Visual Designer, Facebook Inc). In the 'User Information' section, a user named 'hoangnv' is being edited. The fields include: Username (hoangnv), Password (highlighted in blue), Email (hoangnv@jts.com.vn), First name (Nguyễn Vũ), Last name (Hồng), Department (IT), User Corridor (SBI LY HOUR BANK (HQ)), Channel (09 Core banking system), Roles (IT), Status (Active), Locked (Yes), and Is Super Admin (unchecked). Below these sections is a 'Assign user group' section with various checkboxes for different groups like IT Special Project (Maker), IT Admin (Approver), etc.



➤ **User policy**

- Go to menu System/ User Policy.

The screenshot shows the FAST PAYMENT SYSTEM dashboard. On the left, there is a vertical navigation menu with the following items:

- Home
- BO Transaction
- FO Transaction
- System
- User management (selected)
- Report

The main content area displays four summary cards:

- User: 15
- Transaction: 4021
- Incoming: 80
- Outgoing: 120

- Input role information to search:

Policy ID  
 Name of policy  
 Effective from  
 Effective to  
 Services name: All, FAST

- Click [Search] button.

The screenshot shows the User Policy search results page. The search criteria entered are:

Policy ID	Name of policy	Service
Policy ID	Name of policy	Service
Effect from	Effect to	Enforce password history
Effect from	Effect to	Enforce password history

A single "Search" button is visible below the search criteria.

The User policy list table displays two entries:

#	Policy ID	Policy name	Effect from	Affect to	Is default Policy	Actions
1	Default policy	20/04/2021 12:11 AM	20/04/2021 12:11 AM			
2	SBLH Policy	20/04/2021 12:11 AM	20/04/2021 12:11 AM			

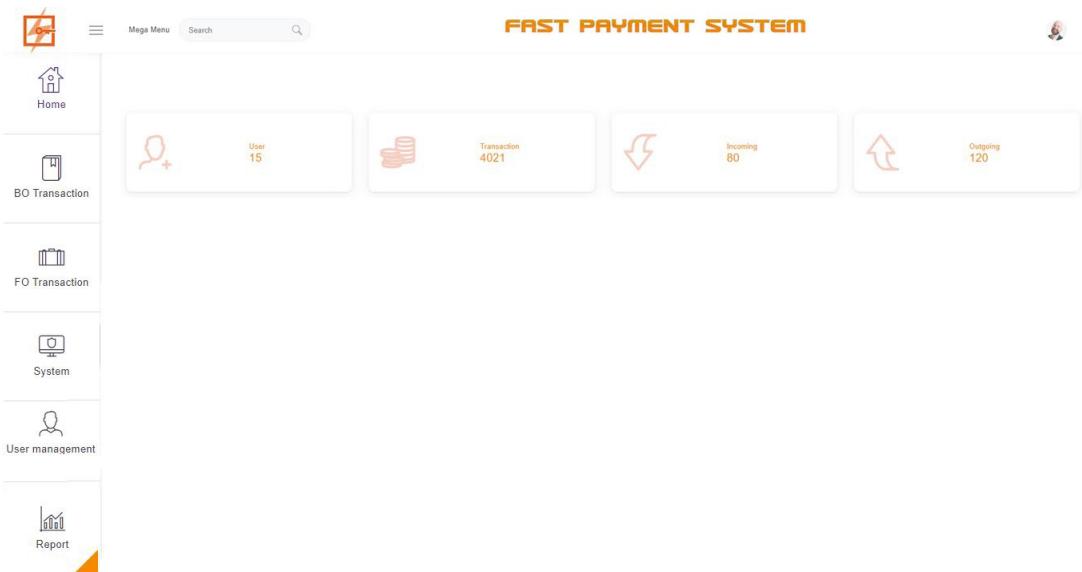
Pagination controls at the bottom show "Previous" and "Next" buttons, with the current page number "1" highlighted.



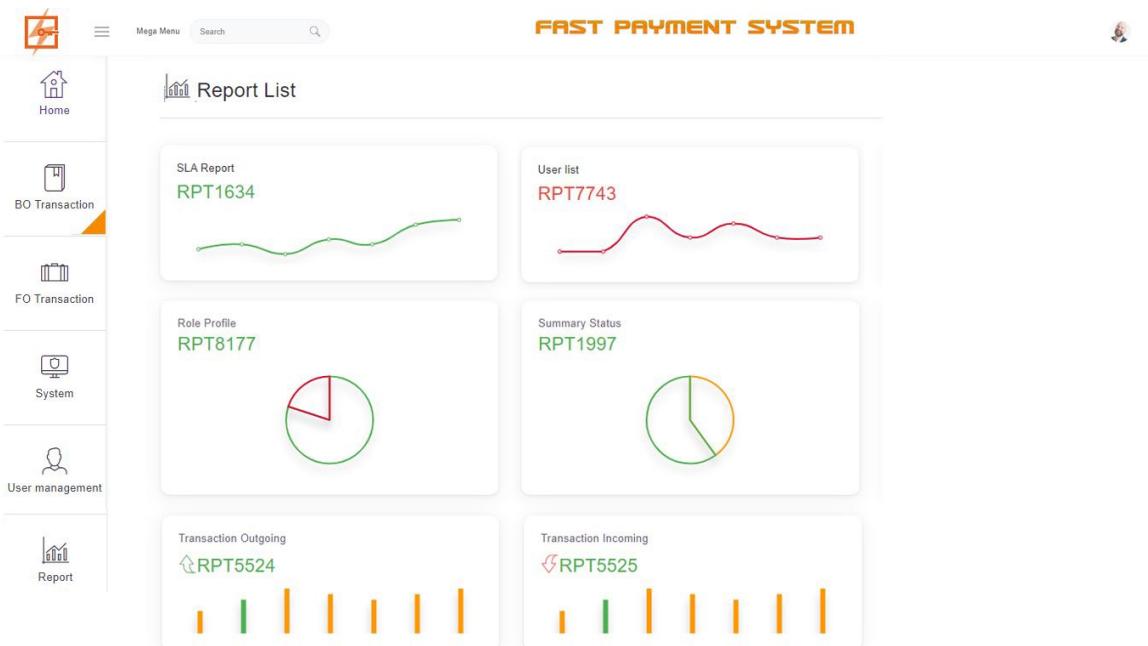
#### D. Report menu

##### ➤ Report list

- Go to menu Report.



- At "Report list" screen, choose one Report ID to report by click Report ID link:



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