Abstract

Detailed Rule Description, Configuration logic, Profile variable and Lookup table usage of each rule is explained

AHB EFMS Rules

Rule Configuration

Table of Contents

[1 Rule R004– Customer details changed followed by high debit activity 5](#_Toc188520420)

[1.1 Description 5](#_Toc188520421)

[1.2 Triggering Events: 6](#_Toc188520422)

[1.3 Applicable source channels: 6](#_Toc188520423)

[1.4 Rule Variables: 6](#_Toc188520424)

[1.5 Profile Variables: 6](#_Toc188520425)

[1.6 Profile Logic: 7](#_Toc188520426)

[1.7 Profile Code: 7](#_Toc188520427)

[1.8 Rule Logic: 7](#_Toc188520428)

[1.9 Rule Code: 7](#_Toc188520429)

[2 Rule R005– Bene velocity check 8](#_Toc188520430)

[2.1 Description 8](#_Toc188520431)

[2.2 Triggering Events: 8](#_Toc188520432)

[2.3 Applicable source channels: 8](#_Toc188520433)

[2.4 Rule Variables: 8](#_Toc188520434)

[2.5 Profile Variables: 8](#_Toc188520435)

[2.6 Profile Logic: 8](#_Toc188520436)

[2.7 Profile Code: 9](#_Toc188520437)

[2.8 Rule Logic: 9](#_Toc188520438)

[2.9 Rule Code: 9](#_Toc188520439)

[3 Rule R006 – Large debit from new device 10](#_Toc188520440)

[3.1 Description 10](#_Toc188520441)

[3.2 Triggering Events: 10](#_Toc188520442)

[3.3 Applicable source channels: 10](#_Toc188520443)

[3.4 Rule Variables: 10](#_Toc188520444)

[3.5 Profile Variables: 10](#_Toc188520445)

[3.6 Profile Logic: 11](#_Toc188520446)

[3.7 Profile Code: 11](#_Toc188520447)

[3.8 Rule Logic: 11](#_Toc188520448)

[3.9 Rule Code: 12](#_Toc188520449)

[4 Rule R007– Inward: Mule Detection 13](#_Toc188520450)

[4.1 Description 13](#_Toc188520451)

[4.2 Triggering Events: 13](#_Toc188520452)

[4.3 Applicable source channels:/S 13](#_Toc188520453)

[4.4 Rule Variables: 14](#_Toc188520454)

[4.5 Profile Variables: 14](#_Toc188520455)

[4.6 Profile Logic: 15](#_Toc188520456)

[4.7 Profile Code: 16](#_Toc188520457)

[4.8 Rule Logic: 16](#_Toc188520458)

[4.9 Rule Code: 18](#_Toc188520459)

[5 Rule R008– Blacklist Check: Funds Transfer 19](#_Toc188520460)

[5.1 Description 19](#_Toc188520461)

[5.2 Triggering Events: 19](#_Toc188520462)

[5.3 Applicable source channels: 19](#_Toc188520463)

[5.4 Rule Variables: 19](#_Toc188520464)

[5.5 Profile Variables: 19](#_Toc188520465)

[5.6 Profile Logic: 19](#_Toc188520466)

[5.7 Profile Code: 19](#_Toc188520467)

[5.8 Rule Logic: 19](#_Toc188520468)

[5.9 Rule Code: 20](#_Toc188520469)

[6 Rule R009 – Funds transfer to same beneficiary from different customers 21](#_Toc188520470)

[6.1 Description 21](#_Toc188520471)

[6.2 Triggering Events: 21](#_Toc188520472)

[6.3 Applicable source channels: 21](#_Toc188520473)

[6.4 Rule Variables: 21](#_Toc188520474)

[6.5 Profile Variables: 21](#_Toc188520475)

[6.6 Profile Logic: 22](#_Toc188520476)

[6.7 Profile Code: 22](#_Toc188520477)

[6.8 Rule Logic: 22](#_Toc188520478)

[6.9 Rule Code: 22](#_Toc188520479)

[7 Rule R010 – Large credit and debit 23](#_Toc188520480)

[7.1 Description 23](#_Toc188520481)

[7.2 Triggering Events: 23](#_Toc188520482)

[7.3 Applicable source channels: 23](#_Toc188520483)

[7.4 Rule Variables: 23](#_Toc188520484)

[7.5 Profile Variables: 23](#_Toc188520485)

[7.6 Profile Logic: 24](#_Toc188520486)

[7.7 Profile Code: 24](#_Toc188520487)

[7.8 Rule Logic: 24](#_Toc188520488)

[7.9 Rule Code: 25](#_Toc188520489)

[8 Rule R011– Blacklist check for beneficiary addition 26](#_Toc188520490)

[8.1 Description 26](#_Toc188520491)

[8.2 Triggering Events: 26](#_Toc188520492)

[8.3 Applicable source channels: 26](#_Toc188520493)

[8.4 Rule Variables: 26](#_Toc188520494)

[8.5 Profile Variables: 26](#_Toc188520495)

[8.6 Profile Logic: 26](#_Toc188520496)

[8.7 Profile Code: 26](#_Toc188520497)

[8.8 Rule Logic: 26](#_Toc188520498)

[8.9 Rule Code: 26](#_Toc188520499)

[9 Rule R012 – Unusual credit/debit activity 27](#_Toc188520500)

[9.1 Description 27](#_Toc188520501)

[9.2 Triggering Events: 27](#_Toc188520502)

[9.3 Applicable source channels: 27](#_Toc188520503)

[9.4 Rule Variables: 27](#_Toc188520504)

[9.5 Profile Variables: 27](#_Toc188520505)

[9.6 Profile Logic: 28](#_Toc188520506)

[9.7 Profile Code: 28](#_Toc188520507)

[9.8 Rule Logic: 28](#_Toc188520508)

[9.9 Rule Code: 29](#_Toc188520509)

[10 Rule R013– Login: IP and Geolocation check 30](#_Toc188520510)

[10.1 Description 30](#_Toc188520511)

[10.2 Triggering Events: 30](#_Toc188520512)

[10.3 Applicable source channels: 30](#_Toc188520513)

[10.4 Rule Variables: 30](#_Toc188520514)

[10.5 Profile Variables: 30](#_Toc188520515)

[10.6 Profile Logic: 31](#_Toc188520516)

[10.7 Profile Code: 31](#_Toc188520517)

[10.8 Rule Logic: 31](#_Toc188520518)

[10.9 Rule Code: 31](#_Toc188520519)

[11 Rule R014– Blacklist check for lending application 32](#_Toc188520520)

[11.1 Description 32](#_Toc188520521)

[11.2 Triggering Events: 32](#_Toc188520522)

[11.3 Applicable source channels: 32](#_Toc188520523)

[11.4 Rule Variables: 32](#_Toc188520524)

[11.5 Profile Variables: 32](#_Toc188520525)

[11.6 Profile Logic: 32](#_Toc188520526)

[11.7 Profile Code: 32](#_Toc188520527)

[11.8 Rule Logic: 32](#_Toc188520528)

[11.9 Rule Code: 32](#_Toc188520529)

[12 Rule R015– Lending applications with same employer name 33](#_Toc188520530)

[12.1 Description 33](#_Toc188520531)

[12.2 Triggering Events: 33](#_Toc188520532)

[12.3 Applicable source channels: 33](#_Toc188520533)

[12.4 Rule Variables: 33](#_Toc188520534)

[12.5 Profile Variables: 33](#_Toc188520535)

[12.6 Profile Logic: 33](#_Toc188520536)

[12.7 Profile Code: 33](#_Toc188520537)

[12.8 Rule Logic: 33](#_Toc188520538)

[12.9 Rule Code: 33](#_Toc188520539)

[13 Rule R016– Fund transfers post self transaction 34](#_Toc188520540)

[13.1 Description 34](#_Toc188520541)

[13.2 Triggering Events: 34](#_Toc188520542)

[13.3 Applicable source channels: 34](#_Toc188520543)

[13.4 Rule Variables: 34](#_Toc188520544)

[13.5 Profile Variables: 35](#_Toc188520545)

[13.6 Profile Logic: 35](#_Toc188520546)

[13.7 Profile Code: 36](#_Toc188520547)

[13.8 Rule Logic: 36](#_Toc188520548)

[13.9 Rule Code: 36](#_Toc188520549)

[14 Rule R017– Debit to new beneficiary from a new device 37](#_Toc188520550)

[14.1 Description 37](#_Toc188520551)

[14.2 Triggering Events: 37](#_Toc188520552)

[14.3 Applicable source channels: 37](#_Toc188520553)

[14.4 Rule Variables: 37](#_Toc188520554)

[14.5 Profile Variables: 37](#_Toc188520555)

[14.6 Profile Logic: 38](#_Toc188520556)

[14.7 Profile Code: 38](#_Toc188520557)

[14.8 Rule Logic: 38](#_Toc188520558)

[14.9 Rule Code: 38](#_Toc188520559)

[15 Rule R018– Fake Investment scams 39](#_Toc188520560)

[15.1 Description 39](#_Toc188520561)

[15.2 Triggering Events: 39](#_Toc188520562)

[15.3 Applicable source channels: 39](#_Toc188520563)

[15.4 Rule Variables: 39](#_Toc188520564)

[15.5 Profile Variables: 39](#_Toc188520565)

[15.6 Profile Logic: 40](#_Toc188520566)

[15.7 Profile Code: 40](#_Toc188520567)

[15.8 Rule Logic: 40](#_Toc188520568)

[15.9 Rule Code: 40](#_Toc188520569)

[16 Rule R019 – New device and language change 41](#_Toc188520570)

[16.1 Description 41](#_Toc188520571)

[16.2 Triggering Events: 41](#_Toc188520572)

[16.3 Applicable source channels: 41](#_Toc188520573)

[16.4 Rule Variables: 41](#_Toc188520574)

[16.5 Profile Variables: 41](#_Toc188520575)

[16.6 Profile Logic: 41](#_Toc188520576)

[16.7 Profile Code: 42](#_Toc188520577)

[16.8 Rule Logic: 42](#_Toc188520578)

[16.9 Rule Code: 42](#_Toc188520579)

[17 Rule R020 – Unusual transaction time rule 43](#_Toc188520580)

[17.1 Description 43](#_Toc188520581)

[17.2 Triggering Events: 43](#_Toc188520582)

[17.3 Applicable source channels: 43](#_Toc188520583)

[17.4 Rule Variables: 43](#_Toc188520584)

[17.5 Profile Variables: 44](#_Toc188520585)

[17.6 Profile Logic: 44](#_Toc188520586)

[17.7 Profile Code: 44](#_Toc188520587)

[17.8 Rule Logic: 44](#_Toc188520588)

[17.9 Rule Code: 44](#_Toc188520589)

[18 Rule R021 – Insufficient Funds 45](#_Toc188520590)

[18.1 Description 45](#_Toc188520591)

[18.2 Triggering Events: 45](#_Toc188520592)

[18.3 Applicable source channels: 45](#_Toc188520593)

[18.4 Rule Variables: 45](#_Toc188520594)

[18.5 Profile Variables: 45](#_Toc188520595)

[18.6 Profile Logic: 45](#_Toc188520596)

[18.7 Profile Code: 45](#_Toc188520597)

[18.8 Rule Logic: 46](#_Toc188520598)

[18.9 Rule Code: 46](#_Toc188520599)

[19 Rule R022 – Cooling period rules 47](#_Toc188520600)

[19.1 Description 47](#_Toc188520601)

[19.2 Triggering Events: 47](#_Toc188520602)

[19.3 Applicable source channels: 48](#_Toc188520603)

[19.4 Rule Variables: 48](#_Toc188520604)

[19.5 Profile Variables: 48](#_Toc188520605)

[19.6 Profile Logic: 48](#_Toc188520606)

[19.7 Profile Code: 49](#_Toc188520607)

[19.8 Rule Logic: 49](#_Toc188520608)

[19.9 Rule Code: 50](#_Toc188520609)

# Rule R004– Customer details changed followed by high debit activity

## Description

Whenever a debit transaction occurs check

1. If it has occurred within "X" days of previous mobile number/email change

2. If the aggregate debit transaction value within 6 hour (including current transaction) is more than 40% of available balance (1st txn after details change) or exceeds the average daily debit amount in last "Y" months

Where, X = 5, Y = 3

## Triggering Events:

|  |  |
| --- | --- |
| **SAS\_MESSAGE\_SUB\_TYPE (Rules)** | **SMH\_CLIENT\_TRAN\_TYPE** |
| Funds Transfer | “RFFT\_OAT”, “RFFT\_TWB”, “RFFT\_WIC”, “RFFT\_IFT”  “RFFT\_REM” |
| Cash Withdrawal | “RFFT\_ATMWD”, |
| Bill Payment | “RFFT\_UTBP” |
| POS/ECOM Transactions | “RFFT\_ECOM”, “RFFT\_POS”, |
| **SAS\_MESSAGE\_SUB\_TYPE (Profiles)** | **SMH\_CLIENT\_TRAN\_TYPE** |
| Customer details change | “NR\_UPMON”, “NR\_UPEMI” |
| Funds Transfer | “OFFT\_OAT”, “OFFT\_TWB”, “OFFT\_WIC”, “OFFT\_IFT”  “OFFT\_REM” |
| Cash Withdrawal | “OFFT\_ATMWD”, |
| Bill Payment | “OFFT\_UTBP” |
| POS/ECOM Transactions | “OFFT\_ECOM”, “OFFT\_POS” |

## Applicable source channels:

|  |  |
| --- | --- |
| **Source channels** | **Source channel code** |
| Mobile Banking | MOB |
| ATM | ATM |

## Rule Variables:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable Name | Type | Segment | Description | Comments |
| RQO\_TRAN\_DATE | Date | RQO | Date of the transaction request |  |
| RQO\_TRAN\_TIME | Time | RQO | Time of the transaction request |  |
| SMH\_CLIENT\_TRAN\_TYPE | Character | SMH | Client defined transaction type |  |
| \_X\_RULE\_SCORE\_4A | Numeric | Customer | Condition 1 score |  |
| \_X\_RULE\_SCORE\_4B | Numeric | Customer | Condition 2 score |  |
| \_X\_RULE\_SCORE\_4 | Numeric | Customer | Rule 4 score |  |

## Profile Variables:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable Name | Type | Segment | Description | Comments |
| \_X\_PHONE\_CHANGE\_DT | Datetime | Customer | Datetime of last phone number change |  |
| \_X\_EMAIL\_CHANGE\_DT | Datetime | Customer | Datetime of last email change |  |
| \_A\_AGG\_DEBIT\_DT\_HR\_1 - \_A\_AGG\_DEBIT\_DT\_HR\_6 | Datetime | Account | Datetime of debit transaction for the past 6 hours |  |
| \_A\_AGG\_DEBIT\_AMT\_HR\_1 - \_A\_AGG\_DEBIT\_AMT\_HR\_6 | Numeric | Account | Aggregate debit amount for the past 6 hours |  |
| \_A\_AGG\_DEBIT\_DATE\_DAY\_1 - \_A\_AGG\_DEBIT\_DATE\_DAY\_90 | Date | Account | Date of debit transaction for the past 90 days |  |
| \_A\_AGG\_DEBIT\_AMT\_DAY\_1 - \_A\_AGG\_DEBIT\_AMT\_DAY\_90 | Numeric | Account | Aggregate debit amount for the past 90 days |  |
| \_A\_AVAIL\_BAL\_DT\_POST\_CHANGE | Datetime | Account | Datetime of the first transaction post customer details change event |  |
| \_A\_AVAIL\_BAL\_AMT\_POST\_CHANGE | Numeric | Account | Available balance of the first transaction post customer details change event |  |

## Profile Logic:

* Check if the transaction message type is of post-auth for customer details change:
  + Check if old and new email are different, if yes then update \_X\_EMAIL\_CHANGE\_DT to the transaction datetime
  + Check if old and new phone number are different, if yes then update \_X\_PHONE\_CHANGE\_DT to the transaction datetime
* Check if the transaction message type is of post-auth for a successful debit transaction:
  + Check if the date and hour of the current transaction matches that of \_A\_AGG\_DEBIT\_DT\_HR\_1
    - If yes, then add the transaction amount to \_A\_AGG\_DEBIT\_AMT\_HR\_1
    - If not, then shift the \_A\_AGG\_DEBIT\_DT\_HR and \_A\_AGG\_DEBIT\_AMT\_HR variables and set \_A\_AGG\_DEBIT\_DT\_HR\_1 to transaction datetime and \_A\_AGG\_DEBIT\_AMT\_HR\_1 to transaction amount
  + Check if the date of the current transaction matches that of \_A\_AGG\_DEBIT\_DT\_DAY\_1
    - If yes, then add the transaction amount to \_A\_AGG\_DEBIT\_AMT\_DAY\_1
    - If not, then shift the \_A\_AGG\_DEBIT\_DT\_DAY and \_A\_AGG\_DEBIT\_AMT\_DAY variables and set \_A\_AGG\_DEBIT\_DT\_DAY\_1 to transaction datetime and \_A\_AGG\_DEBIT\_AMT\_HR\_1 to transaction amount
  + Check if \_A\_AVAIL\_BAL\_DT\_POST\_CHANGE is null or not
    - If null, set \_A\_AVAIL\_BAL\_DT\_POST\_CHANGE to transaction datetime, and \_A\_AVAIL\_BAL\_AMT\_POST\_CHANGE to the available balance of the transaction
    - If not, check if \_A\_AVAIL\_BAL\_DT\_POST\_CHANGE is earlier than \_X\_EMAIL\_CHANGE\_DT or \_X\_PHONE\_CHANGE\_DT
      * If earlier, then set \_A\_AVAIL\_BAL\_DT\_POST\_CHANGE to transaction datetime, and \_A\_AVAIL\_BAL\_AMT\_POST\_CHANGE to the available balance of the transaction

## Profile Code:

## Rule Logic:

* Check if the transaction message type is listed in the triggering events for the rule
* If yes, initialise the following rule variables:
  + AGG\_DEBIT\_6HR = Transaction amount
  + AGG\_DEBIT\_90DAY = Transaction amount
* To calculate the aggregate debit in the past 6 hours, traverse through the \_A\_AGG\_DEBIT\_DT\_HR variables and if they are within 6 hours of the transaction datetime, add the corresponding \_A\_AGG\_DEBIT\_AMT\_HR variable to AGG\_DEBIT\_6HR
* To calculate the aggregate debit in the past 3 months, traverse through the \_A\_AGG\_DEBIT\_DT\_DAY variables and if they are within 90 days of the transaction date, add the corresponding \_A\_AGG\_DEBIT\_AMT\_DAY variable to AGG\_DEBIT\_90DAY
* Check if \_X\_PHONE\_CHANGE\_DT or \_X\_EMAIL\_CHANGE\_DT is not null, and is within "X" days of the transaction datetime
  + If AGG\_DEBIT\_6HR is greater than 40% of \_A\_AVAIL\_BAL\_AMT\_POST\_CHANGE, or AGG\_DEBIT\_6HR is greater than AGG\_DEBIT\_90DAY/90, then assign a score of 300.

## Rule Code:

# Rule R005– Bene velocity check

## Description

Whenever a new beneficiary addition request is received

1. Check if same beneficiary was added by "X" customers in "Y" days / "Z" hours

2. Check if more than "X" beneficiaries are added by same customer in "Y" hours

a. score of 300, if X >= 5 in a day

b. score of 600, if X >= 10 in a day

3. Check if the device is registered less than "N" minutes

Note: If (2) and (3) --> Additional score of 100 applies

Where, X = , Y = , Z = 24

## Triggering Events:

|  |  |
| --- | --- |
| **SAS\_MESSAGE\_SUB\_TYPE (Rules & Profiles)** | **SMH\_CLIENT\_TRAN\_TYPE** |
| Beneficiary Addition | NR\_BENRG |
| Device Registration | NR\_MIBRE |

## Applicable source channels:

|  |  |
| --- | --- |
| **Source channels** | **Source channel code** |
| Mobile Banking | MOB |

## Rule Variables:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable Name | Type | Segment | Description | Comments |
| RQO\_TRAN\_DATE | Date | RQO | Date of the transaction request |  |
| RQO\_TRAN\_TIME | Time | RQO | Time of the transaction request |  |
| SMH\_CLIENT\_TRAN\_TYPE | Character | SMH | Client defined transaction type |  |
| \_X\_RULE\_SCORE\_5A | Numeric | Customer | Condition 1 score |  |
| \_X\_RULE\_SCORE\_5B | Numeric | Customer | Condition 2 score |  |
| \_X\_RULE\_SCORE\_5C | Numeric | Customer | Condition 3 score |  |
| \_X\_RULE\_SCORE\_5 | Numeric | Customer | Rule 5 score |  |

## Profile Variables:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable Name | Type | Segment | Description | Comments |
| \_B\_ADD\_DATE\_DAY\_1 - \_B\_ADD\_DATE\_DAY\_7 | Date | Beneficiary | Date when the beneficiary was added by a customer |  |
| \_B\_ADD\_CNT\_DAY\_1 - \_B\_ADD\_CNT\_DAY\_7 | Numeric | Beneficiary | Number of times the beneficiary was added by customers in past 7 days |  |
| \_X\_BEN\_DT\_HR\_1 - \_X\_BEN\_DT\_HR\_24 | Datetime | Customer | Datetime of beneficiary addition for past 24 hours |  |
| \_X\_BEN\_CNT\_HR\_1 - \_X\_BEN\_CNT\_HR\_24 | Numeric | Customer | Count of beneficiaries added by the customer in past 24 hours |  |
| \_D\_DEVICE\_REG\_DT | Datetime | Device | Device registration datetime |  |

## Profile Logic:

* Check if the transaction message type is beneficiary addition
* If yes, check if \_B\_BEN\_DATE\_DAY\_1 equals the transaction date, if yes then increment \_B\_BEN\_CNT\_1.

If not same, then shift the \_B\_BEN\_DATE and \_B\_BEN\_CNT variables, and set \_B\_BEN\_DATE\_DAY\_1 to current transaction date, and \_B\_BEN\_CNT\_DAY\_1 to 1

* If yes, check if date and hour of \_X\_BEN\_DT\_HR\_1 equals that of the transaction datetime, if yes then increment \_X\_BEN\_CNT\_HR\_1. If not, then shift the \_X\_BEN\_DT and \_X\_BEN\_CNT\_HR variables, and set \_X\_BEN\_DT\_HR\_1 to current transaction datetime, and \_X\_BEN\_CNT\_HR\_1 to 1
* Check if the transaction message type is for device registration
  + If yes, store \_D\_DEVICE\_REG\_DT as the datetime of the transaction

## Profile Code:

## Rule Logic:

* Check if the transaction message type is beneficiary addition
* If yes, then initialise the following rule variables:
  + CUST\_ADD\_BENE\_24HR = 0
  + BENE\_ADDED\_7DAYS = 0
* To calculate the count of beneficiaries the customer added in past 24 hours, traverse the \_X\_BEN\_DT\_HR variables, and add the corresponding \_X\_BEN\_CNT\_HR variable to CUST\_ADD\_BENE\_24HR if it lies within 24 hours of the transaction datetime
* To calculate the number of customers which added this beneficiary in past 7 days, traverse the \_B\_ADD\_DATE\_DAY variables, and add the corresponding \_B\_ADD\_CNT\_DAY variable to BENE\_ADDED\_7DAYS if it lies within 7 days of the transaction datetime
* If BENE\_ADDED\_7DAYS > "X", then assign a score of 300
* If CUST\_ADD\_BENE\_24HR >=10, then assign a score of 600, else if CUST\_ADD\_BENE\_24HR >=5, then assign a score of 300
* If \_D\_DEVICE\_REG\_DT is within “X” minutes of the current transaction, assign a score of 100

## Rule Code:

# Rule R006 – Large debit from new device

## Description

When a debit transaction (outward remittance) is received

1. Check if the device is registered less than "X" Days

2. If current single debit amount > "Y"% of available balance prior to the current transaction and debit amount should be >= "Z", OR

Aggregate debit amount within 3 days of device registration >= "A"

3. Check if the IP address is not in last 10 used IP address, and the customer has used at least 2 IPs previously

4. If amount credit and debit in past 60 mins are equal or within 5% variation AND Amount > "A"

Where, X = , Y = , Z = , A =

## Triggering Events:

|  |  |
| --- | --- |
| **SAS\_MESSAGE\_SUB\_TYPE (Rules)** | **SMH\_CLIENT\_TRAN\_TYPE** |
| Fund Transfer (Outward remittance) | RFFT\_REM |
| **SAS\_MESSAGE\_SUB\_TYPE (Profiles)** | **SMH\_CLIENT\_TRAN\_TYPE** |
| Fund Transfer (Outward remittance) | OFFT\_REM |
| Inward | OFFT\_INFT |
| Login | NR\_LOGIN |

## Applicable source channels:

|  |  |
| --- | --- |
| **Source channels** | **Source channel code** |
| Mobile Banking | MOB |

## Rule Variables:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable Name | Type | Segment | Description | Comments |
| RQO\_TRAN\_DATE | Date | RQO | Date of the transaction request |  |
| RQO\_TRAN\_TIME | Time | RQO | Time of the transaction request |  |
| SMH\_CLIENT\_TRAN\_TYPE | Character | SMH | Client defined transaction type |  |
| TBT\_MOD\_AMT | Numeric | TBT | Transaction amount |  |
| AQD\_AVAIL\_BAL | Numeric | AQD | Available account balance |  |
| HQO\_IP\_ADDRESS\_V6 | Character | HOB | Device IP Address |  |
| \_X\_RULE\_SCORE\_6A | Numeric | Customer | Condition 1 score |  |
| \_X\_RULE\_SCORE\_6B | Numeric | Customer | Condition 2 score |  |
| \_X\_RULE\_SCORE\_6C | Numeric | Customer | Condition 3 score |  |
| \_X\_RULE\_SCORE\_6D | Numeric | Customer | Condition 4 score |  |
| \_X\_RULE\_SCORE\_6 | Numeric | Customer | Rule 6 score |  |

## Profile Variables:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable Name | Type | Segment | Description | Comments |
| \_D\_REG\_DATE | Date | Device | Device registration date | Profile created in R004 |
| \_A\_AGG\_DEBIT\_DATE\_DAY\_1 - \_A\_AGG\_DEBIT\_DATE\_DAY\_3 | Date | Account | Date of debit transaction for the past 3 days |  |
| \_A\_AGG\_DEBIT\_AMT\_DAY\_1 - \_A\_AGG\_DEBIT\_AMT\_DAY\_3 | Numeric | Account | Aggregate debit amount for the past 3 days |  |
| \_A\_AGG\_CREDIT\_DT\_MIN\_1 - \_A\_AGG\_CREDIT\_DT\_MIN\_60 | Datetime | Account | Datetime of credit transaction in past 60 minutes |  |
| \_A\_AGG\_CREDIT\_AMT\_MIN\_1 - \_A\_AGG\_CREDIT\_AMT\_MIN\_60 | Numeric | Account | Amount of credit transaction in past 60 minutes |  |
| \_A\_AGG\_DEBIT\_DT\_MIN\_1 - \_A\_AGG\_DEBIT\_DT\_MIN\_60 | Datetime | Account | Datetime of debit transaction in past 60 minutes |  |
| \_A\_AGG\_DEBIT\_AMT\_MIN\_1 - \_A\_AGG\_DEBIT\_AMT\_MIN\_60 | Numeric | Account | Amount of debit transaction in past 60 minutes |  |
| \_X\_LAST\_USED\_IP\_1 - \_X\_LAST\_USED\_IP\_10 | Character | Customer | Last 10 used IP addresses of the customer |  |

## Profile Logic:

* Check if the transaction message type is a post event for debit transaction
* If yes, check if \_A\_AGG\_DEBIT\_DATE\_DAY\_1 equals the transaction date,
  + If yes then add the transaction amount to \_A\_AGG\_DEBIT\_AMT\_DAY\_1
  + If not, then shift the \_A\_AGG\_DEBIT\_DATE\_DAY and \_A\_AGG\_DEBIT\_AMT\_DAY variables and set \_A\_AGG\_DEBIT\_DATE\_DAY\_1 to transaction date and \_A\_AGG\_DEBIT\_AMT\_DAY\_1 to transaction amount
* If yes, check if date and minute of \_A\_AGG\_DEBIT\_DT\_MIN\_1 equals that of the transaction datetime
  + If yes, then add the transaction amount to \_A\_AGG\_DEBIT\_AMT\_MIN\_1
  + If not, then shift the variables and set \_A\_AGG\_DEBIT\_DT\_MIN\_1 to transaction datetime and \_A\_AGG\_DEBIT\_AMT\_MIN\_1 to transaction amount
* Check if the transaction IP address equals \_X\_LAST\_USED\_IP\_1. If not, then shift the \_X\_LAST\_USED\_IP variables and set \_X\_LAST\_USED\_IP\_1 to the current IP address
* Check if the transaction message type is a post event for credit transaction
* If yes, check if date and minute of \_A\_AGG\_CREDIT\_DT\_MIN\_1 equals that of the transaction datetime
  + If yes, then add the transaction amount to \_A\_AGG\_CREDIT\_AMT\_MIN\_1
  + If not, then shift the variables and set \_A\_AGG\_CREDIT\_DT\_MIN\_1 to transaction datetime and \_A\_AGG\_CREDIT\_AMT\_MIN\_1 to transaction amount

## Profile Code:

## Rule Logic:

* Check if the transaction message type is listed in triggering events for the rule
* If yes, set the following rule variables:
  + Aggregate debit amount in past 3 days (AGG\_DEBIT\_3DAYS = TBT\_MOD\_AMT)
  + Aggregate credit amount in past 60 minutes (AGG\_CREDIT\_60MINS = 0)
  + Aggregate debit amount in past 60 minutes (AGG\_DEBIT\_60MINS = TBT\_MOD\_AMT)
* Traverse through \_A\_AGG\_DEBIT\_DATE\_DAY variables and if the difference between them and device registration date is within 3 days, add the corresponding \_A\_AGG\_DEBIT\_AMT\_DAY variable to AGG\_DEBIT\_3DAYS
* Traverse through \_A\_AGG\_DEBIT\_DT\_MIN variables and if the difference between them and device registration date is within 60 minutes, add the corresponding \_A\_AGG\_DEBIT\_AMT\_MIN variable to AGG\_DEBIT\_60MINS
* Traverse through \_A\_AGG\_CREDIT\_DT\_MIN variables and if the difference between them and device registration date is within 60 minutes, add the corresponding \_A\_AGG\_CREDIT\_AMT\_MIN variable to AGG\_CREDIT\_60MINS
* If AGG\_DEBIT\_60MINS/AGG\_DEBIT\_60MINS is greater than 0.95, then assign a rule score of 600
* If device is registered within the past "X" days, and
  + If the current transaction amount is greater than “Z” and greater than “Y” % of the available account balance, then assign a score of 600, or
  + If AGG\_DEBIT\_3DAYS >= “A”, then set a rule score of 600
* Traverse through the \_A\_LAST\_USED\_IP variables and check if the current IP is present in them. If not, then set a rule score of 200

## Rule Code:

# Rule R007– Inward: Mule Detection

## Description

When a new credit transaction is received,

1. Check if the first transaction for that account is a deposit/credit (inward/internal transfer) for amount <=500 followed by debit of same amount or less., OR

2. Check if first transaction for that account is a balance enquiry via ATM, OR

3. No financial transaction (account balance = 0), and the current credit amount >= X (10k initially), OR

[(1 or 2 or 3) AND 4]

4. Check if the account received funds from the same or different sender more than "Y" times in the past 24 hrs, OR

5. Check if same sender has transferred funds to >= "Z" AHB customers within past 30mins with aggregate or single amount >= 10,000 AED

6. Number of debit similar (10% variation) to last credit in in last "Y" days or difference between credit and debit is less than AED 100

7. Check if total credit in last "D" days is more than X times of his last "Z" month average credit amounts (excluding txn codes)

8. No salary credited since account opening

9. Number of credits in last "M" minutes is greater than "X"

10. Aggregate credit amount in "M" minutes is greater than "Y" AED

11. If single/aggregate credit amount >= "Z" times of salary

12. Average of 10 amount of transactions between sender and receiver < A & Current credit > "X" times the average

**Inclusion conditions**

1. Customer is from high-risk nationality

2. Check if the account is opened less than "Z" months

3. Account status is active

## Triggering Events:

|  |  |  |
| --- | --- | --- |
| **SAS\_MESSAGE\_SUB\_TYPE (Rules)** | **SMH\_CLIENT\_TRAN\_TYPE** | |
| Fund Transfer (Credit) | “OFFT\_INFT” | |
| Cash Deposit | “NR\_ATMDP” | |
| **SAS\_MESSAGE\_SUB\_TYPE (Profiles)** | **SMH\_CLIENT\_TRAN\_TYPE** |
| Fund Transfer (Credit) | “OFFT\_INFT” |
| Funds Transfer | “OFFT\_OAT”, “OFFT\_TWB”, “OFFT\_WIC”, “OFFT\_IFT”  “OFFT\_REM” |
| Cash Withdrawal & Deposit | “OFFT\_ATMWD”, “NR\_ATMDP” |
| Bill Payment | “OFFT\_UTBP” |
| POS/ECOM Transactions | “OFFT\_ECOM”, “OFFT\_POS” |
| Balance enquiry |  |
| Account status change | “NR\_ACCST” |
| Account Opening | “NR\_NAOPN” |
| Customer Onboarding | “NR\_CUSOB” |

## Applicable source channels:/S

|  |  |
| --- | --- |
| **Source channels** | **Source channel code** |
| Mobile Banking | “MOB” |
| ATM | “ATM” |

## Rule Variables:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable Name | Type | Segment | Description | Comments |
| RQO\_TRAN\_DATE | Date | RQO | Date of the transaction request |  |
| RQO\_TRAN\_TIME | Time | RQO | Time of the transaction request |  |
| SMH\_CLIENT\_TRAN\_TYPE | Character | SMH | Client defined transaction type |  |
| TBT\_MOD\_AMT | Numeric | TBT | Transaction amount |  |
| AQD\_AVAIL\_BAL | Numeric | AQD | Available account balance |  |
| XQO\_CUST\_NUM | Character | XQO | Customer ID |  |
| TPP\_ACCT\_NUM | Character | TPP | Beneficiary/Sender Account Number |  |
| \_X\_RULE\_SCORE\_7A | Numeric | Customer | Condition 1 score |  |
| \_X\_RULE\_SCORE\_7B | Numeric | Customer | Condition 2 score |  |
| \_X\_RULE\_SCORE\_7C | Numeric | Customer | Condition 3 score |  |
| \_X\_RULE\_SCORE\_7D | Numeric | Customer | Condition 4 score |  |
| \_X\_RULE\_SCORE\_7E | Numeric | Customer | Condition 5 score |  |
| \_X\_RULE\_SCORE\_7F | Numeric | Customer | Condition 6 score |  |
| \_X\_RULE\_SCORE\_7G | Numeric | Customer | Condition 7 score |  |
| \_X\_RULE\_SCORE\_7H | Numeric | Customer | Condition 8 score |  |
| \_X\_RULE\_SCORE\_7I | Numeric | Customer | Condition 9 score |  |
| \_X\_RULE\_SCORE\_7J | Numeric | Customer | Condition 10 score |  |
| \_X\_RULE\_SCORE\_7K | Numeric | Customer | Condition 11 score |  |
| \_X\_RULE\_SCORE\_7L | Numeric | Customer | Condition 12 score |  |
| \_X\_RULE\_SCORE\_7 | Numeric | Customer | Rule Score |  |

## Profile Variables:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable Name | Type | Segment | Description | Comments |
| \_A\_FIRST\_TXN\_AFTER\_AO | Character | Account | First transaction done after account opening:  ""  "SMALL\_CREDIT"  "SMALL\_DEBIT"  "BAL\_ENQUIRY" |  |
| \_A\_SALARY\_CREDITED | Numeric | Account | Whether salary was credited in the account  0 / 1 |  |
| \_X\_CUST\_SALARY | Numeric | Account | Customer Salary |  |
| \_A\_CNT\_FIN\_TXN | Numeric | Account | Count of financial transactions |  |
| \_A\_AGG\_CREDIT\_DT\_HR\_1 - \_A\_AGG\_CREDIT\_DT\_HR\_24 | Datetime | Account | Datetime of credit transactions in past 24 hours |  |
| \_A\_CREDIT\_CNT\_HR\_1 - \_A\_CREDIT\_CNT\_HR\_24 | Numeric | Account | Count of credit transactions in past 24 hours |  |
| \_A\_AGG\_CREDIT\_DT\_MIN\_1 - \_A\_AGG\_CREDIT\_DT\_MIN\_15 | Datetime | Account | Datetime of credit transactions in past 15 minutes |  |
| \_A\_CREDIT\_CNT\_MIN\_1 - \_A\_CREDIT\_CNT\_MIN\_15 | Numeric | Account | Count of credit transactions in past 15 minutes |  |
| \_A\_AGG\_CREDIT\_AMT\_MIN\_1 - \_A\_AGG\_CREDIT\_AMT\_MIN\_15 | Numeric | Account | Aggregate amount of credit transactions in past 15 minutes |  |
| \_A\_AGG\_CREDIT\_DT\_DAY\_1 - \_A\_AGG\_CREDIT\_DT\_DAY\_7 | Datetime | Account | Datetime of credit transactions in past 7 days |  |
| \_A\_AGG\_CREDIT\_AMT\_DAY\_1 - \_A\_AGG\_CREDIT\_AMT\_DAY\_7 | Numeric | Account | Amount of credit transactions in past 7 days |  |
| \_A\_AGG\_CREDIT\_CNT\_DAY\_1 - \_A\_AGG\_CREDIT\_CNT\_DAY\_7 | Numeric | Account | Count of credit transactions in past 7 days |  |
| \_A\_AGG\_DEBIT\_DT\_DAY\_1 - \_A\_AGG\_DEBIT\_DT\_DAY\_7 | Datetime | Account | Datetime of debit transactions in past 7 days |  |
| \_A\_AGG\_DEBIT\_AMT\_DAY\_1 - \_A\_AGG\_DEBIT\_AMT\_DAY\_7 | Numeric | Account | Amount of debit transactions in past 7 days |  |
| \_A\_AGG\_DEBIT\_CNT\_DAY\_1 - \_A\_AGG\_DEBIT\_CNT\_DAY\_7 | Numeric | Account | Count of debit transactions in past 7 days |  |
| \_A\_AGG\_CREDIT\_DT\_MON\_1 - \_A\_AGG\_CREDIT\_DT\_MON\_3 | Datetime | Account | Datetime of credits for past 3 months |  |
| \_A\_AGG\_CREDIT\_AMT\_MON\_1 - \_A\_AGG\_CREDIT\_AMT\_MON\_3 | Numeric | Account | Aggregate Credit amount for past 3 months |  |
| \_A\_AGG\_CREDIT\_CNT\_MON\_1 - \_A\_AGG\_CREDIT\_CNT\_MON\_3 | Numeric | Account | Aggregate Credit count for past 3 months |  |
| \_AS\_CREDIT\_AMT\_1 – \_AS\_CREDIT\_AMT\_10 | Numeric | Account + Sender | Past 10 transaction amounts the account received from sender |  |
| \_S\_SENT\_CUST\_DT\_1 - \_S\_SENT\_CUST\_DT\_5 | Datetime | Sender | Datetime when sender transferred amount to customer in past 30 minutes |  |
| \_S\_SENT\_CUST\_ID\_1 - \_S\_SENT\_CUST\_ID\_5 | Datetime | Sender | Customer IDs to which the sender transferred amounts in past 30 minutes |  |
| \_S\_SENT\_CUST\_AMT\_1 - \_S\_SENT\_CUST\_AMT\_5 | Numeric | Sender | Aggregate amount which sender transferred in past 30 minutes |  |
| \_A\_ACCOUNT\_STATUS | Character | Account | Account status |  |
| \_A\_AO\_DT | Datetime | Account | Account opening datetime |  |

## Profile Logic:

* Check if the transaction message type is for account status change:
  + If yes, then update the \_A\_ACCOUNT\_STATUS to the account status received in transaction
* Check if the transaction message type is for balance enquiry:
  + Check if \_A\_FIRST\_TXN\_AFTER\_AO = "", if yes, then set it to "BAL\_ENQUIRY"
* Check if the transaction message type is for account opening:
  + If yes, then set \_A\_AO\_DT to transaction datetime
* Check if the transaction message type is for customer onboarding:
  + If yes, then set \_X\_CUST\_SALARY to the salary received in the transaction
* Check if the transaction message type is for a financial transaction (credit/debit):
  + If yes, then increment \_A\_CNT\_FIN\_TXN by 1
  + If yes, then shift \_AS\_CREDIT\_AMT variables, and set \_AS\_CREDIT\_AMT\_1 variable to transaction amount
* Check if the transaction message type is for credit:
  + Shift the CREDIT\_AMT variables, and set CREDIT\_AMT\_1 to transaction amount
  + If the transaction purpose is for salary, set \_A\_SALARY\_CREDITED = 1
  + Check if \_A\_FIRST\_TXN\_AFTER\_AO = "" and transaction amount <= 500, if yes, then set it to "SMALL\_CREDIT"

Condition 5:

* + Traverse through \_S\_SENT\_CUST\_ID variables, and check if the customer id is present
  + If found, check if the \_S\_SENT\_CUST\_DT is within 30 mins of the transaction datetime, if yes, then add transaction amount to \_S\_SENT\_CUST\_AMT variable. If not, then update \_S\_SENT\_CUST\_AMT\_1 to transaction amount and \_S\_SENT\_CUST\_DT\_1 to transaction datetime
  + If not found, shift the \_S\_SENT\_CUST\_DT, \_S\_SENT\_CUST\_AMT, \_S\_SENT\_CUST\_ID variables and update the same with the transaction values.

Condition 6:

* + Check if date of \_A\_AGG\_CREDIT\_DT\_DAY\_1 equals that of the transaction datetime
    - If yes, then add transaction amount to \_A\_AGG\_CREDIT\_AMT\_DAY\_1, and increment the \_A\_AGG\_CREDIT\_CNT\_DAY\_1 variable
    - If not, then shift \_A\_AGG\_CREDIT\_DT\_DAY and \_A\_AGG\_CREDIT\_AMT\_DAY variables, set \_A\_AGG\_CREDIT\_DT\_DAY\_1 to transaction datetime, \_A\_AGG\_CREDIT\_AMT\_DAY\_1 to transaction amount, and \_A\_AGG\_CREDIT\_CNT\_DAY\_1 to 1
  + Check if date and minute of \_A\_AGG\_CREDIT\_DT\_MIN\_1 equals that of the transaction datetime
    - If yes, then add transaction amount to \_A\_AGG\_CREDIT\_AMT\_MIN\_1 and increment \_A\_CREDIT\_CNT\_MIN\_1 by 1
    - If not, then shift \_A\_AGG\_CREDIT\_DT\_MIN, \_A\_AGG\_CREDIT\_AMT\_MIN, and \_A\_CREDIT\_CNT\_MIN variables, set \_A\_AGG\_CREDIT\_DT\_MIN\_1 to transaction datetime ,\_A\_AGG\_CREDIT\_AMT\_MIN\_1 to transaction amount, and \_A\_CREDIT\_CNT\_MIN\_1 to 1
  + Repeat similar logic to maintain aggregate credit amount and count variables for past 24 hours

Condition 7:

* + Check if month and year of \_A\_AGG\_CREDIT\_DT\_MON\_1 equals that of the transaction datetime
  + If yes, increment \_A\_AGG\_CREDIT\_CNT\_MON\_1, and add transaction amount to \_A\_AGG\_CREDIT\_AMT\_MON\_1
  + If not, shift the variables, and set \_A\_AGG\_CREDIT\_DT\_MON\_1 to transaction datetime, \_A\_AGG\_CREDIT\_AMT\_MON\_1 to transaction amount, and \_A\_AGG\_CREDIT\_CNT\_MON\_1 to 1
* Check if the transaction message type is for debit:
  + Check if \_A\_FIRST\_TXN\_AFTER\_AO = "SMALL\_CREDIT" and transaction amount <= 500, if yes, then set it to "SMALL\_DEBIT"
  + Check if date of \_A\_AGG\_DEBIT\_DT\_DAY\_1 equals that of the transaction datetime
    - If yes, then add transaction amount to \_A\_AGG\_DEBIT\_AMT\_DAY\_1, and increment the \_A\_AGG\_DEBIT\_CNT\_DAY\_1 variable
    - If not, then shift \_A\_AGG\_DEBIT\_DT\_DAY and \_A\_AGG\_DEBIT\_AMT\_DAY variables, set \_A\_AGG\_DEBIT\_DT\_DAY\_1 to transaction datetime, \_A\_AGG\_DEBIT\_AMT\_DAY\_1 to transaction amount, and \_A\_AGG\_DEBIT\_CNT\_DAY\_1 to 1

## Profile Code:

## Rule Logic:

* Check if the transaction message type is listed in triggering events for the rule
* Check if the below inclusion conditions are satisfied:
  + Customer nationality is present in high-risk country list
  + \_A\_AO\_DT is within “Z” months of the transaction datetime
  + \_A\_ACCOUNT\_STATUS is active
* Initialise the following variables:
  + Count of credits in past 24 hours (CNT\_CREDIT\_24\_HR = 0)
  + Count of customers the same sender has transferred to in past 30 minutes (CNT\_CUST\_FT\_30MIN = 0)
  + Aggregate credit in past 7 days (AGG\_CREDIT\_7DAY = 0)
  + Aggregate debit in past 7 days (AGG\_DEBIT\_7DAY = 0)
  + Total credit count in past 7 days (TOTAL\_CREDIT\_CNT\_7DAY = 0)
  + Total debit count in past 7 days (TOTAL\_DEBIT\_CNT\_7DAY = 0)
  + Aggregate credit amount in past 3 months (AGG\_CREDIT\_3MON = 0)
  + Total credit count in past 3 months (TOTAL\_CREDIT\_CNT\_3MON = 0)
  + Average credit amount in past 3 months (AVG\_CREDIT\_AMT\_3MON = 0)
  + Count of credits in past 15 minutes (TOTAL\_CREDIT\_CNT\_15MIN = 0)
  + Aggregate credit amount in past 15 minutes (AGG\_CREDIT\_15MIN = 0)
  + Average transaction amount between sender and receiver (AVG\_TXN\_SEND\_REC = 0)
* Traverse through \_A\_AGG\_CREDIT\_DT\_HR variables, and add the corresponding \_A\_AGG\_CREDIT\_CNT\_HR variable to CNT\_CREDIT\_24HR if the datetime is within 24 hours
* Traverse through \_AS\_SENT\_CUST\_DT variables, if \_S\_SENT\_CUST\_DT is within 30 minutes of the transaction datetime, and \_S\_SENT\_CUST\_AMT >= 10,000, then increment CNT\_CUST\_FT\_30MIN variable
* Traverse through \_A\_AGG\_CREDIT\_DT\_DAY variables, if they are within 7 days of the transaction datetime, add \_A\_AGG\_CREDIT\_AMT\_DAY to AGG\_CREDIT\_7DAY, and \_A\_AGG\_CREDIT\_CNT\_DAY to TOTAL\_CREDIT\_CNT\_7DAY variables. Using same logic, calculate AGG\_DEBIT\_7DAY and TOTAL\_DEBIT\_CNT\_7DAY
* Traverse through \_A\_AGG\_CREDIT\_DT\_MON variables, if they are within 3 months of the transaction datetime, add \_A\_AGG\_CREDIT\_AMT\_MON to AGG\_CREDIT\_3MON, and \_A\_AGG\_CREDIT\_CNT\_MON to TOTAL\_CREDIT\_CNT\_3MON variables.

Calculate AVG\_CREDIT\_AMT\_3MON = AGG\_CREDIT\_3MON/ TOTAL\_CREDIT\_CNT\_3MON

* Traverse through \_A\_AGG\_CREDIT\_DT\_MIN variables, if they are within 15 minutes of the transaction datetime, add \_A\_AGG\_CREDIT\_AMT\_MIN to AGG\_CREDIT\_15MIN, and \_A\_AGG\_CREDIT\_CNT\_MIN to TOTAL\_CREDIT\_CNT\_15MIN variables.
* Traverse through \_AS\_CREDIT\_AMT variables and calculate their sum. Then set AVG\_TXN\_SEND\_REC as the sum / 10
* If (\_A\_FIRST\_TXN\_AFTER\_AO = “SMALL\_DEBIT” or “BAL\_ENQUIRY”) OR (\_A\_CNT\_FIN\_TXN = 0 and AQD\_AVAIL\_BAL = 0 and transaction amount >= 10,000), then assign a rule score of 300.
  + If CNT\_CREDIT\_24HR >= “Y”, then assign a rule score of 600.
* If CNT\_CUST\_FT\_30MIN >= “Y”, then assign a rule score of 100
* If TOTAL\_CREDIT\_CNT\_7DAY - TOTAL\_DEBIT\_CNT\_7DAY/TOTAL\_DEBIT\_CNT\_7DAY < 1 or AGG\_CREDIT\_7DAY – AGG\_DEBIT\_7DAY < 100 AED, then assign a rule score of 100
* If AGG\_CREDIT\_7DAY >= “X” times AVG\_CREDIT\_AMT\_3MON, then assign a rule score of 100
* If \_A\_SALARY\_CREDITED = 0 then assign a rule score of 100
* If TOTAL\_CREDIT\_CNT\_15MIN >= “X”, then assign a rule score of 100
* If AGG\_CREDIT\_15MIN >= “Y”, then assign a rule score of 100
* If AGG\_CREDIT\_24HR >= “Z” times of salary, then assign a rule score of 100
* If AVG\_TXN\_SEND\_REC < “A” and current transaction amount > “X” times AVG\_TXN\_SEND\_REC, then assign a rule score of 100

## Rule Code:

# Rule R008– Blacklist Check: Funds Transfer

## Description

When a new credit/debit transaction is received

1. Check if sender/receiver details are found in blacklist then block all debit transactions of the customer for "H" hours (H = 6)

2. For debit, check if it is to a merchant whose name is blacklisted

## Triggering Events:

|  |  |
| --- | --- |
| **SAS\_MESSAGE\_SUB\_TYPE (Rules)** | **SMH\_CLIENT\_TRAN\_TYPE** |
| Funds Transfer | “RFFT\_OAT”, “RFFT\_TWB”, “RFFT\_WIC”, “RFFT\_IFT”  “RFFT\_REM” |
| Cash Withdrawal, Cash Deposit | “RFFT\_ATMWD”, “NR\_ATMDP” |
| Bill Payment | “RFFT\_UTBP” |
| POS/ECOM Transactions | “RFFT\_ECOM”, “RFFT\_POS” |
| Tokenized Transaction | “RFFT\_TOKN” |
| Inward | “OFFT\_INFT” |

## Applicable source channels:

|  |  |
| --- | --- |
| **Source channels** | **Source channel code** |
| Mobile Banking | “MOB” |
| ATM | “ATM” |

## Rule Variables:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable Name | Type | Segment | Description | Comments |
| RQO\_TRAN\_DATE | Date | RQO | Date of the transaction request |  |
| RQO\_TRAN\_TIME | Time | RQO | Time of the transaction request |  |
| SMH\_CLIENT\_TRAN\_TYPE | Character | SMH | Client defined transaction type |  |
| XQO\_CUST\_NAME | Character | XQO | Customer Name |  |
| XQO\_EMAIL | Character | XQO | Customer Email |  |
| XQO\_PHONE | Character | XQO | Customer Mobile |  |
| AQO\_ACCT\_NUM | Character | AQO | Customer account number |  |
| \_X\_CUST\_EID | Character | Customer | Customer EID |  |
| \_X\_CUST\_PASSPORT | Character | Customer | Customer Passport |  |
| TPP\_ACCT\_NUM | Character | TPP | Sender Account Number |  |
| HCT\_TERM\_OWNER\_NAME | Character | HCT | Merchant Name |  |
| \_X\_RULE\_SCORE\_8 | Numeric |  | Rule Score |  |

## Profile Variables:

* Not Required

## Profile Logic:

* Not Required

## Profile Code:

* Not Required

## Rule Logic:

* Check if the transaction message type is listed in the triggering events for the rule
  + If yes, check if customer account number, EID, passport or email is found in blacklist then assign a rule score of 600
* Check if transaction message type is for a debit transaction
  + Check if beneficiary name, account number or merchant name is found in blacklist, then assign a rule score of 600
* Check if transaction message type is for a credit transaction
  + Check if sender name, account number is found in blacklist, then assign a rule score of 600

## Rule Code:

# Rule R009 – Funds transfer to same beneficiary from different customers

## Description

For debit transaction check

1. If same beneficiary has received more than "X" funds from "Y" customers in last "Z" hours

2. Check if aggregate debit transaction amount is greater than "M" in "D" days

3. Check if beneficiary details are matching blacklist

4. Check if the same device is used by more than "C" customers for financial transactions

Where X = , Y = , Z = , C = 2

## Triggering Events:

|  |  |
| --- | --- |
| **SAS\_MESSAGE\_SUB\_TYPE (Rules)** | **SMH\_CLIENT\_TRAN\_TYPE** |
| Funds Transfer | “RFFT\_OAT”, “RFFT\_TWB”, “RFFT\_WIC”, “RFFT\_IFT”, “RFFT\_REM” |
| **SAS\_MESSAGE\_SUB\_TYPE (Profiles)** | **SMH\_CLIENT\_TRAN\_TYPE** |
| Fund Transfer (Debit) | “OFFT\_OAT”, “OFFT\_TWB”, “OFFT\_WIC”, “OFFT\_IFT”, “OFFT\_REM” |
| Login | “NR\_LOGIN” |

## Applicable source channels:

|  |  |
| --- | --- |
| **Source channels** | **Source channel code** |
| Mobile Banking | MOB |

## Rule Variables:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable Name | Type | Segment | Description | Comments |
| RQO\_TRAN\_DATE | Date | RQO | Date of the transaction request |  |
| RQO\_TRAN\_TIME | Time | RQO | Time of the transaction request |  |
| SMH\_CLIENT\_TRAN\_TYPE | Character | SMH | Client defined transaction type |  |
| AQO\_ACCT\_NUM | Character | AQO | Customer account number |  |
| TBT\_MOD\_AMT | Numeric | TBT | Transaction amount |  |
|  | Character |  | Beneficiary Name |  |
|  | Character |  | Beneficiary account number |  |
| \_X\_RULE\_SCORE\_9A | Numeric | Customer | Condition 1 score |  |
| \_X\_RULE\_SCORE\_9B | Numeric | Customer | Condition 2 score |  |
| \_X\_RULE\_SCORE\_9C | Numeric | Customer | Condition 3 score |  |
| \_X\_RULE\_SCORE\_9D | Numeric | Customer | Condition 4 score |  |
| \_X\_RULE\_SCORE\_9 | Numeric | Customer | Rule 6 score |  |

## Profile Variables:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable Name | Type | Segment | Description | Comments |
| INW\_TXN\_DT\_HR\_1 – INW\_TXN\_DT\_HR\_Z | Datetime | Beneficiary | Transaction datetime for last “Z” hours |  |
| INW\_TXN\_AMT\_HR\_1 – INW\_TXN\_AMT\_HR\_Z | Numeric | Beneficiary | Transaction amounts for last “Z” hours |  |
| PREV\_CUST\_DT\_1 –PREV\_CUST\_DT\_Y | Datetime | Beneficiary | Datetime of last customer transaction |  |
| PREV\_CUST\_ID\_1 –PREV\_CUST\_ID\_Y | Character | Beneficiary | Customer ID of the sender |  |
| \_A\_AGG\_DEBIT\_DATE\_DAY\_1 - \_A\_AGG\_DEBIT\_DATE\_DAY\_D | Date | Account | Date of debit transaction for the past D days |  |
| \_A\_AGG\_DEBIT\_AMT\_DAY\_1 - \_A\_AGG\_DEBIT\_AMT\_DAY\_D | Numeric | Account | Aggregate debit amount for the past D days |  |
| \_D\_USER\_CID\_1 - \_D\_USER\_CID\_5 | Character | Device | Customer IDs using that device |  |

## Profile Logic:

* Check if the transaction message type is listed in triggering event list for rule, if yes:
* Check if the transaction date and hour matches that of INW\_TXN\_DT\_HR\_1:
  + If yes, then add the current transaction amount to INW\_TXN\_AMT\_HR\_1
  + If not, then shift the INW\_TXN\_DT\_HR and INW\_TXN\_AMT variables, and set INW\_TXN\_DT\_HR\_1 to the transaction datetime and INW\_TXN\_AMT\_HR\_1 to the current transaction amount
* Check if transaction customer ID exists in PREV\_CUST\_ID variables
  + If yes, then set the corresponding PREV\_CUST\_DT variable to the transaction datetime
  + If not, then check if any PREV\_CUST\_DT\_HR variable is null or outside of “Z” hours of time difference
    - If found, then set the PREV\_CUST\_DT to transaction datetime and the corresponding PREV\_CUST\_ID to the sender ID
    - If not, then shift the PREV\_CUST\_DT and PREV\_CUST\_ID variables and set PREV\_CUST\_DT\_1 to transaction datetime and PREV\_CUST\_ID\_1 to the sender ID
* Logic for aggregate daily debit amount covered in R004
* Check if the transaction message type is a post auth for login or fund transfer event:
* If yes, check if the transaction device ID is present in \_D\_USER\_CID variables.
  + If not, then shift those variables and set \_D\_USER\_CID\_1 to the customer id of the transaction

## Profile Code:

## Rule Logic:

* Check if the transaction message type is listed in triggering event list for rule,
* If yes, set the rule variables: CUST\_COUNT to 1, BEN\_FUNDS\_AMT to the transaction amount, AGG\_DEBIT\_D\_DAYS to transaction amount, and DEVICE\_USER\_CNT to 0.
* Traverse the PREV\_TXN\_DT variables, and if the difference is within “Z” hours, then add the corresponding PREV\_TXN\_AMT variable amount to the BEN\_FUNDS\_AMT
* Traverse the PREV\_CUST\_DT variables, and if the difference between transaction datetime and the PREV\_CUST\_DT variable is within “Z” hours, increment CUST\_COUNT variable
* Update the AGG\_DEBIT\_D\_DAYS as the aggregate debit amount in “D” days from the \_A\_AGG\_DEBIT\_AMT\_DAY variables
* Traverse the \_D\_USER\_CID variables and count the variables which are not null
* If beneficiary name or account number is found in blacklist,
  + If CUST\_COUNT is at least “Y”, and BEN\_FUNDS\_AMT is greater than “X”, and AGG\_DEBIT\_D\_DAYS is at least “M”, then assign a rule score of 300
  + If DEVICE\_USER\_CNT is greater than “C”, then assign a rule score of 600

## Rule Code:

# Rule R010 – Large credit and debit

## Description

For debit transaction

1. Check if there was an aggregate credit of more than "A" amount in last "X" minutes

2. Aggregate debit amount (including current debit) is exceeding "Y%" of his credits (in point 1)

3. Aggregate amount to new beneficiary (any beneficiary added in "Z" days) is exceeding "B%" of his today account balance

(Inclusion : High risk nationality ONLY)

Where, X = , Y = , Z = , A = , B =

## Triggering Events:

|  |  |
| --- | --- |
| **SAS\_MESSAGE\_SUB\_TYPE (Rules)** | **SMH\_CLIENT\_TRAN\_TYPE** |
| Funds Transfer | “RFFT\_OAT”, “RFFT\_TWB”, “RFFT\_WIC”, “RFFT\_IFT”, “RFFT\_REM” |
| **SAS\_MESSAGE\_SUB\_TYPE (Profiles)** | **SMH\_CLIENT\_TRAN\_TYPE** |
| Fund Transfer (Debit) | “OFFT\_OAT”, “OFFT\_TWB”, “OFFT\_WIC”, “OFFT\_IFT”, “OFFT\_REM” |
| Inward | “OFFT\_INFT” |
| Beneficiary Addition | “NR\_BENRG” |

## Applicable source channels:

|  |  |
| --- | --- |
| **Source channels** | **Source channel code** |
| Mobile Banking | “MOB” |

## Rule Variables:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable Name | Type | Segment | Description | Comments |
| RQO\_TRAN\_DATE | Date | RQO | Date of the transaction request |  |
| RQO\_TRAN\_TIME | Time | RQO | Time of the transaction request |  |
| SMH\_CLIENT\_TRAN\_TYPE | Character | SMH | Client defined transaction type |  |
| TBT\_MOD\_AMT | Numeric | TBT | Transaction amount |  |
| AQD\_AVAIL\_BAL | Numeric | AQD | Available account balance |  |
| HOB\_IP\_ADDRESS\_V6 | Character | HOB | Device IP Address |  |
| \_X\_RULE\_SCORE\_10A | Numeric | Customer | Condition 1 score |  |
| \_X\_RULE\_SCORE\_10B | Numeric | Customer | Condition 2 score |  |
| \_X\_RULE\_SCORE\_10C | Numeric | Customer | Condition 3 score |  |
| \_X\_RULE\_SCORE\_10 | Numeric | Customer | Rule 10 score |  |

## Profile Variables:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable Name | Type | Segment | Description | Comments |
| \_XB\_BENE\_REG\_DT | Datetime | Customer + Beneficiary | Beneficiary registration date |  |
| \_XB\_BENE\_AGG\_AMT | Numeric | Customer + Beneficiary | Funds transferred by customer to the beneficiary since registration |  |
| \_A\_AGG\_DEBIT\_DT\_MIN\_1 - \_A\_AGG\_DEBIT\_DT\_MIN\_15 | Datetime | Account | Datetime of debit transaction for the past 15 minutes |  |
| \_A\_AGG\_DEBIT\_AMT\_MIN\_1 - \_A\_AGG\_DEBIT\_AMT\_MIN\_15 | Numeric | Account | Aggregate debit amount for the past 15 minutes |  |
| \_A\_AGG\_CREDIT\_DT\_MIN\_1 - \_A\_AGG\_CREDIT\_DT\_MIN\_15 | Datetime | Account | Datetime of credit transaction for the past 15 minutes |  |
| \_A\_AGG\_CREDIT\_AMT\_MIN\_1 - \_A\_AGG\_CREDIT\_AMT\_MIN\_15 | Numeric | Account | Aggregate credit amount for the past 15 minutes |  |
| \_A\_TODAY\_BAL\_DT | Datetime | Account | Datetime of available balance |  |
| \_A\_TODAY\_BAL\_AMT | Numeric | Account | Available balance amount |  |

## Profile Logic:

* Check if the transaction message type is a post event for fund transfer transaction
* If yes, check if the date of \_A\_TODAY\_BAL\_DT equals that of the transaction datetime
  + If not, then set \_A\_TODAY\_BAL\_DT as the transaction datetime and \_A\_TODAY\_BAL\_AMT to the available balance of the transaction
* Check if the transaction message type is a post event for debit transaction
* If yes, check if the date, hour and minute of \_A\_AGG\_DEBIT\_DT\_MIN\_1 equals that of the transaction datetime
  + If yes then add the transaction amount to \_A\_AGG\_DEBIT\_AMT\_MIN\_1
  + If not, then shift the \_A\_AGG\_DEBIT\_DT\_MIN and \_A\_AGG\_DEBIT\_AMT\_MIN variables and set \_A\_AGG\_DEBIT\_DT\_MIN\_1 to transaction datetime and \_A\_AGG\_DEBIT\_AMT\_MIN\_1 to transaction amount
* If yes, then add the transaction amount to \_XB\_BENE\_AGG\_AMT
* Check if the transaction message type is a post event for credit transaction
* If yes, check if the date, hour and minute of \_A\_AGG\_CREDIT\_DT\_MIN\_1 equals that of the transaction datetime
  + If yes then add the transaction amount to \_A\_AGG\_CREDIT\_AMT\_MIN\_1
  + If not, then shift the \_A\_AGG\_CREDIT\_DT\_MIN and \_A\_AGG\_CREDIT\_AMT\_MIN variables and set \_A\_AGG\_CREDIT\_DT\_MIN\_1 to transaction datetime and \_A\_AGG\_CREDIT\_AMT\_MIN\_1 to transaction amount

## Profile Code:

## Rule Logic:

* Check if the transaction message type is listed in triggering events for the rule and the customer is from a high risk nationality
* If yes, set the rule variable for aggregate debit amount to the current transaction amount (AGG\_DEBIT = TBT\_MOD\_AMT), and aggregate credit amount to 0 (AGG\_CREDIT = 0)
* Traverse through \_A\_AGG\_DEBIT\_DT\_MIN variables and if the difference between them and current transaction datetime is within 15 minutes, add the corresponding \_A\_AGG\_DEBIT\_AMT\_MIN variable to the aggregate
* Traverse through \_A\_AGG\_CREDIT\_DT\_MIN variables and if the difference between them and current transaction datetime is within 15 minutes, add the corresponding \_A\_AGG\_CREDIT\_AMT\_MIN variable to the aggregate
* If aggregate debit within the past 15 minutes is greater than "A", then set a rule score of 300
* If aggregate debit within the past 15 minutes is at least Y% of the aggregate credit in the past 15 minutes, then set a rule score of 300
* If \_XB\_BENE\_AGG\_AMT is greater than B% of \_A\_TODAY\_BAL\_AMT and \_XB\_BENE\_ADD\_DT is within Z days, then set a rule score of 300

## Rule Code:

# Rule R011– Blacklist check for beneficiary addition

## Description

When a beneficiary addition request is received check if IP Address or Device ID or Beneficiary name or beneficiary account number are matching blacklist.

## Triggering Events:

|  |  |
| --- | --- |
| **SAS\_MESSAGE\_SUB\_TYPE (Rules)** | **SMH\_CLIENT\_TRAN\_TYPE** |
| Beneficiary Addition | “NR\_BENRG” |

## Applicable source channels:

|  |  |
| --- | --- |
| **Source channels** | **Source channel code** |
| Mobile Banking | “MOB” |

## Rule Variables:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable Name | Type | Segment | Description | Comments |
| RQO\_TRAN\_DATE | Date | RQO | Date of the transaction request |  |
| RQO\_TRAN\_TIME | Time | RQO | Time of the transaction request |  |
| SMH\_CLIENT\_TRAN\_TYPE | Character | SMH | Client defined transaction type |  |
| HOB\_DEVICE\_IP | Character | HOB | Device IP address |  |
| HQO\_DEVICE\_ID | Character | HQO | Device ID |  |
| TPP\_NAME | Character | TPP | Beneficiary name |  |
| TPP\_ACCT\_NUM | Character | TPP | Beneficiary Account number |  |
| \_X\_RULE\_SCORE\_11 | Numeric | Customer | Rule Score |  |

## Profile Variables:

* Not Required

## Profile Logic:

* Not Required

## Profile Code:

* Not Required

## Rule Logic:

* Check if the transaction message type is listed in the triggering events for the rule
* If yes, check if beneficiary name, or beneficiary account number, or IP address or device ID is found in blacklist
* If found, then set a score of 600

## Rule Code:

# Rule R012 – Unusual credit/debit activity

## Description

For a debit transaction request, check

1. Account opened within "X" (3) months with 0 balance

2. Total count of credit/debit for the last "X" months <= "Y"

3. Total aggregate credit within past 24hr >= 20k

4. Total aggregate debit within past 24hr >= 20k

(Inclusion 1-4: High risk nationality)

5. Count of cash withdrawals in the past 30 mins with 5000 each >= 6

Where, X = 3, Y =

## Triggering Events:

|  |  |
| --- | --- |
| **SAS\_MESSAGE\_SUB\_TYPE (Rules)** | **SMH\_CLIENT\_TRAN\_TYPE** |
| Funds Transfer | “RFFT\_OAT”, “RFFT\_TWB”, “RFFT\_WIC”, “RFFT\_IFT”, “RFFT\_REM” |
| **SAS\_MESSAGE\_SUB\_TYPE (Profiles)** | **SMH\_CLIENT\_TRAN\_TYPE** |
| Funds Transfer | “OFFT\_OAT”, “OFFT\_TWB”, “OFFT\_WIC”, “OFFT\_IFT”, “OFFT\_REM” |
| Credit | “OFFT\_INFT” |
| Account Opening | “NR\_NAOPN” |

## Applicable source channels:

|  |  |
| --- | --- |
| **Source channels** | **Source channel code** |
| Mobile Banking | “MOB” |
| ATM | “ATM” |

## Rule Variables:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable Name | Type | Segment | Description | Comments |
| RQO\_TRAN\_DATE | Date | RQO | Date of the transaction request |  |
| RQO\_TRAN\_TIME | Time | RQO | Time of the transaction request |  |
| SMH\_CLIENT\_TRAN\_TYPE | Character | SMH | Client defined transaction type |  |
| TBT\_MOD\_AMT | Numeric | TBT | Transaction amount |  |
| \_X\_RULE\_SCORE\_12A | Numeric | Customer | Condition 1 score |  |
| \_X\_RULE\_SCORE\_12B | Numeric | Customer | Condition 2 score |  |
| \_X\_RULE\_SCORE\_12C | Numeric | Customer | Condition 3 score |  |
| \_X\_RULE\_SCORE\_12D | Numeric | Customer | Condition 4 score |  |
| \_X\_RULE\_SCORE\_12E | Numeric | Customer | Condition 5 score |  |
| \_X\_RULE\_SCORE\_12 | Numeric | Customer | Rule score |  |

## Profile Variables:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable Name | Type | Segment | Description | Comments |
| \_XB\_BENE\_REG\_DT | Datetime | Beneficiary + Customer | Beneficiary registration date |  |
| \_A\_AO\_DT | Datetime | Account | Account opening date |  |
| \_A\_FT\_DT\_MON\_1 - \_A\_FT\_DT\_MON\_6 | Datetime | Account | Datetime of financial transactions for the past 6 months |  |
| \_A\_FT\_CNT\_MON\_1 - \_A\_FT\_CNT\_MON\_6 | Numeric | Account | Count of financial transactions in the past 6 months |  |
| \_A\_AGG\_DEBIT\_DT\_HR\_1 - \_A\_AGG\_DEBIT\_DT\_HR\_24 | Datetime | Account | Datetime of debit transaction for the past 24 hours |  |
| \_A\_AGG\_DEBIT\_AMT\_HR\_1 - \_A\_AGG\_DEBIT\_AMT\_HR\_24 | Numeric | Account | Aggregate debit amount for the past 24 hours |  |
| \_A\_AGG\_CREDIT\_DT\_HR\_1 - \_A\_AGG\_CREDIT\_DT\_HR\_24 | Datetime | Account | Datetime of credit transaction for the past 24 hours |  |
| \_A\_AGG\_CREDIT\_AMT\_HR\_1 - \_A\_AGG\_CREDIT\_AMT\_HR\_24 | Numeric | Account | Aggregate credit amount for the past 24 hours |  |
| \_A\_5K\_CW\_DT | Datetime | Account | Datetime of cash withdrawal of 5000 AED |  |
| \_A\_5K\_CW\_CNT | Numeric | Account | Count of cash withdrawal of 5000 AED in the past 15 minutes |  |

## Profile Logic:

* Check if the transaction message type is a post event for debit transaction
* If yes, check if the date and hour of \_A\_AGG\_DEBIT\_DT\_HR\_1 equals that of the transaction datetime
  + If yes then add the transaction amount to \_A\_AGG\_DEBIT\_AMT\_HR\_1
  + If not, then shift the \_A\_AGG\_DEBIT\_DT\_HR and \_A\_AGG\_DEBIT\_AMT\_HR variables and set \_A\_AGG\_DEBIT\_DT\_HR\_1 to transaction datetime and \_A\_AGG\_DEBIT\_AMT\_HR\_1 to transaction amount
* Check if the transaction message type is a post event for credit transaction
* If yes, check if the date and hour of \_A\_AGG\_CREDIT\_DT\_HR\_1 equals that of the transaction datetime
  + If yes then add the transaction amount to \_A\_AGG\_CREDIT\_AMT\_HR\_1
  + If not, then shift the \_A\_AGG\_CREDIT\_DT\_HR and \_A\_AGG\_CREDIT\_AMT\_HR variables and set \_A\_AGG\_CREDIT\_DT\_HR\_1 to transaction datetime and \_A\_AGG\_CREDIT\_AMT\_HR\_1 to transaction amount
* Check if the transaction message type is a post event for a financial transaction (credit or debit)
* If yes, check if the month and year of \_A\_FT\_DT\_MON\_1 equals that of the transaction date
  + If yes then increment \_A\_FT\_CNT\_MON\_1 by 1
  + If not, then shift the \_A\_FT\_DT\_MON and \_A\_FT\_CNT\_MON variables and set \_A\_FT\_DT\_MON to transaction datetime and \_A\_FT\_CNT\_MON to 1
* Check if the transaction message type is a post event for a cash withdrawal
* If yes, check if the difference between \_A\_5K\_CW\_DT and transaction datetime is within 15 minutes
  + If yes then increment the variable \_A\_5K\_CW\_CNT by 1
  + If not, then set \_A\_5K\_CW\_DT to transaction datetime and \_A\_5K\_CW\_CNT to 1
* Check if the transaction message type is for account opening
* If yes, then set the \_A\_AO\_DT to the transaction datetime

## Profile Code:

## Rule Logic:

* Check if the transaction message type is listed in triggering events for the rule
* If yes, set the rule variable for aggregate debit amount to the current transaction amount (AGG\_DEBIT = TBT\_MOD\_AMT), and aggregate credit amount to 0 (AGG\_CREDIT = 0), and count of financial transactions to 0 (AGG\_FT\_CNT = 0)
* Traverse through \_A\_AGG\_DEBIT\_DT\_HR variables and if the difference between them and current transaction datetime is within 24 hours, add the corresponding \_A\_AGG\_DEBIT\_AMT\_HR variable to the aggregate
* Traverse through \_A\_AGG\_CREDIT\_DT\_HR variables and if the difference between them and current transaction datetime is within 24 hours, add the corresponding \_A\_AGG\_CREDIT\_AMT\_HR variable to the aggregate
* Traverse through \_A\_FT\_DT\_MON variables and if the difference between their month and current transaction month is within 6 months, add the corresponding \_A\_FT\_CNT\_MON variable to the aggregate count
* If the customer is from a high-risk nationality, and
  + If AGG\_DEBIT >= 20,000 and AGG\_CREDIT >= 20,000 and AGG\_FT\_CNT < “Y” and the account opening date is within “X” months, then set a rule score of 300
  + If \_A\_5K\_CW\_CNT is >= 6, then set a rule score of 600

## Rule Code:

# Rule R013– Login: IP and Geolocation check

## Description

Whenever a login happens

1. Check is the location belongs to the list of suspicious/blacklisted countries

2. Check if the state/country of previous login is different from current login and previous IP is used within "X" hours duration

3. Check if IP address is blacklisted

Inclusion conditions:

1. Device ID is different from the registered one

2. Prior failed login event within 24hrs

Where, X = 1

## Triggering Events:

|  |  |
| --- | --- |
| **SAS\_MESSAGE\_SUB\_TYPE (Rules)** | **SMH\_CLIENT\_TRAN\_TYPE** |
| Login | “NR\_LOGIN” |
| **SAS\_MESSAGE\_SUB\_TYPE (Profiles)** | **SMH\_CLIENT\_TRAN\_TYPE** |
| Login | “NR\_LOGIN” |
| Device Registration | “NR\_MIBRE” |

## Applicable source channels:

|  |  |
| --- | --- |
| **Source channels** | **Source channel code** |
| Mobile Banking | “MOB” |

## Rule Variables:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable Name | Type | Segment | Description | Comments |
| RQO\_TRAN\_DATE | Date | RQO | Date of the transaction request |  |
| RQO\_TRAN\_TIME | Time | RQO | Time of the transaction request |  |
| SMH\_CLIENT\_TRAN\_TYPE | Character | SMH | Client defined transaction type |  |
| HOB\_DEVICE\_IP | Character | HOB | Device IP address |  |
| HQO\_DEVICE\_ID | Character | HQO | Device ID |  |
| TNG\_TRAN\_STATUS | Character | TNG | Event status |  |
| \_X\_RULE\_SCORE\_13 | Numeric | Customer | Rule Score |  |

## Profile Variables:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable Name | Type | Segment | Description | Comments |
| \_X\_PREV\_LOGIN\_DT | Datetime | Customer | Datetime of previous login event |  |
| \_X\_PREV\_LOGIN\_IP | Character | Customer | Device IP used for previous login |  |
| \_X\_CUR\_LOGIN\_DT | Datetime | Customer | Datetime of current login event |  |
| \_X\_CUR\_LOGIN\_IP | Character | Customer | Device IP used for current login |  |
| \_D\_DEVICE\_REG\_DT | Datetime | Device | Device registration datetime |  |
| \_X\_FAILED\_LOGIN\_DT | Datetime | Customer | Datetime of last failed login |  |

## Profile Logic:

* Check if the transaction message type is of login:
  + If yes, set \_X\_PREV\_LOGIN\_DT to \_X\_CUR\_LOGIN\_DT, \_X\_PREV\_LOGIN\_IP to \_X\_CUR\_LOGIN\_IP, and update the \_X\_CUR\_LOGIN\_DT to the transaction datetime and \_X\_CUR\_LOGIN\_IP to the device IP address used
  + If event status is failed, set \_X\_FAILED\_LOGIN\_DT to the transaction datetime
* Check if the transaction message type is of device registration:
  + If yes, then set the \_D\_DEVICE\_REG\_DT to the transaction datetime

## Profile Code:

## Rule Logic:

* Check if the transaction message type is listed in the triggering events for the rule
* Check if \_D\_DEVICE\_REG\_DT is not null and the difference between \_X\_FAILED\_LOGIN\_DT and the transaction datetime is within 24 hrs
  + If yes, check if the IP address or the country location is found in blacklist, if yes, then assign a rule score of 600
  + If yes, check if \_X\_PREV\_LOGIN\_IP is not null and is different from the current IP. If different, check if the difference between \_X\_PREV\_LOGIN\_DT and the current transaction datetime is within “X” hours. If yes, then assign a rule score of 600

## Rule Code:

# Rule R014– Blacklist check for lending application

## Description

When an application is received for any liability product, the applicant details (Based on CID, Name, EID, Passport, Mobile number, Email) are found blacklist.

## Triggering Events:

|  |  |
| --- | --- |
| **SAS\_MESSAGE\_SUB\_TYPE (Rules)** | **SMH\_CLIENT\_TRAN\_TYPE** |
| Lending Application | “NR\_LOAP” |

## Applicable source channels:

|  |  |
| --- | --- |
| **Source channels** | **Source channel code** |
| Mobile Banking | “MOB” |

## Rule Variables:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable Name | Type | Segment | Description | Comments |
| RQO\_TRAN\_DATE | Date | RQO | Date of the transaction request |  |
| RQO\_TRAN\_TIME | Time | RQO | Time of the transaction request |  |
| SMH\_CLIENT\_TRAN\_TYPE | Character | SMH | Client defined transaction type |  |
| XQO\_CUST\_NAME | Character | XQO | Customer name |  |
| XQO\_CUSTOMER\_ID | Character | XQO | Customer ID |  |
| XQO\_PHONE | Character | XQO | Customer Phone number |  |
| XQO\_EMAIL | Character | XQO | Customer Email ID |  |
| DEE\_ENTITY\_ID\_2 | Character | DEE | Customer Passport ID |  |
| DEE\_ENTITY\_ID\_1 | Character | DEE | Customer Emirates ID |  |
| \_X\_RULE\_SCORE\_14 | Numeric | Customer | Rule Score |  |

## Profile Variables:

* Not Required

## Profile Logic:

* Not Required

## Profile Code:

* Not Required

## Rule Logic:

* Check if the transaction message type is listed in the triggering events for the rule
* If yes, check if Customer ID, Name, EID, Passport, Mobile number, Email is found in blacklist
* If found, then set a score of 600 and trigger an alert

## Rule Code:

# Rule R015– Lending applications with same employer name

## Description

Whenever a new application is received check if the employer name was used in more than "Y" applications in last "X" period. If yes then generate alert

Where, X = 7 days

## Triggering Events:

|  |  |
| --- | --- |
| **SAS\_MESSAGE\_SUB\_TYPE (Rules & Profiles)** | **SMH\_CLIENT\_TRAN\_TYPE** |
| Lending Application | “NR\_LOAP” |

## Applicable source channels:

|  |  |
| --- | --- |
| **Source channels** | **Source channel code** |
| Mobile Banking | “MOB” |

## Rule Variables:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable Name | Type | Segment | Description | Comments |
| RQO\_TRAN\_DATE | Date | RQO | Date of the transaction request |  |
| RQO\_TRAN\_TIME | Time | RQO | Time of the transaction request |  |
| SMH\_CLIENT\_TRAN\_TYPE | Character | SMH | Client defined transaction type |  |
| \_X\_RULE\_SCORE\_15 | Numeric |  | Rule Score |  |

## Profile Variables:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable Name | Type | Segment | Description | Comments |
| \_E\_LA\_DATE\_1 - \_E\_LA\_DATE\_15 | Date | Employer Name | Date of lending application request |  |
| \_E\_LA\_CNT\_DAY\_1 - \_E\_LA\_CNT\_DAY\_15 | Numeric | Employer Name | Count of lending applications for the past 15 days |  |

## Profile Logic:

* Check if the transaction message type is of post-auth for a lending application
* If yes, check if \_E\_LA\_DATE\_1 is not null and is equal to the transaction date
  + If yes, then increment the \_E\_LA\_CNT\_DAY\_1 variable by 1
  + If not, then shift the \_E\_LA\_DATE and \_E\_LA\_CNT\_DAY variables and set \_E\_LA\_DATE\_1 to the transaction date and \_E\_LA\_CNT\_DAY\_1 to 1

## Profile Code:

## Rule Logic:

* Check if the transaction message type is listed in the triggering events for the rule
* Set the aggregate application count to 1 (LA\_COUNT = 1)
* Traverse through the \_E\_LA\_DATE variables, and check if the difference between the transaction date and \_E\_LA\_DATE is within “X” days
  + If within “X” days, add the corresponding \_E\_LA\_CNT variable to LA\_COUNT
* If the aggregate count (LA\_COUNT) is upto 5, then assign a rule score of 300, else if it is more than 5, then assign a score of 600

## Rule Code:

# Rule R016– Fund transfers post self transaction

## Description

When a debit transaction is received check

1. Transaction preceded by a Me-to-Me transaction (inward/internal transfer) (Customer name and Beneficiary name are matching) in last "X" hours

2. Aggregate transaction amount post me-to-me aggregate debit amount (all debits to account) is more than "Y%" of account balance or more than "Z%" of maximum limit for transfer type

3. Number of transfers between accounts having same CIF within 1 hour >= "C"

4. If more than "K" (2) AHB accounts receive funds from the same account number (for whom debit is done in current scenario) within 30 mins AND Amount > 10K each

Where, X = , Y = , Z =

## Triggering Events:

|  |  |
| --- | --- |
| **SAS\_MESSAGE\_SUB\_TYPE (Rules)** | **SMH\_CLIENT\_TRAN\_TYPE** |
| Funds Transfer | “RFFT\_OAT”, “RFFT\_TWB”, “RFFT\_WIC”, “RFFT\_IFT”, “RFFT\_REM” |
| Cash Withdrawal | “RFFT\_ATMWD” |
| Bill Payment | “RFFT\_UTBP” |
| POS/ECOM Transactions | “RFFT\_ECOM”, “RFFT\_POS” |
| **SAS\_MESSAGE\_SUB\_TYPE (Profiles)** | **SMH\_CLIENT\_TRAN\_TYPE** |
| Funds Transfer | “OFFT\_OAT”, “OFFT\_TWB”, “OFFT\_WIC”, “OFFT\_IFT”, “OFFT\_REM” |
| Cash Withdrawal | “OFFT\_ATMWD” |
| Bill Payment | “OFFT\_UTBP” |
| POS/ECOM Transactions | “OFFT\_ECOM”, “OFFT\_POS” |
| Credit | “OFFT\_INFT” |

## Applicable source channels:

|  |  |
| --- | --- |
| **Source channels** | **Source channel code** |
| Mobile Banking | “MOB” |

## Rule Variables:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable Name | Type | Segment | Description | Comments |
| RQO\_TRAN\_DATE | Date | RQO | Date of the transaction request |  |
| RQO\_TRAN\_TIME | Time | RQO | Time of the transaction request |  |
| SMH\_CLIENT\_TRAN\_TYPE | Character | SMH | Client defined transaction type |  |
| TBT\_MOD\_AMT | Numeric | TBT | Transaction amount |  |
| AQD\_AVAIL\_BAL | Numeric | AQD | Available account balance |  |
| HQO\_LIMIT\_AMT | Numeric | HQO | Channel daily limit |  |
| \_X\_RULE\_SCORE\_16A | Numeric | Customer | Condition 1 score |  |
| \_X\_RULE\_SCORE\_16B | Numeric | Customer | Condition 2 score |  |
| \_X\_RULE\_SCORE\_16C | Numeric | Customer | Condition 3 score |  |
| \_X\_RULE\_SCORE\_16D | Numeric | Customer | Condition 4 score |  |
| \_X\_RULE\_SCORE\_16 | Numeric | Customer | Rule score |  |

## Profile Variables:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable Name | Type | Segment | Description | Comments |
| \_A\_SELF\_INW\_TXN\_DT | Datetime | Account | Datetime of last self inward transaction |  |
| \_A\_BAL\_AT\_SELF\_TXN | Datetime | Account | Account balance post self inward transaction |  |
| \_A\_SELF\_INW\_DT\_HR\_1 - \_A\_SELF\_INW\_DT\_HR\_3 | Datetime | Account | Datetime of self inward transactions in past 3 hours |  |
| \_A\_SELF\_INW\_CNT\_HR\_1 - \_A\_SELF\_INW\_CNT\_HR\_3 | Datetime | Account | Count of self inward transactions in past 3 hours |  |
| \_A\_AGG\_DEBIT\_DT\_HR\_1 - \_A\_AGG\_DEBIT\_DT\_HR\_24 | Datetime | Account | Datetime of debit transaction for the past 24 hours |  |
| \_A\_AGG\_DEBIT\_AMT\_HR\_1 - \_A\_AGG\_DEBIT\_AMT\_HR\_24 | Numeric | Account | Aggregate debit amount for the past 24 hours |  |
| \_X\_OAT\_DT\_1HR | Datetime | Customer | Datetime of own account transfers in past 1 hour |  |
| \_X\_OAT\_CNT\_1HR | Numeric | Customer | Count of own account transfers in past 1 hour |  |
| \_A\_DEBIT\_ACCT\_POST\_ST\_1 - \_A\_DEBIT\_ACCT\_POST\_ST\_5 | Numeric | Account | Account IDs to which the amount is sent post self inward transaction |  |
| \_A\_DEBIT\_AMT\_POST\_ST\_1 - \_A\_DEBIT\_AMT\_POST\_ST\_5 | Numeric | Account | Amount sent to the accounts post self inward transaction |  |

## Profile Logic:

* Check if the transaction message type is a post event for an inward transaction, and the sender name and customer name is matching,
* If yes, check if the date of \_A\_SELF\_INW\_TXN\_DT equals that of the transaction datetime
  + If not, then set \_A\_SELF\_INW\_TXN\_DT as the transaction datetime and \_A\_BAL\_AT\_SELF\_TXN to the available balance of the transaction. Update the \_A\_DEBIT\_ACCT\_POST\_ST and \_ A\_DEBIT\_AMT\_POST\_ST variables to null and 0 respectively
* If yes, check if the date and hour of \_A\_SELF\_INW\_DT\_HR\_1 matches that of the transaction datetime
  + If yes, then increment \_A\_SELF\_INW\_CNT\_HR\_1. Else shift the \_A\_SELF\_INW\_DT\_HR & \_A\_SELF\_INW\_CNT\_HR variables and set \_A\_SELF\_INW\_DT\_HR\_1 to transaction datetime and \_A\_SELF\_INW\_CNT\_HR\_1 to 1
* Check if the transaction message type is a post event for debit transaction
* If yes, check if the date, and hour of \_A\_AGG\_DEBIT\_DT\_HR\_1 equals that of the transaction datetime
  + If yes then add the transaction amount to \_A\_AGG\_DEBIT\_AMT\_HR\_1
  + If not, then shift the \_A\_AGG\_DEBIT\_DT\_HR and \_A\_AGG\_DEBIT\_AMT\_HR variables and set \_A\_AGG\_DEBIT\_DT\_HR\_1 to transaction datetime and \_A\_AGG\_DEBIT\_AMT\_HR\_1 to transaction amount
* If yes, check if the transaction is within 30 minutes of \_A\_SELF\_INW\_TXN\_DT
  + If yes, check if the beneficiary account id is present in \_A\_DEBIT\_ACCT\_POST\_ST variables.
    - If found, then add transaction amount to the corresponding \_A\_DEBIT\_AMT\_POST\_ST variable
    - If not, then shift the \_A\_DEBIT\_ACCT\_POST\_ST and \_A\_DEBIT\_AMT\_POST\_ST variables and set \_A\_DEBIT\_ACCT\_POST\_ST to the beneficiary account id and \_A\_DEBIT\_AMT\_POST\_ST as the transaction amount
* Check if the transaction message type is a post event for own account transfer transaction
  + If yes, check if the transaction datetime is within 1 hour of \_X\_OAT\_DT\_1HR
    - If yes, then increment the \_X\_OAT\_CNT\_1HR variable
    - If not, then set \_X\_OAT\_DT\_1HR to transaction datetime and \_X\_OAT\_CNT\_1HR to 1
* Check if the transaction message type is a post event for credit transaction
* If yes, check if the date, hour and minute of \_A\_AGG\_CREDIT\_DT\_MIN\_1 equals that of the transaction datetime
  + If yes then add the transaction amount to \_A\_AGG\_CREDIT\_AMT\_MIN\_1
  + If not, then shift the \_A\_AGG\_CREDIT\_DT\_MIN and \_A\_AGG\_CREDIT\_AMT\_MIN variables and set \_A\_AGG\_CREDIT\_DT\_MIN\_1 to transaction datetime and \_A\_AGG\_CREDIT\_AMT\_MIN\_1 to transaction amount

## Profile Code:

## Rule Logic:

* Check if the transaction message type is listed in triggering events for the rule
* If yes, set the rule variable for aggregate debit amount post self transaction to the current transaction amount (AGG\_DEBIT\_POST\_OAT = TBT\_MOD\_AMT)
* Set the count of inward transfers in past “X” hours to 0 (TOTAL\_INW\_TFR = 0)
* Set the number of accounts to which amount is transferred post self transfers to 0 (COUNT\_ACC = 0)
* Traverse through \_A\_AGG\_DEBIT\_DT\_HR variables and if the difference between them and current transaction datetime is within X hours and they are within “X” hours of the \_A\_SELF\_INW\_TXN\_DT, add the corresponding \_A\_AGG\_DEBIT\_AMT\_HR variable to the aggregate
* Traverse through \_A\_SELF\_INW\_DT\_HR variables and add the corresponding \_A\_SELF\_INW\_CNT\_HR variable to TOTAL\_INW\_TFR if it is within “X” hours of transaction datetime
* Traverse through \_A\_DEBIT\_AMT\_POST\_ST variables, and if the amount is at least 10,000, then increment COUNT\_ACC by 1
* If aggregate debit within the past “X” hours is at least Y% of \_A\_BAL\_AT\_SELF\_TXN or Z% of HQO\_LIMIT\_AMT, then set a rule score of 300
* If TOTAL\_INW\_TFR = 3, set a score of 300, if greater, set 600 as the score
* If \_X\_OAT\_CNT\_1HR >= “C”, then set a rule score of 600
* If COUNT\_ACC > 2, then set a rule score of 600

## Rule Code:

# Rule R017– Debit to new beneficiary from a new device

## Description

When a debit transaction is received check

1. The device ID is different from his previously registered device

2. X or more new bene is added and within 30 mins single/aggregate debit of Y% of account balance.

Where, X = 2, Y = 30

## Triggering Events:

|  |  |
| --- | --- |
| **SAS\_MESSAGE\_SUB\_TYPE (Rules)** | **SMH\_CLIENT\_TRAN\_TYPE** |
| Funds Transfer | “RFFT\_OAT”, “RFFT\_TWB”, “RFFT\_WIC”, “RFFT\_IFT”, “RFFT\_REM” |
| **SAS\_MESSAGE\_SUB\_TYPE (Profiles)** | **SMH\_CLIENT\_TRAN\_TYPE** |
| Fund Transfer (Debit) | “OFFT\_OAT”, “OFFT\_TWB”, “OFFT\_WIC”, “OFFT\_IFT”, “OFFT\_REM” |
| Fund Transfer (Credit) | “OFFT\_INFT” |
| Beneficiary addition | “NR\_BENRG” |
| Device registration | “NR\_MIBRE” |

## Applicable source channels:

|  |  |
| --- | --- |
| **Source channels** | **Source channel code** |
| Mobile Banking | “MOB” |

## Rule Variables:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable Name | Type | Segment | Description | Comments |
| RQO\_TRAN\_DATE | Date | RQO | Date of the transaction request |  |
| RQO\_TRAN\_TIME | Time | RQO | Time of the transaction request |  |
| SMH\_CLIENT\_TRAN\_TYPE | Character | SMH | Client defined transaction type |  |
| TBT\_MOD\_AMT | Numeric | TBT | Transaction amount |  |
| AQD\_AVAIL\_BAL | Numeric | AQD | Available account balance |  |
| \_X\_RULE\_SCORE\_17A | Numeric | Customer | Condition 1 score |  |
| \_X\_RULE\_SCORE\_17B | Numeric | Customer | Condition 2 score |  |
| \_X\_RULE\_SCORE\_17 | Numeric | Customer | Rule score |  |

## Profile Variables:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable Name | Type | Segment | Description | Comments |
| \_D\_REG\_DT | Datetime | Device | Device registration datetime |  |
| \_X\_PREV\_DEVICE\_ID | Character | Customer | Previous device ID used by customer |  |
| \_X\_CUR\_DEVICE\_ID | Character | Customer | Current device ID used by customer |  |
| \_X\_BENE\_ADDED\_DT\_30MINS | Datetime | Customer | Datetime of beneficiary addition for past 30 minutes |  |
| \_X\_BENE\_ADDED\_CNT\_30MINS | Numeric | Customer | Count of beneficiaries added in past 30 minutes |  |
| \_A\_AGG\_DEBIT\_DT\_MIN\_1 - \_A\_AGG\_DEBIT\_DT\_MIN\_30 | Datetime | Account | Datetime of debit transaction for past 30 minutes |  |
| \_A\_AGG\_DEBIT\_AMT\_MIN\_1 - \_A\_AGG\_DEBIT\_AMT\_MIN\_30 | Numeric | Account | Amount of debit transaction for past 30 minutes |  |
| \_A\_AVAIL\_BAL\_DEV\_REG\_DT | Datetime | Account | Available balance datetime post device registration |  |
| \_A\_AVAIL\_BAL\_DEV\_REG\_AMT | Numeric | Account | Available balance amount post device registration |  |

## Profile Logic:

* Check if the transaction message type is a post event for a device registration event
* If yes, update the device ID variables as:
  + Set \_X\_PREV\_DEVICE\_ID = \_X\_CUR\_DEVICE\_ID
  + \_X\_CUR\_DEVICE\_ID = Device Id received in the transaction
  + \_D\_REG\_DT = Transaction datetime
* Check if the transaction message type is for beneficiary addition
* If yes, check if the transaction datetime is within 30 minutes of \_X\_BENE\_ADDED\_DT\_30MINS
  + If within 30 minutes, increment \_X\_BENE\_ADDED\_CNT\_30MINS by 1
  + If not, then set \_X\_BENE\_ADDED\_DT\_30MINS to transaction datetime and \_X\_BENE\_ADDED\_CNT\_30MINS to 1.
* Check if the transaction message type is a post event for debit transaction
* If yes, check if the date, hour and minute of \_A\_AGG\_DEBIT\_DT\_MIN\_1 equals that of the transaction datetime
  + If yes then add the transaction amount to \_A\_AGG\_DEBIT\_AMT\_MIN\_1
  + If not, then shift the \_A\_AGG\_DEBIT\_DT\_MIN and \_A\_AGG\_DEBIT\_AMT\_MIN variables and set \_A\_AGG\_DEBIT\_DT\_MIN\_1 to transaction datetime and \_A\_AGG\_DEBIT\_AMT\_MIN\_1 to transaction amount
* Check if the transaction message type is for fund transfer (credit or debit):
* Check if \_A\_AVAIL\_BAL\_DEV\_REG\_DT is null or is prior to \_D\_REG\_DT
  + If yes, then set \_A\_AVAIL\_BAL\_DEV\_REG\_DT to transaction datetime, and the available balance amount to the available balance received in transaction.

## Profile Code:

## Rule Logic:

* Check if the transaction message type is listed in triggering events for the rule
* If yes, initialise the following rule variables:
  + AGG\_DEBIT\_30MIN = Transaction amount
* Traverse through \_A\_AGG\_DEBIT\_DT\_MIN variables, and if it is within 30 minutes of the transaction datetime, add the corresponding \_A\_AGG\_DEBIT\_AMT\_MIN variable to the AGG\_DEBIT\_30MIN
* If \_X\_PREV\_DEVICE\_ID and \_X\_CUR\_DEVICE\_ID are not null and are different
  + If \_X\_BENE\_ADDED\_CNT\_30MINS is greater than 1, and AGG\_DEBIT\_30MIN > Y% of \_A\_AVAIL\_BAL\_DEV\_REG\_DT, then assign a rule score of 300

## Rule Code:

# Rule R018– Fake Investment scams

## Description

For a debit transaction request, check

1. Count of bene added in 24hrs >= 5

2. Receiving and sending funds to >= 10 customers within 24 hrs

3. Receiving funds from > 5 different remitters within 24 hours

4. Excluding bill/utility/merchant payments

Where, X =

## Triggering Events:

|  |  |
| --- | --- |
| **SAS\_MESSAGE\_SUB\_TYPE (Rules)** | **SMH\_CLIENT\_TRAN\_TYPE** |
| Fund Transfer (Debit) | “RFFT\_OAT”, “RFFT\_TWB”, “RFFT\_WIC”, “RFFT\_IFT”, “RFFT\_REM” |
| **SAS\_MESSAGE\_SUB\_TYPE (Profiles)** | **SMH\_CLIENT\_TRAN\_TYPE** |
| Fund Transfer (Debit) | “OFFT\_OAT”, “OFFT\_TWB”, “OFFT\_WIC”, “OFFT\_IFT”, “OFFT\_REM” |
| Fund Transfer (Credit) | “OFFT\_INFT” |

## Applicable source channels:

|  |  |
| --- | --- |
| **Source channels** | **Source channel code** |
| Mobile Banking | “MOB” |

## Rule Variables:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable Name | Type | Segment | Description | Comments |
| RQO\_TRAN\_DATE | Date | RQO | Date of the transaction request |  |
| RQO\_TRAN\_TIME | Time | RQO | Time of the transaction request |  |
| SMH\_CLIENT\_TRAN\_TYPE | Character | SMH | Client defined transaction type |  |
| TBT\_MOD\_AMT | Numeric | TBT | Transaction amount |  |
| \_X\_RULE\_SCORE\_18A | Numeric | Customer | Condition 1 score |  |
| \_X\_RULE\_SCORE\_18B | Numeric | Customer | Condition 2 score |  |
| \_X\_RULE\_SCORE\_18C | Numeric | Customer | Condition 3 score |  |
| \_X\_RULE\_SCORE\_18 | Numeric | Customer | Rule score |  |

## Profile Variables:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable Name | Type | Segment | Description | Comments |
| \_X\_BEN\_DT\_HR\_1 - \_X\_BEN\_DT\_HR\_24 | Datetime | Customer | Datetime of beneficiary addition for past 24 hours |  |
| \_X\_BEN\_CNT\_HR\_1 - \_X\_BEN\_CNT\_HR\_24 | Numeric | Customer | Count of beneficiaries added by the customer in past 24 hours |  |
| \_A\_DEBIT\_BENE\_DT\_1 – \_A\_DEBIT\_BENE\_DT\_10 | Datetime | Account | Datetime of last transfer to the recent 10 beneficiaries |  |
| \_A\_DEBIT\_BENE\_ACC\_1 – \_A\_DEBIT\_BENE\_ACC\_10 | Character | Account | Account number of recent 10 beneficiaries |  |
| \_A\_SENDER\_DT\_1 – \_A\_SENDER\_DT\_10 | Datetime | Account | Datetime of last funds received from latest 10 senders |  |
| \_A\_SENDER\_ACC\_1 – \_A\_SENDER\_ACC\_10 | Character | Account | Account number of recent 10 senders |  |

## Profile Logic:

* Check if the transaction message type is a post event for beneficiary addition
  + Profiles created in R005
* Check if the transaction message type is a post event for credit
* If yes, check if the sender account number is present in \_A\_SENDER\_ACC variables
  + If found, update the corresponding \_A\_SENDER\_DT variable to the transaction datetime
  + If not found, traverse the \_A\_SENDER\_DT variables and check if it is null or outside 24 hours time frame.
    - If found, then update the \_A\_SENDER\_DT variable to the transaction datetime and \_A\_SENDER\_ACC variable to the sender account number.
    - If not, then shift the \_A\_SENDER\_DT and \_A\_SENDER\_ACC variables and set \_A\_SENDER\_DT\_1 to the transaction datetime and \_A\_SENDER\_ACC\_1 to the sender account number
* Check if the transaction message type is a post event for debit (excluding any merchant/bill/utility payments)
* If yes, check if the beneficiary account number is present in \_A\_DEBIT\_BENE\_DT variables
  + If found, update the corresponding \_A\_DEBIT\_BENE\_DT variable to the transaction datetime
  + If not found, traverse the \_A\_DEBIT\_BENE\_DT variables and check if it is null or outside 24 hours time frame.
    - If found, then update the \_A\_DEBIT\_BENE\_DT variable to the transaction datetime and \_A\_DEBIT\_BENE\_ACC variable to the beneficiary account number.
    - If not, then shift the \_A\_DEBIT\_BENE\_DT and \_A\_DEBIT\_BENE\_ACC variables and set \_A\_DEBIT\_BENE\_DT\_1 to the transaction datetime and \_A\_DEBIT\_BENE\_ACC\_1 to the beneficiary account number

## Profile Code:

## Rule Logic:

* Check if the transaction message type is listed in triggering events for the rule
* If yes, set the count of beneficiaries the customer transferred to 1 (CNT\_FT\_BENE = 1), count of the remitters to 0 (CNT\_SENDER = 0), and count of beneficiaries added to 0 (CNT\_ADD\_BENE = 0)
* Traverse the \_X\_BEN\_DT\_HR variables and check if it lies within 24 hours of the transaction datetime
  + If yes, then add the corresponding \_X\_BEN\_CNT\_HR variable to CNT\_ADD\_BENE
* Traverse the \_A\_DEBIT\_BENE\_DT variables and check if it lies within 24 hours of the transaction datetime
  + If yes, then increment the CNT\_FT\_BENE variable by 1
* Traverse the \_A\_SENDER\_DT variables and check if it lies within 24 hours of the transaction datetime
  + If yes, then increment the CNT\_SENDER variable by 1
* If CNT\_ADD\_BENE >= 5 or (CNT\_FT\_BENE + CNT\_SENDER) >= 10 or CNT\_SENDER > 5, then assign a score of 600 and trigger an alert

## Rule Code:

# Rule R019 – New device and language change

## Description

When a debit transaction is received check

1. Check if the device ID is different from that of the previously registered ID

2. Check if device registration was done in the past "X" hours

3. Debit done within "Y" minutes of language change event

Where, X = 24, Y =

## Triggering Events:

|  |  |
| --- | --- |
| **SAS\_MESSAGE\_SUB\_TYPE (Rules)** | **SMH\_CLIENT\_TRAN\_TYPE** |
| Fund Transfer (Debit) | “RFFT\_OAT”, “RFFT\_TWB”, “RFFT\_WIC”, “RFFT\_IFT”, “RFFT\_REM” |
| **SAS\_MESSAGE\_SUB\_TYPE (Profiles)** | **SMH\_CLIENT\_TRAN\_TYPE** |
| Preferred language change | “NR\_CHNLP” |
| Device registration | “NR\_MIBRE” |

## Applicable source channels:

|  |  |
| --- | --- |
| **Source channels** | **Source channel code** |
| Mobile Banking | “MOB” |

## Rule Variables:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable Name | Type | Segment | Description | Comments |
| RQO\_TRAN\_DATE | Date | RQO | Date of the transaction request |  |
| RQO\_TRAN\_TIME | Time | RQO | Time of the transaction request |  |
| SMH\_CLIENT\_TRAN\_TYPE | Character | SMH | Client defined transaction type |  |
| \_X\_RULE\_SCORE\_19A | Numeric | Customer | Condition 1 score |  |
| \_X\_RULE\_SCORE\_19B | Numeric | Customer | Condition 2 score |  |
| \_X\_RULE\_SCORE\_19C | Numeric | Customer | Condition 3 score |  |
| \_X\_RULE\_SCORE\_19 | Numeric | Customer | Rule score |  |

## Profile Variables:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable Name | Type | Segment | Description | Comments |
| \_D\_REG\_DT | Datetime | Device | Device registration datetime |  |
| \_X\_PREV\_DEVICE\_ID | Character | Customer | Previous device ID used by customer |  |
| \_X\_CUR\_DEVICE\_ID | Character | Customer | Current device ID used by customer |  |
| \_X\_LANG\_CHANGE\_DT | Datetime | Customer | Datetime of language change event |  |

## Profile Logic:

* Check if the transaction message type is for device registration
  + If yes, update the last registration datetime to current transaction datetime and update the \_X\_PREV\_DEVICE\_ID to \_X\_CUR\_DEVICE\_ID and \_X\_CUR\_DEVICE\_ID to newly registered ID.
* Check if the transaction message type is a post event for preferred language change event
  + If yes, set \_X\_LANG\_CHANGE\_DT to datetime of the transaction

## Profile Code:

## Rule Logic:

* Check if the transaction message type is listed in triggering events for the rule
* If yes, check if \_X\_PREV\_DEVICE\_ID and \_X\_CUR\_DEVICE\_ID are not null and are different from each other
  + If yes, check if \_D\_REG\_DT is within "X" hours of the transaction datetime, and \_X\_LANG\_CHANGE\_DT is within "Y" minutes of the transaction datetime, then assign a rule score of 599

## Rule Code:

# Rule R020 – Unusual transaction time rule

## Description

Customer is logging in and doing transaction in unusual time, when a debit transaction is initiated

1. If amount is greater than average spending during that bucket, assign score of 300.

2. If count is greater than the average spending during that bucket, assign 300.

One day will be bucket of 4 hours

|  |  |
| --- | --- |
| **Bucket** | **Time Range** |
| Bucket 1 | 00:00 - 03:59 |
| Bucket 2 | 04:00 - 07:59 |
| Bucket 3 | 08:00 - 11:59 |
| Bucket 4 | 12:00 - 15:59 |
| Bucket 5 | 16:00 - 19:59 |
| Bucket 6 | 20:00 - 23:59 |

## Triggering Events:

|  |  |
| --- | --- |
| **SAS\_MESSAGE\_SUB\_TYPE (Rules)** | **SMH\_CLIENT\_TRAN\_TYPE** |
| Fund Transfer (Debit) | “RFFT\_OAT”, “RFFT\_TWB”, “RFFT\_WIC”, “RFFT\_IFT”, “RFFT\_REM” |
| Cash Withdrawal | “RFFT\_ATMWD” |
| Bill Payment | “RFFT\_UTBP” |
| POS/ECOM Transactions | “RFFT\_ECOM”, “RFFT\_POS” |
| **SAS\_MESSAGE\_SUB\_TYPE (Profiles)** | **SMH\_CLIENT\_TRAN\_TYPE** |
| Fund Transfer (Debit) | “OFFT\_OAT”, “OFFT\_TWB”, “OFFT\_WIC”, “OFFT\_IFT”, “OFFT\_REM” |
| Cash Withdrawal | “OFFT\_ATMWD” |
| Bill Payment | “OFFT\_UTBP” |
| POS/ECOM Transactions | “OFFT\_ECOM”, “OFFT\_POS” |

## Applicable source channels:

|  |  |
| --- | --- |
| **Source channels** | **Source channel code** |
| Mobile Banking | “MOB” |

## Rule Variables:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable Name | Type | Segment | Description | Comments |
| RQO\_TRAN\_DATE | Date | RQO | Date of the transaction request |  |
| RQO\_TRAN\_TIME | Time | RQO | Time of the transaction request |  |
| SMH\_CLIENT\_TRAN\_TYPE | Character | SMH | Client defined transaction type |  |
| TBT\_MOD\_AMT | Character | TBT | Transaction Amount |  |
| \_X\_RULE\_SCORE\_20A | Numeric | Customer | Condition 1 score |  |
| \_X\_RULE\_SCORE\_20B | Numeric | Customer | Condition 2 score |  |
| \_X\_RULE\_SCORE\_20 | Numeric | Customer | Rule score |  |

## Profile Variables:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable Name | Type | Segment | Description | Comments |
| \_A\_TXN\_AMT\_BUCKET\_X\_DAY\_1 - \_A\_TXN\_AMT\_BUCKET\_X\_DAY\_90 | Numeric | Account | Total transaction amount in “X”th bucket in past 3 months | X = 1 to 6 |
| \_A\_TXN\_CNT\_BUCKET\_X\_DAY\_1 - \_A\_TXN\_CNT\_BUCKET\_X\_DAY\_90 | Numeric | Account | Total transaction count in “X”th bucket in past 3 months | X = 1 to 6 |
| \_A\_TXN\_BUCKET\_DT\_1 –  \_A\_TXN\_BUCKET\_DT\_90 | Datetime | Account | Datetime of transactions made in past 90 days |  |

## Profile Logic:

* If the transaction message type is present in the listed types
* Check if the date of current transaction datetime is same as date of \_A\_TXN\_BUCKET\_DT\_1,
  + If not, then shift the variables for each bucket and put the current transaction datetime to \_A\_TXN\_BUCKET\_DT\_1.
  + if yes, find the bucket(X) to which the transaction belongs using conditional logic and add the amount to the corresponding \_A\_TXN\_AMT\_BUCKET\_X\_DAY variable and increment the \_A\_TXN\_CNT\_BUCKET\_X\_DAY by one.

## Profile Code:

## Rule Logic:

* Check if transaction type is for a debit transaction,
  + According to the conditional logic find the bucket (X = 1 to 6) of the transaction datetime.
  + Set the below variables:
    - Aggregate debit amount during that bucket for 90 days (AGG\_DEBIT\_90D = 0)
    - Total count of debit transactions during that bucket for 90 days (CNT\_DEBIT\_90D = 0)
  + Traverse through \_A\_TXN\_BUCKET\_DT variables, and if they lie within 90 days of the transaction datetime, add the corresponding \_A\_TXN\_BUCKET\_AMT to AGG\_DEBIT\_90D, and add \_A\_TXN\_BUCKET\_CNT to CNT\_DEBIT\_90D
  + If \_A\_TXN\_CNT\_BUCKET\_X\_DAY\_1 + 1 > CNT\_DEBIT\_90D/90, assign a score of 300
  + If \_A\_TXN\_AMT\_BUCKET\_X\_DAY\_1 + Transaction amount > AGG\_DEBIT\_90D/90, then assign a score of 300

## Rule Code:

# Rule R021 – Insufficient Funds

## Description

When a new debit transaction is received

1. If the current available balance is negative, alert.

2. If the authorization req amount is greater than account available balance (excluding any fees, charges, cheque clearing charges, other txn codes, etc.)

## Triggering Events:

|  |  |
| --- | --- |
| **SAS\_MESSAGE\_SUB\_TYPE (Rules)** | **SMH\_CLIENT\_TRAN\_TYPE** |
| Fund Transfer (Debit) | “RFFT\_OAT”, “RFFT\_TWB”, “RFFT\_WIC”, “RFFT\_IFT”, “RFFT\_REM” |
| Cash Withdrawal | “RFFT\_ATMWD” |
| Bill Payment | “RFFT\_UTBP” |
| POS/ECOM Transactions | “RFFT\_ECOM”, “RFFT\_POS” |
| **SAS\_MESSAGE\_SUB\_TYPE (Profiles)** | **SMH\_CLIENT\_TRAN\_TYPE** |
| Fund Transfer (Debit) | “OFFT\_OAT”, “OFFT\_TWB”, “OFFT\_WIC”, “OFFT\_IFT”, “OFFT\_REM” |
| Cash Withdrawal | “OFFT\_ATMWD” |
| Bill Payment | “OFFT\_UTBP” |
| POS/ECOM Transactions | “OFFT\_ECOM”, “OFFT\_POS” |

## Applicable source channels:

|  |  |
| --- | --- |
| **Source channels** | **Source channel code** |
| Mobile Banking | “MOB” |
| ATM | “ATM” |

## Rule Variables:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable Name | Type | Segment | Description | Comments |
| RQO\_TRAN\_DATE | Date | RQO | Date of the transaction request |  |
| RQO\_TRAN\_TIME | Time | RQO | Time of the transaction request |  |
| SMH\_CLIENT\_TRAN\_TYPE | Character | SMH | Client defined transaction type |  |
| TBT\_MOD\_AMT | Character | TBT | Transaction Amount |  |
| AQD\_AVAIL\_BAL | Numeric | AQD | Available balance |  |
| \_X\_RULE\_SCORE\_21 | Numeric | Customer | Rule score |  |

## Profile Variables:

* Not Required

## Profile Logic:

* Not Required

## Profile Code:

* Not Required

## Rule Logic:

* Check if transaction type is for a debit transaction,
  + If yes, check if the current available balance of the account is negative. If yes, raise an alert and assign a score of 300
  + If yes, check if the current balance is less than the requested debit amount, raise an alert and assign a score of 300

## Rule Code:

# Rule R022 – Cooling period rules

## Description

When a new credit transaction is received:

1. Check if the inward transaction amount is >= 10,000 AED, AND

the inward transaction amount is >= 10 times of the running balance prior to this remittance transaction OR

2. Check if aggregate inward amount in past 3 days >= 20,000 AED

3. (For Debit Txn) If a SINGLE amount which is credited more than or Equal to AED 'X' and the same amount has been fully utilized (Aggregate Debits Equalling to the Single Amount Credit value), then it has to immediately triggered

**Inclusion conditions for the above rules**:

1. Account is opened within last 12 months

2. Account status should be Active

3. Transaction types are among: UAEFTS, SWIFT, IPI, IPP, RIA Money, AANI, etc.

4. Declared salary < "X" (0 initially)

5. Customer country is in high-risk mule nationalities

**Exclusion conditions for the above rules**:

1. Transactions from specific customer segments

2. Customers of age 0-18 or minor account

3. Tharwa, Tharwa VIP, Staff segments, etc

4. Specific transaction types/codes such as: CC Payment, PF instalment, Salary payment, DDA, WPS

5. Whitelisted customer IDs

6. Customer with DND (Do Not Debit) restrict

7. Reversals, refunds, related transactions

8. Specific transaction purpose codes

9. If any transaction done in the past 3 months was a part of the exclusion code list (transaction code / purpose code), exclude the current transaction

10. Whitelisted nationality

## Triggering Events:

|  |  |
| --- | --- |
| **SAS\_MESSAGE\_SUB\_TYPE (Rules)** | **SMH\_CLIENT\_TRAN\_TYPE** |
| Fund Transfer (Debit) | “RFFT\_OAT”, “RFFT\_TWB”, “RFFT\_WIC”, “RFFT\_IFT”, “RFFT\_REM” |
| Fund Transfer (Credit) | “OFFT\_INFT” |
| Cash Withdrawal | “RFFT\_ATMWD” |
| POS/ECOM Transactions | “RFFT\_ECOM”, “RFFT\_POS” |
| **SAS\_MESSAGE\_SUB\_TYPE (Profiles)** | **SMH\_CLIENT\_TRAN\_TYPE** |
| Fund Transfer (Credit) | “OFFT\_INFT” |
| Fund Transfer (Debit) | “RFFT\_OAT”, “RFFT\_TWB”, “RFFT\_WIC”, “RFFT\_IFT”, “RFFT\_REM” |
| Account Opening | “NR\_NAOPN” |
| Account Status change | “NR\_ACCST” |
| Update Salary | “NR\_UPSAL” |

## Applicable source channels:

|  |  |
| --- | --- |
| **Source channels** | **Source channel code** |
| Mobile Banking | “MOB” |
| ATM | “ATM” |

## Rule Variables:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable Name | Type | Segment | Description | Comments |
| RQO\_TRAN\_DATE | Date | RQO | Date of the transaction request |  |
| RQO\_TRAN\_TIME | Time | RQO | Time of the transaction request |  |
| SMH\_CLIENT\_TRAN\_TYPE | Character | SMH | Client defined transaction type |  |
| TBT\_MOD\_AMOUNT | Numeric | TBT | Transaction amount |  |
| AQD\_AVAIL\_BAL | Numeric | AQD | Available balance |  |
| \_X\_RULE\_SCORE\_22A | Numeric | Customer | Condition 1 score |  |
| \_X\_RULE\_SCORE\_22B | Numeric | Customer | Condition 2 score |  |
| \_X\_RULE\_SCORE\_22C | Numeric | Customer | Condition 3 score |  |
| \_X\_RULE\_SCORE\_22 | Numeric | Customer | Rule Score |  |

## Profile Variables:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable Name | Type | Segment | Description | Comments |
| \_A\_AO\_DT | Datetime | Account | Account opening date |  |
| \_A\_ACCT\_STATUS | Character | Account | Account Status |  |
| \_X\_CUST\_SALARY | Numeric | Customer | Customer Salary |  |
| \_X\_CUST\_CNTRY | Character | Customer | Customer Nationality |  |
| \_X\_CUST\_TYPE | Character | Customer | Customer Type/Segment |  |
| \_X\_CUST\_DOB | Datetime | Customer | Customer date of birth |  |
| \_X\_DND\_FLAG | Character | Customer | Do not Debit flag |  |
| \_X\_EXCLUSION\_TXN\_DT | Datetime | Customer | Latest time when the customer did a transaction under exclusion list |  |
| \_A\_AGG\_CREDIT\_DATE\_DAY\_1 - \_A\_AGG\_CREDIT\_DATE\_DAY\_3 | Date | Account | Datetime of aggregate credit in the past 3 days |  |
| \_A\_AGG\_CREDIT\_AMT\_DAY\_1 - \_A\_AGG\_CREDIT\_AMT\_DAY\_3 | Numeric | Account | Amount of aggregate credit in the past 3 days |  |
| \_A\_LARGE\_INW\_DT | Numeric | Account | Datetime of last inward amount >= X |  |
| \_A\_LARGE\_INW\_AMT | Datetime | Account | Amount of last inward >= X |  |
| \_A\_AGG\_DEBIT\_DT\_MIN\_1 - \_A\_AGG\_DEBIT\_DT\_MIN\_60 | Datetime | Account | Datetime of aggregate debit in the past 60 minutes |  |
| \_A\_AGG\_DEBIT\_AMT\_MIN\_1 - \_A\_AGG\_DEBIT\_AMT\_MIN\_60 | Numeric | Account | Amount of aggregate debit in the past 60 minutes |  |

## Profile Logic:

* Check if the transaction message type is for customer onboarding
  + Set \_A\_AO\_DT to the transaction datetime
  + Set \_X\_CUST\_SALARY to the salary received in the transaction
  + Set \_X\_CUST\_CNTRY to the customer country
  + Set \_X\_CUST\_TYPE to the customer type
  + Set \_X\_CUST\_DOB to customer date of birth
  + Set \_X\_DND\_FLAG to the flag received in the transaction
* Check if the transaction message type is for account status change
  + Store the \_A\_ACCT\_STATUS as the account status received in the transaction
* Check if the transaction message type is for update salary
  + Set \_X\_CUST\_SALARY to the salary received in the transaction

* Check if the transaction message type is for credit
* If yes, check if the transaction amount is > “X” AED
  + If yes, then update \_A\_LARGE\_INW\_DT to transaction datetime, and \_A\_LARGE\_INW\_AMT to transaction amount
* If yes, check if \_A\_AGG\_CREDIT\_DATE\_DAY\_1 matches the transaction date
  + If yes, then add the transaction amount to \_A\_AGG\_CREDIT\_AMT\_DAY\_1
  + If not, then shift the \_A\_AGG\_CREDIT\_AMT\_DAY and \_A\_AGG\_CREDIT\_DT\_DAY variables, and set \_A\_AGG\_CREDIT\_AMT\_DAY\_1 to transaction amount and \_A\_AGG\_CREDIT\_DATE\_DAY\_1 to transaction date
* If yes, check if date, hour and minute of \_A\_AGG\_CREDIT\_DT\_MIN\_1 matches that of the transaction date
  + If yes, then add the transaction amount to \_A\_AGG\_CREDIT\_AMT\_MIN\_1
  + If not, then shift the \_A\_AGG\_CREDIT\_AMT\_MIN and \_A\_AGG\_CREDIT\_DT\_MIN variables, and set \_A\_AGG\_CREDIT\_AMT\_MIN\_1 to transaction amount and \_A\_AGG\_CREDIT\_DT\_MIN\_1 to transaction datetime
* Check if the transaction message type is for debit
* If yes, check if date, hour and minute of \_A\_AGG\_DEBIT\_DT\_MIN\_1 matches that of the transaction date
  + If yes, then add the transaction amount to \_A\_AGG\_DEBIT\_AMT\_MIN\_1
  + If not, then shift the \_A\_AGG\_DEBIT\_AMT\_MIN and \_A\_AGG\_DEBIT\_DT\_MIN variables, and set \_A\_AGG\_DEBIT\_AMT\_MIN\_1 to transaction amount and \_A\_AGG\_DEBIT\_DT\_MIN\_1 to transaction datetime

## Profile Code:

## Rule Logic:

* Check if the transaction message type is listed in triggering events for the rule
* Check if all the following inclusion conditions are fulfilled:
  + \_A\_AO\_DT should be within 12 months of the transaction datetime
  + \_A\_ACCT\_STATUS should be active
  + Transaction type should be one of the following: (UAEFTS, SWIFT, IPI, IPP, RIA Money, AANI)
  + \_X\_CUST\_SALARY should be less than \*\*
  + \_X\_CUST\_CNTRY code should be in high-risk nationalities
* Exit the rule if any of the below conditions are met:
  + \_X\_CUST\_TYPE is among the following: (Tharwa, Tharwa VIP, Staff, Minor)
  + Transaction type is among the following: (CC Payment, PF Instalment, DDA, WPS, Salary Payment, Reversal, Refund, etc)
  + Difference between transaction datetime and \_X\_CUST\_DOB is within 18 years
  + Customer ID is found in whitelist
  + \_X\_CUST\_CNTRY is whitelisted
* If the transaction is valid after considering the inclusion and exclusion criteria, initialise the following rule variables:
  + Aggregate credit in past 3 days (AGG\_CREDIT\_3DAYS = Transaction amount)
  + Aggregate debit in past 60 minutes (AGG\_DEBIT\_60MINS = 0)
* To calculate aggregate credit in past 3 days, traverse the \_A\_AGG\_CREDIT\_DATE\_DAY\_1 variables and if the date is within 3 days of the transaction datetime, add the corresponding \_A\_AGG\_CREDIT\_AMT\_DAY\_1 variable to AGG\_CREDIT\_3DAYS
* To calculate aggregate debit in past 60 minutes, traverse the \_A\_AGG\_DEBIT\_DT\_MIN\_1 variables and if the date is within 60 minutes of the transaction datetime, add the corresponding \_A\_AGG\_DEBIT\_AMT\_MIN\_1 variable to AGG\_DEBIT\_60MINS
* If Transaction amount >= 10,000 AED and Transaction amount >= 10\*AQD\_AVAIL\_BAL, then assign a score of 300
* If AGG\_CREDIT\_3DAYS >= 20,000, then assign a score of 300
* If \_A\_LARGE\_INW\_AMT = AGG\_DEBIT\_60MINS, then assign a score of 300

## Rule Code: