DRISK (Risk Event Resolutions)

Credit Suisse is a Private Banking. When we normal people take loan we have to some physical asset as collateral.

But in case of investment bank the amt of loan is so large that the organisation taking loan might not be having physical asset (collateral) matching to it loan amount. So instead of going via asset as collateral, they go via market value.   
But Market Value of any organisation fluctuates a lot.

For every Credit Suisse customer, there is a predefined threshold. If market value falls below that threshold, a risk is generated. Risk is a business is generated but technical term is event.

The event is captured by “Event360” and data is persisted to RER Table.  
After capturing the Event dRisk comes into picture.

dRisk is a dashboard application, that is used by internal organisation people in case risk(event) is generated. If Risk is generated then, Relationship Manager contacts the customer asking them in how many days this risk can be mitigated. If risk is not mitigated, then this risk has to be escalated to Credit Specialist or Manager of RM.

For e.g. If the amount is very high, then escalation happens directly to Manager of RM and that has to happen immediately. If amount is not big enough then escalation happens to Credit Specialist and escalation happens by EOD.

------------------------------------------------------------------------------------------------------------------------------------------

Some Common Terminologies

1. DANTE : It is a database which stores private banking’s client data. For Investment banking client’s data is called INSIGHT. Dante data is stored only in Zurich. Offshore team has only SIT and dev access to DANTE DB. dRisk uses Dante’s Customer Service & (Collateral + credit data).
2. Risk360 : It is viewing and monitoring application which displays information in form of chart and graphs. Eventually dRisk UI will be decommissioned and will be merged with Risk360.
3. RER : Risk Event Repositories. Initially was supposed to store Risk Events. But now store all type of Events  
   Type Of Event  
   a. Risk Event : COS(Collateral Short fall)/CLE(Credit Limit Excess)/AOD(Amount Over Draft)  
   b. Warning Events  
   c. Control Events  
   d. EDA(newly introduced)
4. Events360 : Works on Ice Cream Engine. Sole Purpose is to generate the events. As of now It is used to generate Control Events and now it will be used to generate EBA and in future it will be used to generate Risk Events & Warning Events.
5. RSIN : Risk Saver International. At present it generates Risk Event for all location except SBIP.
6. RSCH : Risk Saver Switzerland. At present it generates Risk Event for SBIP locations.
7. SBIP : Swiss Banking Infrastructure Platform. SBIP Location includes Switzerland, Luxemborg
8. T24 : Core banking for all location except SBIP.
9. CARAT : Core banking for SBIP Locations.
10. COB : Close Of Business.
11. 10 day Short fall

------------------------------------------------------------------------------------------------------------------------------------------

How Risk Events are generated as of now?

For Non SBIP Locations.

RER

RSIN

SPDC feeds

T24

COB Data RE given to

DANTE

For SBIP location T24 should be replaced with CARAT and RSIN should be replaced with RSCH.

SPDC packages the data based on which application is going to consume it.

------------------------------------------------------------------------------------------------------------------------------------------

Risk Event always goes through 3 steps

1. Prioritization : defines the priority.
2. Pre-Classification : Classification are of two types: Technical and non technical.  
   Technical are not actual risk events. Why they arise?  
   Non technical are actual risk events.
3. Assignments. Need more clarity

------------------------------------------------------------------------------------------------------------------------------------------

Stake holder for dRisk

1. Business(Credit Risk Monitoring + FO(Front Office))
2. IT People
3. CH

**Escalation**

4 APAC frontend office escalations will start to use HAM-DELP

TL (Team Lead) 🡪 ML/SH (Market Lead/ Sector Head) 🡪 MAH (Mkt. Area Head) 🡪 MGH (Mkt. Group Head)

What are Control Events?

Control Event in laymen terms means Operational Risk.

For Example: - Suppose a customer comes to bank to acquire a loan and is eligible for 0.4LTV(Loan To Value) as standard way, but seeking it reputation or business growth or market size bank can leverage up to 0.6LTV. There is risk associated with extra leverage of 0.2LTV. The risk associated to this extra leverage is called Control Event.

Resolution Priority flow   
Critical -> Low -> Acknowledged -> Redeemed (Event Rectified)   
(Group Events whose priority are Critical & Low are shown in task list)

Child Event and Group Event Status Change Flow  
New -> Updated -> Redeemed

Task Status Change Flow  
New -> In Progress -> Closed

Note:- Events k liye task bante hai...for example agar escalation hota hai toh....same event k liye new task banega.

T1(E1,E2) ---after escalation 🡪 T2(E1,E2).   
Thus child event remains same......It creates new task for CRM Manager when escalated.

Event Generated (by Event 360) 🡪 dRisk creates resolutions 🡪workflow create task

Task 🡪 Flowable

Resolution Audit/Group Events/ Child Event Resolution/ Group Event Resolution 🡪 RER

Workflow Audit 🡪 dRisk DB.

**DB Scripts**

UI side configurations specifically related to AgGrid.

Data Useful data

UI (Events View)

Supply Chain

Cache

RER

Ag Grid Configurations

DB Script

Data -> Events data + Resolution data + snapshot data.

Supply Chain 🡪 It process data that it gets from Cache and configurations from DBScript.

2.

Amazon S3 Bucket

DLS

Dante

pLTV + Carat

Application

3.

4.

Events Generation

Events Engine

Events Data Source

Events Validation

dRisk Application

RER

Step 1.

1. pLTV and Carat Application performs some operation and generates 2 files (Operational.avro and Simulation.avro file).
2. Operational is actual data file. Simulation is sort of bench mark.
3. Both these files are stored in Dante DB.

Step 2.

1. From dante using a DLS(Delivery Service) we send these 2 files to S3 Bucket.

Step 3.

1. Events Data Source listens to S3 bucket for both avro files.
2. Once S3 Bucket has avro files, it sends both the files to Events Data Source.

Step 4. (Overview Of Events Data Source)

In Events Data Source contents from both avro files are processed to create Adjustment Data Object **(ADO).**  
Processing means mapping and converting the data into a format so that Ice Cream Engine **(I.C.E)** can process it.

Step 5. (Overview Of Events Engine)

1. Calls the parametrized engine.
2. So based on inputs of CO, parametrized engine decide which rule to trigger & which rule not to trigger. Basically parameters are given by CO.
3. Data from parametrized engine + ADO are sent to I.C.E.
4. I.C.E contains total 24 rules (10 implemented) which decides the rule that will be triggered and will have a defined trigger type.
5. The triggered rules are sent to events generation along with ADO.

Step 6. (Overview of Events Generation)

1. Based on data received(ADO + rule triggered) from I.C.E, Events are generated. Some other properties related to events are also created there. For e.g. UBK, creation time, external id, event type, event class sub type, event type, etc.
2. Events Generated are sent to Events Validation.

Step 7. (Overview Of Events validation)

1. From RER we fetch previous day events.
2. Based on events that we get from Events Generation, we categorize the events as New, Updated, & Redeemed.
3. Also based on different conditions events validation decides whether the generated event are valid or not.
4. The valid Events are then saved to RER, which can be fetched from by dRisk Application. via Pulsar Queue.

**App Flow for Control Events**

1 2 3

Queue

RER DB

RER

Event 360

4

Queue

6

5

dRisk

Steps Executed After Step 5

1. Workflow Contacts are created  
2. Creates Child Resolution  
3. Creates Group Resolution  
4. Creates Group Events  
5. GE, GR & Child Resolutions are saved in RER.  
6. Tasks are created.

Lifecycle(LCE)

Approval (ACE)

Maturity (MCE)

Qualitative (QCE)

A.C.E

1. Any mismatch in operational & simulation file results in generation of ACE
2. If trigger type is Extramile positive it results in generation of ACE.

Q.C.E

If trigger type is:

1. Non Standard Lombard Flag.
2. Current fixed LTV less than current padLTV.
3. Current hardLTV less than current padLTV.

L.C.E

If trigger type is:

1. Increase in Extramile.
2. Decrease in Base LTV.
3. Maturity
4. Extramile positive pad LTV decrease
5. Decrease of fixed LTV

M.C.E

If trigger type is:

1. Explicit Adjustment Expiry

Extra Mile Negative %

Haircut deactivation

Floating Point Add on

Fixed %

Hard override %

**Adjustment Type**

Extra Mile Positive %

Extra Mile Positive % points

Extra Mile Negative % Points

**Trigger Type**

**Trigger Type**

1. Current Fixed LTV less than Current PAD LTV.
2. Current Hard LTV less than current PAD LTV.
3. Non Standard Lombard Flag.
4. Maturity
5. Extra Mile Positive
6. Increase in Extra Mile
7. Extra Mile positive pad LTV decrease
8. Decrease of Fixed LTV
9. Decrease of Base LTV
10. Explicit Adjustment Expiry

**Baseline**

Data generation in simulation file for some of the attributes that are not present is called baseline.  
Basically means generating event data for simulation based on other existing Acknowledged events.

LUCE 🡪 Lombard Universal Combat Engine.  
Each LUCE file contains record. Each record is called Adjustment.  
Simulation file is benchmark/reference which is approved by CO & CRM.  
Operational file is real time file where we store data.

**Maturity Control Event**

1. Maturity Control Event will be created to notify CO/CVM that positive or negative EA(Explicit Adjustment) will reach maturity date and expire in 30 days unless renewed/rolled over (no approval required unless FIX is reached)
2. All Maturity Control Events for CIF are grouped and shown under a new control event task.

**Express**

Reload 🡪 Fetching the data again and again (refresh) from other data sources.

Publish 🡪Converting the fetched data into reports.

Qlik is used to create visualisations (represents data in form of charts and images).  
On top of click Express Application is created. So we can say that express acts as orchestration tool which we can use to generate Qlik Reports.

Reports are generated based on COB dates.

Qlik calls express server to fetch data from external source.  
Express server converts received data into a simple format which is understandable by Qlik & return this data back to Qlik.

Express   
1. Express UI (Angular)  
2. Express API  
3. Express Server  
4. Express Scheduler