**Discovery Report**

ORIENT COMMERCIAL BANK

Volume 15 - Risk Monitoring

Way4 Implementation

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# Introduction

## Introduction

This document contains the risk rule to monitor online transaction which the Way4 system will be configured for the Business Requirements of Orient Commercial Bank. It covers the different sections of the Way4 system and Configuration needed to be done in them.

The technical solution, setup and configuration needed to be done in Way4 to satisfy risk rule requirements. These solutions are internal to Way4 and are based on expertise and knowledge of OpenWay staff. The solution will be updated and finalized during system build phase by OpenWay.

## Notations used

The formats of the file fields are as follows:

| Ref | Description |
| --- | --- |
| A | Alphabetic characters A through Z and a through z |
| N | Numeric digits 0 through 9. A numeric field containing only digits; the field is right-aligned and should to be appended with leading zeros to reach the specified length. |
| An | Alphabetic and Special Characters. A character field containing any printable characters; the field is left aligned, it is appended with trailing spaces to reach the specified length |
| Ns | Numeric and Special Characters |
| Ans | Alphabetic, Numeric and Special Characters |
| MM | Month, 01 through 12 |
| DD | Day, 01 through 31 |
| YY | Year, 00 through 99 |
| YYYY | Year, 0000 through 9999 |
| HH | Hour, 00 through 23 |
| MI | Minute, 00 through 59 |
| SS | Second, 00 through 59 |
| B | Binary representation of data. A binary field only used to store line delimiter characters |
| ..nn | Variable length data up to nn characters. There will be two or three character length (depending upon whether maximum data length is 99 or 999) at the beginning of the element to identify the number of positions following to the end of the data element |
| S | Single Value Field |
| MV | Multi-value Field/Multiline data |
| O | Optional |
| M | Mandatory |
| C | Conditional |
| MR | Copy from request |
| CR | Copy if present in request |
| ATM | Auto Teller Machine |
| CCDM | Cheque and Cash Deposit Machine |
| SML | SmartLink |
| Napas | Vietnam Nation Financial Switching Joint Stock Company |
| OCB | Orient Commercial Bank |

## Data Elements

The final component of a message consists of a number of 'data elements'. Data elements may be of fixed or variable length. No delimiters are used between data elements. Their order and presence is indexed by the associated bit map(s). Variable length data starts with length specified, indicating the length of that particular data element. Each data element is characterized by:

* **No** is a running number
* **Data Element Name** is name of field
* **Position** is starting position of the field.
* **Size** is the length of the field. For example: Position = 6 and length = 3 mean the field content starts at 6 spaces/ characters/ digits from the left and occupies 3 spaces/ characters/ digits.
* **M/C/O** is a value represents mandatory or conditional or optional. The following flags specify if the entry of data in the field is mandatory:
  + **M** - the data entry is mandatory,
  + **O**- the data entry is optional,
  + **C** - the data entry depends on other field values.
* **Description** is additional explanation of the field. It should clarify
  + whether the field is expecting a fixed value
  + the field is running number
  + the field existence depends on other field/ fields
  + termination symbol
  + delimiter; for example 0x0D, 0x0A (CRLF).

# Risk Management

## Business Requirement

**Real-time blocking:**

* System must be capable of blocking suspicious transactions identified by users including: MCC, Merchant ID (onus merchant+ offus merchant), TER ID, Acquirer BIN, Acquirer Country Code.
* System must be capable of blocking unsecured Ecommerce transactions: ECI 06, UCAF 01
* System must be capable of rejecting crossing border transactions (compare merchant country code of 2 continuous Card-Present transactions, if 2 transaction happen during a specific period of time, the later transaction will be declined).
* System must be capable of rejecting 2 transactions happening in very short time (compare date & time of 2 continuous Card-Present transactions, if 2 transaction happen during a specific duration of time, let’s say less than 1 minutes, the later transaction will be declined).
* System must be capable of rejecting transactions happening at multiple merchant, let’s say more than 2 merchants in very short time (compare Merchant ID of all Card not present transactions in a duration of time, let say 3 MID during 1 minute, the last transaction will be declined).
* System must be capable of blocking fallback/POS 01 transaction with pre-set limits.

**Risk scoring:**

* System should have risk scoring mechanism. When setting rule, user will decide the risk score of each rule. If transactions hit rules, the system will calculate the total risk scores of each alerts/cases based on all the rules being hit.
* Then when alerts/cases come out at every batch cycle, the screen will show the alerts/cases with highest risk scores on top of the screen so that analyst can pick up & handle first.

**Alerts/Warning:**

* System must be capable of generating SMS/Notification Email to Cardholder/User when creating alerts.
* System must be capable of scoring alerts based on pre-set risk scoring criteria

**Risk Rule Configuration**

Bank request Openway setup some risk rules:

|  | Rules | Parameters | Actions |
| --- | --- | --- | --- |
| 1 | Amount of a single authorisation exceeds a set limit | Limit: 30000000VND | Monitoring |
| 2 | Number of authorisations exceeds the limit set for a specific period and list of MCC | Max: 3 transactions  Period: 1 day  MCC: 4900, 5499, 5541, 5542 | Monitoring |
| 3 | Total amount of authorisations exceeds the limit set for a specific period and list of MCC | Limit: 30000000 VND  Period: 1 day  MCC: 4900, 5499, 5541, 5542 | Monitoring |
| 4 | Total number of authorisations exceeds the limit set for a specific period and international countries | Max: 3 transactions  Period: 1 hour | Monitoring |
| 5 | Total number of incorrect PIN attempts for a set period exceeds the set limit | Max: 2 transactions  Period: 1 day | Monitoring |
| 6 | Total number of authorisations exceeds the limit set for one merchant for a specific period | Max: 3 transactions  Period: 1 hour | Monitoring |
| 7 | Card authorisation in two and more countries during a set period | Max: 3 transactions  Period: 1 hour | Reject authorisation with response code = 59 – suspected fraud |
| 8 | Total amount of authorisations exceeds the limit set for a specific period as a percentage of the amount of available balance | Max: 1 transaction  Max percentage: 70%  Period: 1 day | Monitoring |
| 9 | Number of requests with invalid card expiry date for a set period | Max: 2 transactions  Period: 1 day | Monitoring |
| 10 | Number of authorisations on this card from 23h 🡪 5h | Max: 3 transactions  Period: 1 day | Call event to lock card |
| 11 | Number of authorisations on this card with a wrong CVC | Max: 2 transactions  Period: 1 day | Monitoring |
| 12 | Number of authorisations on this card with a wrong CVC2 | Max: 2 transactions  Period: 1 day | Monitoring |
| 13 | Authorisation on a card for a large amount with one or more consecutive attempts to receive authorisation for a decreasing amount | Max: 3 transactions  Period: 1 hour | Monitoring |
| 14 | Authorisation on a card for a large amount with one or more consecutive attempts to receive authorisation for an increasing amount | Max: 3 transactions  Period: 1 hour | Monitoring |
| 15 | Card authorisation in list of suspicious merchants. Suspicious merchants is configured in merchant stop list | Period: 1 day | Monitoring |
| 16 | Number of requests insufficient funds for a set period | Max: 3 transactions  Period: 1 hour | Monitoring |

## Technical Detail

Above Rules are setup by WAY4 standard function.

## Limitations

* WAY4 does not support intelligent fraud monitoring (neural network)
* WAY4 does not support sound alert.