Technical Design

Credit Risk Management Platform

Status: Final Version 9.1.23 - Confidential -



**ACTICO GmbH**

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|  |  |
| --- | --- |
| Solution | Credit Risk Management Platform |
| Author(s) | ACTICO GmbH |
| Status | Status: Final |
| Date | 2023-06-21 |

Version History

| Date | Version | Notice/Reason of Changes and Changes | Author |
| --- | --- | --- | --- |
|  |  |  |  |
|  |  |  |  |

References

| Version/Date | Title | File name / link |
| --- | --- | --- |
|  | *Financial Spreading Documentation (SPR)* | *financial\_spreading\_documentation-<version>.docx* |
|  | *User Interface Specifications for CLI, CRR and CRMP* | *CLI Create Internal Client.xlsx,  CLI Import Client.xlsx,  CLI Maintain Client.xlsx,  CLI Search Client.xlsx,  CLI Worklist Client.xlsx, CRMP DropDowns.xlsx, CRMP Main Navigation.xlsx, CRMP Search Bulk Operation.xlsx, CRMP Worklist Financials.xlsx, CRR Bulk Approval Rating.xlsx, CRR Search Rating.xlsx, CRR Template PD Rating.xlsx, CRR Worklist Rating.xlsx,*  *ORI Search Application.xlsx,*  *ORI Maintain Application.xlsx,*  *ORI Worklist Application.xlsx* |
|  | *CRMP Interface Mapping* | *crmp-interface-mapping.xlsx* |

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# Glossary

|  |  |  |
| --- | --- | --- |
| **Term** | **Type** | **Meaning** |
| Analyst | CR Solution | see Risk Analyst |
| Backtesting | Business | Backtesting is the process of applying a trading strategy or analytical method to historical data to see how accurately the strategy or method would have predicted actual results. (source: http://www.investinganswers.com/financial-dictionary/stock-market/backtesting-865) |
| Collateral | Business | Guarantee for a credit |
| CRMP | CR Solution | see Solution |
| DWH | Technical | Datawarehouse (IT-system) |
| Financial Analysis | Business | process of assessment of the viability, stability and profitability of a client |
| Group | Business | Grouping of clients. |
| KPI | Business | Key Performance Indicator |
| LGD | Business | Abbreviation for: "Loss Given Default" |
| PD | Business | Abbreviation for: "Probability of default" |
| Rating date | CR Solution | Date when the rating of the client is done |
| Review Date | CR Solution | Date when the application will be reviewed again. For the most applications this is rating date + 1 year |
| Risk Analyst | CR Solution | A main user group of the Credit Risk Management Platform (see related actor) |
| Solution | CR Solution | Credit Risk Management Solution that supports standard functionalities for financial analysis and risk rating. |

# Introduction

This document contains the requirements for designing and implementing a software solution for financial analysis, risk rating and credit origination in commercial banking. The solution is implemented based on the Credit Risk Management Platform from ACTICO.

# Business Object Model

The following chapter provides an overview of the solutions' business object model.

## Business Objects

The following chapter covers the description of the business objects used in this specification.



Figure Diagram Sequence: Business Object Overview

### BO0001 Client

Represents a client (usually a customer or a prospect) - either a legal entity or an individual

**Columns:**

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Notes** |
| active\_rating | BO0030 Final Rating | Represents the current active rating of the client. |
| address | BO0014 Address | Represents the address of the client. |
| analysis\_industry\_sector | richtext | Represents the industry sector within the client analysis. |
| analysis\_overview | richtext | Represents the overview within the client analysis. |
| analysis\_payment\_behaviour | richtext | Represents the payment behaviour within the client analysis. |
| category | char | Represents the type of the Client (internal or imported). |
| client\_document\_id | long | Internal client ID |
| client\_groups | BO0016 Client Relation | Represents the relationships between the clients. |
| collaterals | BO0022 Collateral | Represents the collaterals of the client. |
| comment | char | Represents the comments from the business users to the Client. |
| current\_limit | BO0021 Current Limit | Represents the current limit granted to the client. |
| date\_of\_foundation | date | Represents the date of foundation. |
| external\_client\_id | char | Represents the ID of the Client in an external system. |
| financial\_template | char | The name of the financial template which is used for creating new statements for the client. |
| group\_type | char | Represents the list of group types which the Client is related. This is the unique identifier to the group type relation. |
| industry\_code | char | Represents the classification of the Client (e.g. WZCode 2008). |
| last\_refresh\_date | timestamp | Represents the date of the last update of the Client attributes. |
| legal\_form | char | Represents the legal form. |
| name | char | Represents the name of the Client. |

### BO0002 Client Identifiable

Represents the link to a specific client revision in the system.

**Columns:**

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Notes** |
| basic\_data | BO0001 Client | Represents the Basic Data of the client. |
| client\_doc\_id | int | Represents the document id of the client. |
| client\_latest\_rev\_id | int | Represents the latest revision id of the client document. |

### BO0003 Client Application

Represents a client revision with application specific additional information.

**Columns:**

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Notes** |
| client | BO0002 Client Identifiable | Represents the client data including document id and latest revision id of the client document. |
| latest\_fs | BO2001 Financial statement | Represents the latest financial statement of the client. |
| limit\_request | BO0024 Limit Request | Represents the limit request of the client. |

### BO0006 Group type

In a initial setup the group types "Risk Unit" (de: Risikoeinheit) and "Borrower Unit" (de: Kreditnehmereinheit) are available. Group types are designed to allow further types, relevant to a customer.

**Columns:**

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Notes** |
| group\_type | char | Represents the type of the group. |

### BO0008 Approval

Represents the approval of a rating

**Columns:**

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Notes** |
| decided\_by | BO0020 CRMP User | Represents the user who did the decision. |
| decision\_comment | char | Represents the comment which the decision maker did for deciding a Rating. |
| decision\_date | date | Represents the date of decision making. |
| sent\_for\_approval\_by | BO0020 CRMP User | Represents the unique identifier from the user who sent the Rating for approval. |
| sent\_for\_approval\_comment | char | Represents the comment which the user who sent the Rating for approval entered. |
| sent\_for\_approval\_date | date | Represents the date of sent for approval. |

### BO0009 Activity History

Represents the activity history for an entity (e.g. Client, Rating etc.). Summarizes the business relevant activity on the entity.

**Columns:**

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Notes** |
| changed\_at | timestamp | Represents the date when the activity was executed. |
| changed\_by | char | Represents the unique identifier of the user (as maintained in the User Administration of the system) who executed the activity. |
| changed\_by\_description | char | The description of the user (as maintained in the User Administration of the system) who executed the activity. |
| changed\_by\_full\_name | char | The full name of the user (as maintained in the User Administration of the system) who executed the activity. |
| description | char | Represents the description of the activity. |
| revision\_no | long | Represents the revision number of the document at time of executing. |

### BO0010 PD Rating

Represents a specific PD rating model

**Columns:**

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Notes** |
| calculated\_PD | double | Represents the calculated PD. |
| final\_rating | BO0030 Final Rating | Represents the final rating with pd, date and class information. |
| override\_PD | double | Represents the override PD. |
| qual\_risk\_factor\_a | char | Represents the qualitative risk factor a. |
| qual\_risk\_factor\_b | char | Represents the qualitative risk factor b. |
| qual\_risk\_factor\_c | char | Represents the qualitative risk factor c. |
| qual\_risk\_factor\_d | char | Represents the qualitative risk factor d. |
| quant\_risk\_factor\_a | float | Represents the quantitative risk factor a. |
| quant\_risk\_factor\_b | float | Represents the quantitative risk factor b. |
| quant\_risk\_factor\_c | float | Represents the quantitative risk factor c. |
| quant\_risk\_factor\_d | float | Represents the quantitative risk factor d. |
| rating\_status | char | Represents the status of the Rating. |
| score\_total | float | Represents the total score of the Rating. |
| sub\_score\_qual\_assessment | float | Represents the sub score of qualitative assessment. |
| sub\_score\_quant\_assessment | float | Represents the sub score of quantitative assessment. |

### BO0011 Rating

Represents the rating attributes that are independent of a specific rating logic or scorecard.

**Columns:**

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Notes** |
| approval | BO0008 Approval | Represents the approval of the rating. |
| calculated\_rating\_class | char | Represents the calculated Rating class. |
| internal\_client\_id | long | Represents the unique identifier of the related Client. |
| overrides | BO0017 Override | Represents the overrides to the rating. |
| pd\_rating | BO0010 PD Rating | Represents the pd rating information of the rating document. |
| rating\_document\_id | long | Internal technical unique identifier of a Rating. |

### BO0014 Address

Represents the (physical) location of a client

**Columns:**

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Notes** |
| city | char | Represents the city. |
| country | char | Represents the country. |
| state | char | Represents the state. |
| street | char | Represents the street. |
| zip\_code | char | Represents the zip\_code. |

### BO0016 Client Relation

Represents the relations of a client (child and parent relations)

**Columns:**

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Notes** |
| child\_relations | BO0016 Client Relation | Represents the relations to the child elements. |
| group\_type | char | Represents the type of the group relation. |
| parent\_relations | BO0016 Client Relation | Represents the relations to the parent elements. |

### BO0017 Override

Represents the override of a rating

**Columns:**

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Notes** |
| comment | char | Represents the comment of the override. |
| pd | float | Represents the pd of the override. |
| rating\_class | char | Represents the rating class of the override. |

### BO0020 CRMP User

Represent a user of the CRMP. The user's attribute are usually maintained in the user administration of the system.

**Columns:**

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Notes** |
| department | char | The department of the user |
| description | char | The description of the user |
| email | char | The email address of the user |
| full\_name | char | The full user name of the user |
| id | long | The technical id of the user |
| name | char | The unique user name of the user (that is e.g. also used for logging in) |
| phone\_number | char | The phone number of the user |

### BO0021 Current Limit

Represents the current limit granted to the client.

**Columns:**

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Notes** |
| current\_limit | BO0028 Currency Amount | Represents the granted amount of limit to the customer. |
| drawdown\_amount | BO0028 Currency Amount | Represents the amount already drawn by the customer. |
| drawdown\_date | date | Represents the date when the drawdown amount was last updated. |
| next\_review\_date | date | Represents the date, when the limit has to be reviewed (latest). |

### BO0022 Collateral

Represents a collateral of the client.

**Columns:**

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Notes** |
| collateral\_id | int | Represents the unique identifier for the collateral. |
| estimation | float | Represents to what extend, in %, the collateral can be used to secure. |
| net\_value | BO0028 Currency Amount | Represents the net value of the collateral. |
| nominal | BO0028 Currency Amount | Represents the nominal value of the collateral. |
| remarks | char | Represents further remarks to the collateral. |
| type | char | Represents the type of the collateral. |
| valid\_to | date | Represents the date until the collateral can be used. |

### BO0023 Limit Application

Represents a limit application of a client.

**Columns:**

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Notes** |
| applicant | BO0002 Client Identifiable | Represents the main applicant of the application |
| comment | char | represents the comment for a limit application |
| decision | BO0025 Application Decision | Represents the decision of the application. |
| decision\_state | char | Represents the current decision state of the application. |
| financial\_covenants | BO0027 Financial Covenant | Represents the financial covenants of an application. |
| limit\_key\_figures | BO0031 Limit Key Figures | represents the limit key figures of a limit application |
| limit\_requests | BO0024 Limit Request | Represents the requested limit per participating client |
| non\_financial\_covenants | BO0029 Non Financial Covenant | represents the non financial covenants of a limit application |
| total\_drawdown\_amount | BO0028 Currency Amount | represents the total drawdown amount of a limit application |

### BO0024 Limit Request

Represents a limit request of a client.

**Columns:**

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Notes** |
| change\_limit | BO0028 Currency Amount | Represents the change in limit that is beeing requested. |
| new\_limit | BO0028 Currency Amount | Represents the new requested limit. |

### BO0025 Application Decision

Represents the decision of an application.

**Columns:**

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Notes** |
| approve\_conditions | char | Represents the conditions for an approved application. |
| automatic\_decision | char | Represents the automated decision by the decision engine. |
| automatic\_decision\_reason | char | Represents the reasons, why the decision was made by the decision engine. |
| calculated\_decision\_level | BO1005 Option | Represents the decision level calculated for this application. |
| calculated\_review\_date | date | Represents the proposed limit review date. |
| decision\_at | date | Represents the date, when the final decision was made. |
| decision\_by | BO0020 CRMP User | Represents the user, who made the final decision. |
| decision\_stage | char | Represents the decision stage of the application decision. |
| decision\_type | BO1005 Option |  |
| final\_decision\_level | BO1005 Option | Represents the final decision level for this application. |
| final\_review\_date | date | Represents the final review date for the approved limits. |
| is\_decision\_level\_overruled | boolean | Represents weather the calculated decision level is overruled. |
| is\_review\_date\_overruled | boolean | Represents weather the review date is overruled. |
| member\_votes | BO0032 Member Vote | Represents the member votes of the application decision. |
| votes | BO0026 Vote | Represents the votes made within the decision workflow. |

### BO0026 Vote

Represents a vote of a user to approve / decline an application.

**Columns:**

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Notes** |
| conditions | char | Represents the conditions to the decision. |
| decision | BO1005 Option | Represents the actual decision, the user selected. |
| decision\_stage | char | Represents the current decision stage. |
| reasoning | char | Represents the reason for the decision. |
| vote\_id | int | Represents the identifier of the vote within an application. |
| voted\_at | date | Represents the date, when the vote was provided. |
| voted\_by | BO0020 CRMP User | Represents the user, which voted. |

### BO0027 Financial Covenant

Represents a financial covenant of an application.

**Columns:**

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Notes** |
| comment | char | Represents a comment to the covenant. |
| lower\_limit | float | Represents the lower limit of a financial covenant. |
| type | BO1005 Option | Represents the type of the covenant. |
| upper\_limit | float | Represents the upper limit of a financial covenant. |

### BO0028 Currency Amount

Represents an amount in a certain currency.

**Columns:**

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Notes** |
| amount | float | Represents the amount. |
| currency | BO1005 Option | Represents the currency of the amount. Set to "EUR" per default. |

### BO0029 Non Financial Covenant

Represents a non financial covenant.

**Columns:**

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Notes** |
| comment | char | Represents the comments to a covenant. |
| type | BO1005 Option | Represents the type of the covenant. |

### BO0030 Final Rating

Represents a final rating.

**Columns:**

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Notes** |
| date | date | Represents the date, when the rating was finalized. |
| pd | float | Represents the pd of the rating. |
| rating\_class | char | Represents the rating class of the rating. |

### BO0031 Limit Key Figures

Represents the Limit Key Figures of a Limit Application

**Columns:**

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Notes** |
| total\_gap\_limit | BO0028 Currency Amount | represents the gap of the current limit and the new limit amount |
| total\_net\_value\_collaterals | BO0028 Currency Amount | represents the total net value of the collaterals |
| total\_new\_limit | BO0028 Currency Amount | represents the requested total new limit |
| unsecured | float | represents the percentage of the new limit which is not secured by the clients collaterals |

### BO0032 Member Vote

Represents a committee member vote of an application.

**Columns:**

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Notes** |
| is\_selected | boolean | Determines if the committee member is selected or not. |
| member\_id | int | Represents the id of the committee member. |
| member\_name | int | Represents the name of the committee member. |
| member\_type | BO1005 Option | Represents the type of the committee member. |
| member\_vote | BO1005 Option | Represents the vote of the committee member |

### BO0033 Document Relation

Represents the relation between two documents.

**Columns:**

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Notes** |
| document\_id\_from | int | Represents the document id of the parent element. |
| document\_id\_to | int | Represents the document id of the child element. |
| type | char | Represents the type of the document relation. |

### BO1001 Document

Represents a document (an entity) in the underlying ACTICO Workplace framework. A document is the topmost entity in ACTICO Workplace. This business object is provided by the underlying ACTICO workplace frameworks and is thus not specified here in full detail.

**Columns:**

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Notes** |
| creationLog | BO1004 LogEntry | Information about the creation date/time/user of a document |
| id | long | The technical unique identifier of a Document |
| latestRevision | BO1002 Revision | The latest revision of the document that was persisted in the database |

### BO1002 Revision

Each time a document is persisted a new revision is created (to ensure that data is never overwritten). This business object is provided by the underlying ACTICO workplace frameworks and is thus not specified here in full detail.

**Columns:**

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Notes** |
| attachments | BO1003 Attachment | Represents the attachment element. |
| creationLog | BO1004 LogEntry | The time when a revision was persisted. The creationLog of the latestRevision is also the last modification date of the document. |
| id | long | The technical unique identifier of a revision. |
| revision | int | The revision number (incremented for each persisted revision) |
| status | char | The status of a revision. This field is not used. Instead the StateflowState (separate entity) is used. |

### BO1003 Attachment

Represent an attachment to an entity. This business object is provided by the underlying ACTICO workplace frameworks and is thus not specified here in full detail.

**Columns:**

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Notes** |
| category | char | The category of an Attachment |
| description | char | The description of an Attachment |
| name | string | The (file) name of an attachment |

### BO1004 LogEntry

Information about when an entity was persisted and by whom. This business object is provided by the underlying ACTICO workplace frameworks and is thus not specified here in full detail.

**Columns:**

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Notes** |
| logDate | date | The date/time when the entity was persisted. |
| user | User | The user who persisted the entity. |

### BO1005 Option

Represents a data type for handling of selections within the workplace application. The labelkey, tooltipkey and value of the selection is persisted in one business object.

**Columns:**

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Notes** |
| labelkey | char | Represents the labelkey of the selection. |
| tooltipkey | char | Represents the tooltipkey of the selection. |
| value | char | Represents the value of the selection. |

### BO2001 Financial statement

Represents a financial statement of a client. See the documentation of the ACTICO Financial Spreading product for more information.

### BO2002 Rulemodel Rating

### 

Represents the rulemodel of the rating documents.

**Columns:**

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Notes** |
| activity\_history | BO0009 Activity History | Represents the activity history of the rating document. |
| client | BO0001 Client | Represents the client, which is rated. |
| client\_revision\_id | long | Represents the revision id of the client at the point in time, when the rating was processed. |
| rating | BO0011 Rating | Represents the business data of the rating. |

### BO2003 Rulemodel Limit Application

Represents the rulemodel of the limit application.

**Columns:**

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Notes** |
| activity\_history | BO0009 Activity History | Represents the activity history of the application document. |
| application | BO0023 Limit Application | Represents the business data of the application. |
| client\_relations | BO0033 Document Relation | Represents the relations of the participating clients of the application document. |
| clients | BO0003 Client Application | Represents the participating clients of the application document. |

### BO2004 Rulemodel Client

Represents the rulemodel of the client.

**Columns:**

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Notes** |
| activity\_history | BO0009 Activity History | Represents the activity history of the client document. |
| client | BO0001 Client |  |

### BO2005 Rulemodel Financial Statement

Represents the rulemodel of the financial statement.

**Columns:**

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Notes** |
| activity\_history | BO0009 Activity History | Represents the activity history of the financial statement. |
| client | BO0001 Client | Represents the client of the financial statement. |
| statement | BO2001 Financial statement | Represents the business data of the financial statement. |

# State Machine Model

The following chapter explains the state machine model in particular the state machines including all relevant states and triggers.

## State Machines

The following chapter documents the process lifecycle states of the core business entities of the Credit Risk Management Platform. A state machine depicts all possible states of an entity and the allowed transit from one state to another. All relevant transitions are provided with the respective business trigger. An entity will reach a final state (portrayed as a large black dot with a circle around it). At this point no more state changes are possible.

Other chapters of this document refer to specific entities states when necessary (e.g. certain UCs only apply to entities in a certain state).

### SM0001 Client state machine

This is the state machine of a client.



Figure Diagram Sequence:.Client state machine

#### INITIAL

Initial state of a client until it is persisted for the first time. This is a technical state not visible to the user.

#### SAVED

The client was saved. This state indicates the client was saved in the system and can be used to create ratings and financial statements.

#### Save

The client is saved. (see UC1102 Maintain Client)

### SM0002 Rating state machine

This is the state machine of a rating.



Figure Diagram Sequence:.Rating State Machine

#### Draft

The rating is saved.

#### Calculated

Rating is calculated and saved.

#### Confirmed

The analyst sets the rating state Confirmed if the rating is ready to be transferred into the decision process. The rating values are calculated again with the current input values and the rating is displayed as read-only to the analyst.

#### SentForApproval

After the analyst checked the values of the confirmed rating, he sends it into the decision process. In the state SentForApproval that rating is ready to be decided in the decision process.

#### INITIAL

Initial state of a rating until it is persisted for the first time. This is a technical state not visible to the user.

#### DISCARDED

The rating was discarded. This state indicates the rating was discarded. This is a final state. No more changes can be made to the attributes of the rating.

#### APPROVED

The rating was approved. This state indicates the rating was taken to a final decision and was approved. This is a final state. No more changes can be made to the attributes of the rating.

#### DECLINED

The rating was declined. This state indicates the rating was taken to a final decision and was declined. This is a final state. No more changes can be made to the attributes of the rating.

#### Save

The rating is saved. (see UC1301 Maintain rating)

#### Calculate

The rating is calculated based on the current input values. (see UC1304 Calculate rating)

#### Edit

If the analyst execute any changes on a rating in state Confirmed the state of the rating is set to Calculated. (see UC1307 Enable confirmed rating for editing)

#### Confirm

The analyst confirms the rating to be ready to be transferred into the decision process. (see UC1306 Confirm rating)

#### Request Adjustment

If the decision maker cannot make a decision on the rating because he needs a correction of input values, the decision maker can send the rating back to the analyst with Request Adjustment. (see UC1310 Request adjustment)

#### Send for approval

After the analyst checked the values of the confirmed rating, he sends the rating for approval, means sends it to into the decision process. (see UC1309 Send for Approval)

#### Discard

If the rating is not relevant any more, the analyst has the possibility to discard the rating. (see UC1308 Discard rating)

#### Decline

The decision maker declines the rating. (see UC1311 Decide rating)

#### Approve

The decision maker approves the rating. (see UC1311 Decide rating)

### SM0003 Bulk Operation state machine

This is the state machine bulk operations.



Figure Diagram Sequence:.Bulk Operation State Machine

#### New

The Bulk operation UI is launched from the Bulk approval Menu.

#### Saved

Bulk operation is created and saved.

#### INITIAL

Initial state of a bulk operation until it is persisted for the first time. This is a technical state not visible to the user.

#### Final

The Bulk operation document has reached its final state. At this point the batch to execute the rating Bulk approval has been initiated.

#### Create New

Create a new Bulk Operation

#### Confirm selection

Confirms the selection of entities (e.g. ratings) that should be processed in the bulk operation. This can be performed multiple times until the user is happy with the selection.

#### Execute Bulk

Executes the Bulk operation

### SM0004 Application state machine

This is the state machine of an application.



Figure Diagram Sequence:.Application State Machine

#### Create application by interface

The application is created via [interface IFC011](#BKM_5ECFDB86_FDD9_431A_98AD_1CF80820CBB9).

#### DRAFT

The application is saved.

#### NEW

Initial state of an application until it is persisted for the first time. This is a technical state not visible to the user.

#### AWAITING APPROVAL

Application is awaiting approval.

#### Save

The application is saved. (see UC1301 Maintain rating)

#### Submit Application

The application is requested and forwarded to be decided.

#### Submitted Application

A submitted application can lead to an automatically approved or declined application or will be forwarded to a manual decision workflow in state "Awaiting Approval". This is not a state, but a decision which can lead to more than one target state.

#### Restart Application

The decision maker decides, that the decision process has to be restarted, because main input factors to the decision needs to be changed.

#### Submit Decision

The decision maker submits his decision.

#### Submitted Decision

A submitted decision can lead to an approved / declined application or it results in the forwarding of the application to the next decider. This is not a state, but a decision which can lead to more than one target state.

#### DECLINED

The application was declined. This is a final state. No more changes can be made to the attributes of the application.

#### APPROVED

The application was approved. This is a final state. No more changes can be made to the attributes of the application.

#### Discard

If the application is not relevant any more, the application can be discarded (see UC1308 Discard rating).

#### DISCARDED

The application was discarded. This is a final state. No more changes can be made to the attributes of the application.

# Use Case Model

This chapter covers the Use Case Model of the Credit Risk Management Platform as defined in the requirements.

The Use Case Model describes the proposed functionality of the Credit Risk Management Platform. A Use Case represents a discrete unit of interaction between a user (human or machine) and the system. This interaction is a single unit of meaningful work, such as Create Rating or View Client Details.

All the Use Case packages contain Use Cases which define how an Actor will interact with the proposed system.

Each interaction may be specified using scenarios, sequence diagrams, communication diagrams and other dynamic diagrams or textual descriptions which together specify how the system when viewed as a "black-box" interacts with a user.



Figure Diagram Sequence: Use Case Model

## Actors

Use cases are typically related to 'actors', which are human or machine entities, that use or interact with the system to perform a piece of meaningful work that helps them to achieve a goal. The set of use cases an actor has access to defines their overall role in the system and the scope of their action.

A person may perform the role of more than one actor, although they will only assume one role during one use case interaction.

An actor role may be performed by a non-human system, such as another computer program.



Figure Diagram Sequence: Actors

### ACT0001 CRMP User

"CRMP User" is an abstract role in the system that cannot be assigned to an user. All users of the system will have a specific role assigned instead. The role "CRMP User" is used to model all access rights that are shared across all specific roles.

### Administrative Roles

#### ACT0201 System Admin

The specific role "System Administrator" is a role assigned to users that are responsible for administrating all non business related parts of the system.

#### ACT0202 Rule Model Administrator

"Rule Model Administrator" is a role assigned to users that are responsible for uploading/deploying and activating ACTICO Rules models to the CRMP.

#### ACT0203 Financial Template Administrator

"Financial Template Administrator" is a role assigned to users that are responsible for maintaining (upload/activate and deactivate) financial templates.

#### ACT0204 Report Administrator

"Report Administrator" is a role assigned to users that are responsible for maintaining (upload/activate and deactivate) report and print templates.

#### ACT0205 User Administrator

"User Administrator" is a role assigned to users that are responsible for maintaining the Credit Risk Management Platform users.

### Technical Roles

#### ACT0011 System

A technical user that is used for actions that are not performed by a human user (e.g. a background job or a batch job)

#### ACT0012 DB Admin

The "DB Admin" user has the required access rights to insert and update data to and in the database tables in the Credit Database. This user is technical user used by the CRMP application to connect to the database. It can also be used to update master data entries that are not maintained via the web frontend.

#### ACT0013 Remote API

A technical user / role that is used by external systems that are triggering the system via the remote API

### Business Roles

#### ACT0131 Read Only

"ReadOnly" is a role assigned to users that may view only clients with their ratings and statements.

#### ACT0141 Reporting

"Reporting" is a role assigned to users that may create general reports only. Unless they have access to the documents (e.g. using role [ACT0131 Read Only](#BKM_0E9C3534_4D58_474A_9578_3B80DBFA55C5)) they will only be able to create general portfolio reports.

#### ACT0101 Analyst

"Analyst" is an abstract role in the system that cannot be assigned to an user. All users of the system will have a specific role assigned instead.

The role is used to model all access rights that are shared across all specific "Analyst" roles.

#### ACT0102 Financial Analyst

"Financial Analyst" is the role for users that capture and analyze financial statement.

#### ACT0103 Rating Analyst

"Rating Analyst" is the most common role for users that handle ratings in the process step of the risk assessment.

#### ACT0111 Client Maintainer

"Client Maintainer" is a role assigned to users that maintain clients.

#### ACT0121 Approver

"Approver" is an abstract role in the system that cannot be assigned to a user. All users of the system will have a specific role assigned instead.

The role is used to model all access rights that are shared across all specific "Approver" roles.

#### ACT0122 Financial Approver

"Finanical Approver" represents an user with the financial approval (finalize) competence.

#### ACT0123 Rating Approver

"Rating Approver" represents an user with the rating approval competence.

#### ACT0124 Decider

"Decider" is an abstract role with the competence to vote or decide on an application.

#### ACT0125 Sales Voter

"Sales Voter" is a role authorized to perform the sales vote of an application.

#### ACT0126 Risk Voter

"Risk Voter" is a role authorized to perform the risk vote of an application.

#### ACT0127 Application Decider

"Application Decider" is a role authorized to decision an application within his/her competence.

#### ACT0128 Application Committee Decider

"Application Committee Decider" is a role authorized to perform a committee decision of an application.

#### ACT0131 Application Maintainer

"Application Maintainer" is a role assigned to users that are authorized to maintain applications.

### Modeling Roles

#### ACT1002 ACTICO Rules Technical Modeler

The "ACTICO Rules Technical Modeler" is the user that uses the ACTICO Modeler to maintain technical models. It's not a specific role in the Credit Risk Management Platform.

This user is a person with technical expertise.

#### ACT1001 ACTICO Rules Business Modeler

The "ACTICO Rules Business Modeler" is the user that uses the ACTICO Modeler to maintain business models (e.g. "Scorecard"). It's not a specific role in the Credit Risk Management Platform.

This user is a person with business expertise.

## Client Management

The section "Client Management" describes all use cases within the CRMP web frontend that are related to business processes of maintaining client information.

The client management is the main starting point to create and maintain client related data. This includes client details and group information which defines relations between clients but also the definition of corresponding financials or ratings.

Clients can be defined as clients just manually created inside the CRMP system. All data including the group definition and all involved other clients need to be maintained manually inside the system for those clients.

But clients can also be imported from an external system via a defined interface.

All client details as well as all group information are retrieved from this interface. If there are relations from an external client to other clients the client data for these need to be delivered from the external system as well. It is not possible to define groups in CRMP with relations between manual created and external clients.



Figure Diagram Sequence: Client Management

### UC1100 Create client manually

The user wants to manually create a new client and enter the values manually.

|  |  |  |
| --- | --- | --- |
| **Post-condition:** |  | The new client is persisted |
| **Pre-condition:** |  | None |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user enters the client name and number |
| 2 | The user triggers the functionality for creating a client |
| 3 | The system checks if the client already exists in the system (client was already created)  **Alternate:** Client already exists in the system |
| 4 | The system persists the client |
| 5 | The system adds an entry to the client diary, description "Client created" |
| 6 | The system informs the user about the newly created client |

**Alternate** Client already exists in the system

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system informs the user that the client cannot be created because he is already available in the system |

### UC1101 Create client by import

The user wants to create a new client that is already known to the external system but not yet available in the Credit Risk Management Platform.

|  |  |  |
| --- | --- | --- |
| **Post-condition:** |  | The new client and all group members are persisted |
| **Pre-condition:** |  | None |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user enters filter criteria |
| 2 | The user triggers the functionality for importing a client |
| 3 | The system loads an overview about matching clients and display the results. See also: UC1105 Retrieve client information from external client management system **Alternate:** Client already existing |
| 4 | The user selects one of the clients |
| 5 | The system checks if the client already exists in the system (client was already created) |
| 6 | The system loads the group data (list of group clients) using UC1113 Retrieve client group information **Exception:** Client not existing in external database |
| 7 | The system adds an entry to the client diary, description "Client created" |
| 8 | The system persists all received clients |
| 9 | The system informs the user about the newly created clients |

**Alternate** Client already existing

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system informs the user with a corresponding message |

**Exception** Client not existing in external database

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system informs the user with a corresponding message |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC2501**  Approved | **DSC2501 Client Publishing**  When publishing the Client the following information is not included in the publishing  - the list of financial statements  - the list of ratings  - the list of applications |

### UC1102 Maintain client

The user wants to change client data which are defined as changeable (owned by the system, no attributes received from an external system).

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | Client is already available in the system |
| **Post-condition:** |  | Changed client is persisted as a new client revision |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user identifies a client |
| 2 | The user changes/enters the changed attributes |
| 3 | The user triggers the functionality for saving a client |
| 4 | The system persists the client information |
| 5 | The system adds an entry to the client acitvity history, description "Client saved" |
| 6 | The system informs the user about the successful persistence of the client information |

**Exception** Invalid user input

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system informs the user about vaildation errors that prevented the persistence of the updated client information |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1004**  Approved | **DSC1004 Limited support of multi currencies**  With the exception of the Financial Spreading module the system does not provide any features related to exchange rates. For this reason no conversion of amounts is supported. Currencies can only be used as an indicator of a values unit when displayed or exposed on any system interface.  When a currency value is persisted (see application entity) the value is persisted alongside with a currency ([BO0028 Currency Amount](#BKM_3771021A_DFBA_4A71_8960_F2655E12049B) - set to EUR per default).  Within interfaces a currency can be provided for currency values, in order to prepare the implementation of multi-currency support.  The currency values must be set to "EUR" when providing data to the interface.  If any other currency than "EUR" is provided, an error message is created and blocks further execution. |
| **DSC1005**  Approved | **DSC1005 Default currency must not be changed**  The default currency of the system is configurable but must not be changed after go live as all exchange rates are based on the default currency. |
| **DSC1006**  Approved | **DSC1006 Changing currency units**  Changing the currency unit of any input field does not trigger a change of the corresponding input field's value (no conversion and no wiping) |
| **DSC2003**  Approved | **DSC2003 Update of rule model version**  The functionality (e.g. business logic, layout logic etc.) of a top level entity (client, rating, financial statement, application) in the Credit Risk Management Platform is defined by a corresponding ACTICO Rules model and its version. The default behavior of the system is that once an entity (e.g. a client) gets created in the system, the system will always process the entity with the ACTICO Rules model version that was used to persist the entity.  That means that e.g. if a new field is added at the client user interface, this field would only appear for clients created with a ACTICO Rules model version that contains the new field. In order to display the field on the UI it would be necessary to delete the client and recreate it from scratch.  In order to prevent this default behavior, the system has been adapted in a way that for ratings in the DRAFT or CALCULATED state and for client entities in the SAVED state the system performs the following check as soon as the entity is opened by the user (e.g. loading a rating or client for displaying it)  - check if the currently valid rule model version is different than the version associated with the entity  - if this is the case, the system performs an automatic rule model update if the user has the required permission for the current rule model (AUTOMATED\_RULE\_MODEL\_UPGRADE\_CLIENT, AUTOMATED\_RULE\_MODEL\_UPGRADE\_RATING, AUTOMATED\_RULE\_MODEL\_UPGRADE\_ORI, AUTOMATED\_RULE\_MODEL\_UPGRADE\_BULK\_APPROVAL)  If the rule model version is updated, the system:  - adds a diary entry  - performs an update of the rule model version of the entity to the currently valid rule model version  - saves the entity  - in case of errors during the update: display a warning message to the user  Displaying an error is necessary as changes between rule model versions could be incompatible (e.g. the datatype of a field could change from an alpha-numeric to a numeric field - and it is impossible for the system to convert a string (e.g. "asdf") to a number (e.g. 42). In this case the system will inform the user that there have been mapping errors. The user can then re-fill data for changed datatypes or e.g. reload client data from external client management system.  The entity is persisted after the upgrade of the rule model version. |
| **DSC2009**  Approved | **DSC2009 Client Rule Model update**  Updating the rule model version (see [DSC2003](#BKM_EB178B1C_CC77_455B_9B8F_97BB2494E3E9)) of a client is possible if the status of the client is SAVED |
| **DSC2501**  Approved | **DSC2501 Client Publishing**  When publishing the Client the following information is not included in the publishing  - the list of financial statements  - the list of ratings  - the list of applications |
| **REQ1104**  Approved | **REQ1104 Comments for client**  The system shall allow to add comments to a client. |

### UC1103 Add group members to client

The user wants to add group members to an manually created client.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | The client is internal (manually created, not by the usage of an external client management system) |
| **Post-condition:** |  | The list of group members of the client is updated |
| **Post-condition:** |  | The client is persisted. |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user identifies the client to be added to the current client´s group |
| 2 | The user selects the group type |
| 3 | The user selects the clients to be added to the group |
| 4 | The user confirms the input |
| 5 | The system adds an entry to the client diary, description "Group Member added" |
| 6 | The system displays the updated client´s group list |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **REQ1107**  Approved | **REQ1107 Search group member from client management**  The system shall provide the possibility to search an existing client in the system in order to add the found client as a group member to a group structure. |
| **REQ1108**  Approved | **REQ1108 Group clients by group type**  The system shall allow to group clients by group type. At an assignment of a relation of a client to another, the group type needs to be defined.  A client can be assigned to multiple groups of different group types as parent or child. |

### UC1114 Remove group members from client

The user wants to remove a group member from an manually created client.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | The client is internal (manually created, not by the usage of an external client management system) |
| **Post-condition:** |  | The client is persisted. |
| **Post-condition:** |  | The list of group members of the client is updated |
| **Pre-condition:** |  | The client contains assigned group members. |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user identifies the client |
| 2 | The user identifies the client to be removed from the group structure |
| 3 | The user triggers the functionality for removing of a client from the group structure |
| 4 | The system removes the relation for the selected client |
| 5 | The system adds an entry to the client diary, description "Group Member removed" |
| 6 | The system display the updated client´s group list |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1106**  Approved | **DSC1106 Remove client from group does only remove relation**  If a client is removed from a group assignment, only the relation to the group is deleted. The client is still available in the system. |
| **REQ1109**  Approved | **REQ1109 Remove client from group**  The system shall allow to remove a client from a group, that is, to remove relations between clients. |

### UC1111 Trigger external client update manually

The user manually triggers an update to retrieve client information from external client management system.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | The client exists in the system and is not created manually. |
| **Post-condition:** |  | Updated client attributes are persisted as a new client revision |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user triggers the update of the client information |
| 2 | The system triggers the UC1105 Retrieve client information from external client management system |
| 3 | The system triggers the UC1113 Retrieve client group information |
| 4 | The system adds an entry to the client activity history, description "Refreshed Customer Data" |
| 5 | The system persists the client as a new revision (including the group membership for the client) |
| 6 | The system confirms all action(s) with a corresponding message |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **REQ1101**  Approved | **REQ1101 Update client with latest data**  The system shall allow to manually update the client information with the latest external client management system data. |

### UC1104 Receive client information by webservice

This use case describes receiving information for a single client via [IFC005](#BKM_7BB09CA3_A185_42BD_8B94_C325B13CCC2B) - a webservice interface provided by the CRMP. This is a technical use case that can not be triggered by a human user directly.

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system verifies that there is already a client in the system for the given external client id  **Alternate:** Client with the given external id does not yet exist in the system |
| 2 | The system updates the client with the received information |
| 3 | The system verifies that all parent/child clients given as relations as input to the use case (e.g. as part of the webservice request) are already existing in the system  **Alternate:** Not all parent/child clients existing in the system |
| 4 | The system adds parent/child relationship information for the client in the system based on all clients given as direct relations as input to the use case (e.g. as part of the webservice request) - unless those relations already exists. |
| 5 | The system removes all existing direct parent/child relationships that were not included as input to the use case (e.g. as part of the webservice request) |
| 6 | The system adds a new entry to the activity history of the client "Client updated via webservice" |
| 7 | The system persists the client |
| 8 | The system performs the publishing for the client |

**Alternate** Client with the given external id does not yet exist in the system

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system creates the client |
| 2 | The system adds a new entry to the activity history of the client "Client imported via webservice" |
| 3 | The system performs the publishing for the client |

**Alternate** Not all parent/child clients existing in the system

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system performs the following for all not yet existing clients |
| 2 | The system creates the client |
| 3 | The system adds a new entry to the activity history of the client "Client imported via webservice " |
| 4 | The system performs the publishing for the client |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC2402**  Approved | **DSC2402 HTTP basic authentication for webservice interfaces**  Webservices interfaces provided by the CRMP are protected by Basic Authentication. |

### UC1113 Retrieve client group information

The system is being triggered to add or update client information regarding available group memberships. This is technical use case. It cannot be triggered directly by a human user.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | None |
| **Post-condition:** |  | The updated client group information is available in the database |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system retrieves information regarding the group membership of a client by triggering interface "IFC002 Retrieve group types for client" |
| 2 | The system updates the relations between the clients based on the retrieved group relations |
| 3 | The system retrieves all clients belong to the group. Retrieved in the first step by triggering interface IFC003 Retrieve child/parent clients |
| 4 | The system creates those clients of the retrieved group members that are not yet available in the system. |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1103**  Approved | **DSC1103 Country code based on ISO-3166-1 ALPHA 2**  External systems will deliver the country code using ISO-3166-1 ALPHA 2 |

### UC1105 Retrieve client information from external client management system

The system is being triggered to add or update client information from external client system. This is a technical use case. It cannot be triggered directly by a human user.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | None |
| **Post-condition:** |  | Updated client information is available in the database |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system triggers the interface IFC001 Load client data and retrieves the client information, in case UC1105 has been triggered either by UC1111 Trigger external client update manually or by UC1101 Create client by import |

**Alternate** Webservice Call

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1103**  Approved | **DSC1103 Country code based on ISO-3166-1 ALPHA 2**  External systems will deliver the country code using ISO-3166-1 ALPHA 2 |
| **DSC1105**  Approved | **DSC1105 Group member data update of external clients**  At a refresh of the client data from an external system, the details of the related clients that exist already in the system are not updated. |

### UC1106 Search client

The user wants to lookup a client using a set of search criteria. The system displays the result set (all clients matching the search criteria) paginated.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | None |
| **Post-condition:** |  | All clients matching the search criteria are displayed |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user enters search criteria |
| 2 | The user triggers the functionality for searching clients |
| 3 | The system filters the client entities using the entered search criteria |
| 4 | The system displays all clients matching the entered search criteria  **Alternate:** No client is matching the search filter criteria |

**Alternate** No client is matching the search filter criteria

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system informs the user that no client is matching the provided search filter criteria |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **REQ1105**  Approved | **REQ1105 Search client**  The system shall provide functionality to search for clients based on search criteria defined in the corresponding GUI specification. |

### UC1115 View client worklist

The user wants to view the list of clients that were maintained by him the last time.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | None |
| **Post-condition:** |  | Clients that were maintained by the current user the last time are displayed |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user enters filter criteria |
| 2 | The user triggers the functionality for viewing client worklist |
| 3 | The system filters the list of clients based on the following information: Last modified by the current user |
| 4 | The system displays all clients that match the filter criteria  **Alternate:** No matching clients found |

**Alternate** No matching clients found

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system can not find any client matching the search criteria |
| 2 | The system displays an empty rating worklist |

### UC1107 View client

The user wants to view the detail information of a client.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | Existing client |
| **Post-condition:** |  | The client data is displayed |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user identifies the client |
| 2 | The user triggers the functionality for viewing a client |
| 3 | The system displays the client data to the user |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1102**  Approved | **DSC1102 Display older client revisions**  When displaying an older revision of the client the system displays a historic snapshot of the client data.  The following information is not shown when displaying an older revision of the client  - list of client financial statements  - list of client ratings  - group member information |
| **DSC2007**  Approved | **DSC2007 Viewing content of PDF document**  The system is not responsible for displaying content of provided PDF documents. For displaying the content of a PDF document the Web Browser is responsible (PDF viewer is registered as a browser plugin and can display PDF documents). The system only provides the PDF document. |
| **REQ1102**  Approved | **REQ1102 View client details**  The system shall allow to view the details of a client. |
| **REQ1110**  Approved | **REQ1110 Print client**  The system shall allow to print client data based on the current printing template. |

### UC1108 View client activity history

The user wants to view the system's activity history of the client. The activity history records and contains entries for all relevant changes to a client entity. The particular types of entries for the client activity history are specified as part of the specific use cases that trigger an entry in the activity history .

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | The client exists in the system |
| **Post-condition:** |  | The client´s activity history is shown |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user identifies the client |
| 2 | The user confirms the action to view the activity history |
| 3 | The systems displays the client activity history |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1102**  Approved | **DSC1102 Display older client revisions**  When displaying an older revision of the client the system displays a historic snapshot of the client data.  The following information is not shown when displaying an older revision of the client  - list of client financial statements  - list of client ratings  - group member information |

### UC1109 View group members

The user wants to view the group members of the client.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | The client exists already in the system |
| **Post-condition:** |  | The group member list of the client are shown |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system displays the group member list associated with the client  **Alternate:** An older revision of the client is displayed |

**Alternate** An older revision of the client is displayed

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system displays the historic list of group members (only the group members that were available in the system when the displayed client revision was saved - and not the group members that are now available in the system) |
| 2 | The system does not offer any functionality to navigate (e.g. to group members) or maintain |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1102**  Approved | **DSC1102 Display older client revisions**  When displaying an older revision of the client the system displays a historic snapshot of the client data.  The following information is not shown when displaying an older revision of the client  - list of client financial statements  - list of client ratings  - group member information |

### UC1110 View related group

The user wants to view all groups the client belongs to as well as the corresponding group members.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | The client exists already in the system |
| **Post-condition:** |  | The related groups of the client as well as the group members are shown |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user identifies the client  **Alternate:** An older revision of the client is displayed |
| 2 | The user confirms the action to view group members of the client |
| 3 | The system displays the related groups to the client as well as the corresponding group members |

**Alternate** An older revision of the client is displayed

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system displays the historic list of group members (only the group members that were available in the system when the displayed client revision was saved - and not the group members that are now available in the system) |
| 2 | The system does not offer any functionality to navigate (e.g. to group members) or maintain |

### UC1112 View client rating list

The user wants to view the list of ratings for the client.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | Client exists in the system |
| **Post-condition:** |  | The list of available ratings of the client are shown to the user |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user identifies the client |
| 2 | The system shows the list of all client ratings |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1102**  Approved | **DSC1102 Display older client revisions**  When displaying an older revision of the client the system displays a historic snapshot of the client data.  The following information is not shown when displaying an older revision of the client  - list of client financial statements  - list of client ratings  - group member information |
| **REQ1106**  Approved | **REQ1106 List all client rating**  The system shall list all ratings associated with a client. |

### UC1120 View client collaterals

The user wants to view the collaterals of a client.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | The client exists already in the system. |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user navigates to the client collateral information |
| 2 | The system displays the client collateral information |

### UC1121 View client limit information

The user wants to view the limit information of the client and his groups including the list of all existing limit applications.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | The client exists already in the system. |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user navigates to the client limit information |
| 2 | The system calculates the group limits of each client group by adding up the single limit information values |
| 3 | The system displays the client limit information |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1107**  Approved | **DSC1107 One limit per client**  Each client can only have one granted limit. If a client is part of multiple groups, each group with it's limit information is displayed on client level, but the specific client limit is the same in all groups. |
| **DSC1401**  Approved | **DSC1401 Display of discarded limit applications**  It is not possible to view or search a limit application in status "Discarded". |
| **REQ1111**  Approved | **REQ1111 List all client applications**  The system shall list all applications where the client is participating. |

### UC1323 Print client

The user wants to generate a document (e.g. for printing) of the latest revision of a client using the print button.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | The client is persisted. |
| **Post-condition:** |  | The generated document is provided to the user. |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user identifies the client |
| 2 | The user triggers the generation of the client printout |
| 3 | The system confirms the action by showing the generated file (based on the information currently stored in the database),  **Exception:** No matching template found |

**Exception** No matching template found

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | If no print template can be found a coresponding error message is shown |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC2006**  Approved | **DSC2006 client print template**  The print template with the name "default\_client\_report" is used for creating the print view of the client.  By using this template all elements shown on the user interface (e.g. tabs, sections, input fields, tables) are visible in the generated document.  It is possible to exclude elements by setting the "visibleInReports" flag. This functionality is documented in more details in the Workplace User Guide. |

### Traceability



Figure Diagram Sequence: Create Client



Figure Diagram Sequence: Maintain Client



Figure Diagram Sequence: Search Client



Figure Diagram Sequence: View Client

## Financial Spreading

All functionality related to the financial analysis of a client is provided through the ACTICO Financial Spreading module. For this reason the requirements and detailed design is documented as part of this ACTICO Financial Spreading product documentation.



Figure Diagram Sequence: Financial Spreading

### UC1222 Create financial statements for clients

This use case describes receiving information for multiple statements via IFC006 - a webservice interface provided by the CRMP. This is a technical use case that can not be triggered by a human user directly.

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC2402**  Approved | **DSC2402 HTTP basic authentication for webservice interfaces**  Webservices interfaces provided by the CRMP are protected by Basic Authentication. |

### UC1200 Create financial statement for client

The user wants to capture a new financial statement for a client. This functionality is provided by the Financial Spreading Module and therefore not specified in full detail in this requirement specification document. See the chapter "Create Statement" in the Financial Spreading User Guide for more information about this functionality.

|  |  |  |
| --- | --- | --- |
| **Post-condition:** |  | The screen for capturing a new financial statement is displayed |
| **Pre-condition:** |  | Client is already created in the system |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user identifies the client |
| 2 | The user selects a financial template |
| 3 | The user triggers the functionality for creating a new financial statement |
| 4 | The system uses the most recent active version of the selected financial template |
| 5 | The system switches to the screen for capturing the data of a new financial statement (standard screen from the financial spreading module)  **Alternate:** "Number of Statements" greater than 1 |

**Alternate** "Number of Statements" greater than 1

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | In case the "Number of Statements" is > 1 the system switches to the screen for editing multiple statements side-by-side (standard screen from the financial spreading module) |
| 2 | The user maintins data of the statement (e.g. meta information or actual financial items) |
| 3 | The user triggers the functionality to save the statements |
| 4 | The system saves the statements and switches to the screen for capturing the data of new financial statements side-by-side |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1101**  Approved | **DSC1101 Financial Spreading via ACTICO Financial Spreading Module (SPR)**  All requirements related to the Financial Spreading will be realized via the ACTICO Financial Spreading Module (SPR). See the Financial Spreading User Guide for a documentation of the functionality and features of the Financial Spreading Module. |
| **REQ1200**  Approved | **REQ1200 Add financial statements**  The system shall allow to add financial statements to a client |
| **REQ1204**  Approved | **REQ1204 Create Workitems for Financial Statements**  Each time a statement is saved the following checks are performed (after the save has succeeded)  - If a statement is in Status "Draft", "Calculated" or "Declined" a workitem for the statement will be created for the Role "Financial Analyst". That means, every user with the role "Financial Analyst" will see an entry for this Statement in its Worklist.  - If a statement is in Status "Awaiting Finalization" a workitem for the statement will be created for the Role "Financial Approver". That means, every user with the role "Financial Approver" will see an entry for this Statement in its Worklist.  - if it is in any other status (e.g. "Finalized" or "Discarded") all workitems for the statement will be removed. That means no user will see the Statement in its Worklist. |
| **REQ1205**  Approved | **REQ1205 Counterparty Information stored on the statement level**  All counterparty attributes (see BO0001 Client) should be copied to the statement level so that they can potentially be used to search for statements by historic counterparty information. The information should also be available for reporting.  When creating a statement (e.g. when creating a new statement or when copying an existing one) the counterparty information is re-loaded. This means that if the name of a counterparty changes the new name is used when an existing statement is copied.  As long as the statement is in status draft, calculated or declined the counterparty information is reloaded each time the statement is opened. |

### UC1202 Search financial statement

The user wants to search financial statements. This functionality is provided by the Financial Spreading Module and therefore not specified in full detail in this requirement specification document. See the chapter "Search Statement" in the Financial Spreading User Guide for more information about this functionality.

A CRMP specific extension model is in place to extend the Financial Spreading Search model.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | None |
| **Post-condition:** |  | All financial statements matching the search criteria are displayed |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user enters search criteria |
| 2 | The user triggers the functionality for searching a financial statement |
| 3 | The system filters the financial statement entities using the entered search criteria |
| 4 | The system displays all financial statements matching the entered search criteria |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1101**  Approved | **DSC1101 Financial Spreading via ACTICO Financial Spreading Module (SPR)**  All requirements related to the Financial Spreading will be realized via the ACTICO Financial Spreading Module (SPR). See the Financial Spreading User Guide for a documentation of the functionality and features of the Financial Spreading Module. |
| **REQ1203**  Approved | **REQ1203 Search financial statement**  The system shall provide functionality to search for financial statements based on search criteria. |

### UC1203 View financial statement

The user wants to view a financial statement for a client. This functionality is provided by the Financial Spreading Module and therefore not specified in full detail in this requirement specification document. See the chapter "Show Statement" in the Financial Spreading User Guide for more information about this functionality.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | At least one financial statement for the client is available in the system |
| **Post-condition:** |  | The selected financial statement is displayed |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user identifies the client |
| 2 | The user identifies the financial statement to display |
| 3 | The user triggers the functionality for viewing a financial statement |
| 4 | The system displays the financial statement (standard screen from the financial spreading module) |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1101**  Approved | **DSC1101 Financial Spreading via ACTICO Financial Spreading Module (SPR)**  All requirements related to the Financial Spreading will be realized via the ACTICO Financial Spreading Module (SPR). See the Financial Spreading User Guide for a documentation of the functionality and features of the Financial Spreading Module. |
| **REQ1201**  Approved | **REQ1201 View details of financial statement**  The system shall allow to view the details of a financial statement for a client |
| **REQ1205**  Approved | **REQ1205 Counterparty Information stored on the statement level**  All counterparty attributes (see BO0001 Client) should be copied to the statement level so that they can potentially be used to search for statements by historic counterparty information. The information should also be available for reporting.  When creating a statement (e.g. when creating a new statement or when copying an existing one) the counterparty information is re-loaded. This means that if the name of a counterparty changes the new name is used when an existing statement is copied.  As long as the statement is in status draft, calculated or declined the counterparty information is reloaded each time the statement is opened. |

### UC1204 View client financial statement list

The user wants to view the list of all financial statements of the current client available in the system.

|  |  |  |
| --- | --- | --- |
| **Post-condition:** |  | The list of financial statements is displayed |
| **Pre-condition:** |  | The client is already created in the system |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user identifies the client |
| 2 | The user chooses to view the client financial statement list |
| 3 | The system displays the list of all financial statements for the client that are currently available in the system |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1102**  Approved | **DSC1102 Display older client revisions**  When displaying an older revision of the client the system displays a historic snapshot of the client data.  The following information is not shown when displaying an older revision of the client  - list of client financial statements  - list of client ratings  - group member information |
| **REQ1202**  Approved | **REQ1202 View list of financial statements**  The system shall allow to view the list of financial statements for a client |

### UC1205 View financial statement worklist

The user wants to view the list of financial statements that are assigned to him. Those are the statements the user should perform an action on.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | None |
| **Post-condition:** |  | All financial statements assigned to the user´s role are displayed, dependent of the selected filter criteria |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user enters the filter criteria |
| 2 | The user triggers the functionality for viewing the worklist for financial statements |
| 3 | The system filters the list of financial statements based on the following information: Assigned to the current users role, worklist view |
| 4 | The system displays all finanical statements that match the filer criteria  **Alternate:** No matching financial statements found |

**Alternate** No matching financial statements found

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system cannot find any financial statement matching the search criteria |
| 2 | The system displays an empty financial statement worklist |

### UC1206 Create consolidated statement for client

The user wants to create a consolidated statement for the client. This functionality is provided by the Financial Spreading Module and therefore not specified in full detail in this requirement specification document. See the chapter "Statement Consolidation" in the Financial Spreading User Guide for more information about this functionality.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | Client is already created in the system |
| **Post-condition:** |  | The screen for capturing a consolidated statement is displayed |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user identifies the client |
| 2 | The user confirms the action to create a consolidated statement |
| 3 | The system switches to the screen for selecting the financial template |
| 4 | The user confirms the action by selecting a template |
| 5 | The system switches to the screen for creating a consolidated statement (standard screen from the financial spreading product) |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1101**  Approved | **DSC1101 Financial Spreading via ACTICO Financial Spreading Module (SPR)**  All requirements related to the Financial Spreading will be realized via the ACTICO Financial Spreading Module (SPR). See the Financial Spreading User Guide for a documentation of the functionality and features of the Financial Spreading Module. |
| **REQ1204**  Approved | **REQ1204 Create Workitems for Financial Statements**  Each time a statement is saved the following checks are performed (after the save has succeeded)  - If a statement is in Status "Draft", "Calculated" or "Declined" a workitem for the statement will be created for the Role "Financial Analyst". That means, every user with the role "Financial Analyst" will see an entry for this Statement in its Worklist.  - If a statement is in Status "Awaiting Finalization" a workitem for the statement will be created for the Role "Financial Approver". That means, every user with the role "Financial Approver" will see an entry for this Statement in its Worklist.  - if it is in any other status (e.g. "Finalized" or "Discarded") all workitems for the statement will be removed. That means no user will see the Statement in its Worklist. |
| **REQ1206**  Approved | **REQ1206 Automatic selection of external statement references**  If a spreading template references other statements (by defining a reference on the "fs-external" tab, see the Financial Spreading User Guide for details) the statements should be automatically selected by the system. Please see the Use Cases referring to this requirement for the point in time when the system selects the statement references. Once a reference is automatically selected (e.g. their IDs), the references are stored at the statement (and also available for reporting purposes if required). The following type of statement references should be automatically selected:  1) References to previous year statements If a spreading template defines one or multiple statement references with one of the following names: "previous\_year\_1", "previous\_year\_2", "previous\_year\_3", "previous\_year\_4", "previous\_year\_5" the system will determine the referenced statements by applying the following logic (with x being the last character of the statement reference name e.g. 2 for previous\_year\_2):  - Accounting Date criteria:   1. for statements of type annual: accounting date - x years; 2. for statements of type semiannual: accounting date - x years; 3. for statements of type quarterly : accounting date - x years; 4. for statements of type interim : accounting date - x years; 5. the accounting date is always rounded to months end. That means that the available number of days within the months needs to be considered.   - accounting period = accounting period of current statement  - accounting standard = accounting standard of current statement  - consolidation type = consolidation type of current statement  - same internal client ID  - used template = template of current statement  - status in {Calculated, Awaiting Finalization, Finalized}  - type = type of current statement  If there are multiple statements matching the criteria from above for a single year the statements should be ordered first by accounting date (descending), second by modification date (descending) and the first match should be used.  In case the statement references are selected manually a validation of the executed statements will be executed. Please see [REQ1207](#BKM_81137E9C_304D_46C1_BC78_844BE14C410D) for more information about the manual selection of statement references. If the statement references are selected manually it's still possible to force an automatic selection.  The automatic selection of the external statement references and the validation of the manually selected statement references are executed for these use cases:  - Single Statement Creation and Editing  - Multi Statement Creation and Editing  - Statement Aggregation  - Statement Consolidation  - Statement Import from Excel file  - Statement Bulk Import  - Creation of statements with the IFS006 |

### UC1207 Import financial statement from Excel file

The user want to import a financial statement from an Excel file. This functionality is provided by the Financial Spreading Module and therefore not specified in full detail in this requirement specification document. See the chapter "Import Statements from Excel" in the Financial Spreading User Guide for more information about this functionality.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | Excel file with finanical statement data available in the required structure |
| **Post-condition:** |  | Finanical statement is created based on Excel file. |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user selects to import a financial statement from Excel |
| 2 | The system switches to the screen for selecting the imported Excel file from the file system and to start the import (standard screen from the financial spreading module) |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1101**  Approved | **DSC1101 Financial Spreading via ACTICO Financial Spreading Module (SPR)**  All requirements related to the Financial Spreading will be realized via the ACTICO Financial Spreading Module (SPR). See the Financial Spreading User Guide for a documentation of the functionality and features of the Financial Spreading Module. |
| **REQ1206**  Approved | **REQ1206 Automatic selection of external statement references**  If a spreading template references other statements (by defining a reference on the "fs-external" tab, see the Financial Spreading User Guide for details) the statements should be automatically selected by the system. Please see the Use Cases referring to this requirement for the point in time when the system selects the statement references. Once a reference is automatically selected (e.g. their IDs), the references are stored at the statement (and also available for reporting purposes if required). The following type of statement references should be automatically selected:  1) References to previous year statements If a spreading template defines one or multiple statement references with one of the following names: "previous\_year\_1", "previous\_year\_2", "previous\_year\_3", "previous\_year\_4", "previous\_year\_5" the system will determine the referenced statements by applying the following logic (with x being the last character of the statement reference name e.g. 2 for previous\_year\_2):  - Accounting Date criteria:   1. for statements of type annual: accounting date - x years; 2. for statements of type semiannual: accounting date - x years; 3. for statements of type quarterly : accounting date - x years; 4. for statements of type interim : accounting date - x years; 5. the accounting date is always rounded to months end. That means that the available number of days within the months needs to be considered.   - accounting period = accounting period of current statement  - accounting standard = accounting standard of current statement  - consolidation type = consolidation type of current statement  - same internal client ID  - used template = template of current statement  - status in {Calculated, Awaiting Finalization, Finalized}  - type = type of current statement  If there are multiple statements matching the criteria from above for a single year the statements should be ordered first by accounting date (descending), second by modification date (descending) and the first match should be used.  In case the statement references are selected manually a validation of the executed statements will be executed. Please see [REQ1207](#BKM_81137E9C_304D_46C1_BC78_844BE14C410D) for more information about the manual selection of statement references. If the statement references are selected manually it's still possible to force an automatic selection.  The automatic selection of the external statement references and the validation of the manually selected statement references are executed for these use cases:  - Single Statement Creation and Editing  - Multi Statement Creation and Editing  - Statement Aggregation  - Statement Consolidation  - Statement Import from Excel file  - Statement Bulk Import  - Creation of statements with the IFS006 |

### UC1208 Compare multiple financial statements

The user wants to compare multiple financial statements for the same client or financial statements of different clients. This functionality is provided by the Financial Spreading Module and therefore not specified in full detail in this requirement specification document. See the chapter "Statement Comparison" in the Financial Spreading User Guide for more information about this functionality.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | None |
| **Post-condition:** |  | Selected financial statements for comparison are displayed. |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user selects to compare financial statements |
| 2 | The system switches to the screen for selection statements and start the comparison (standard screen from the financial spreading module) |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1101**  Approved | **DSC1101 Financial Spreading via ACTICO Financial Spreading Module (SPR)**  All requirements related to the Financial Spreading will be realized via the ACTICO Financial Spreading Module (SPR). See the Financial Spreading User Guide for a documentation of the functionality and features of the Financial Spreading Module. |

### UC1209 Create template for financial statement

The user wants to create a template definition in the system for financial statement. This template is created in Excel and imported as template into the system. Multiple templates for financial statement can be defined in the system e.g. used for clients in different industry sectors.

This functionality is provided by the Financial Spreading Module and therefore not specified in full detail in this requirement specification document. See the chapter "Create Template" in the Financial Spreading User Guide for more information about this functionality.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | Exel file with financial statement template definition is available in the required structure |
| **Post-condition:** |  | Financial statement template is crated in the system based on the Excel file definition |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user selects to create a template for financial statement |
| 2 | The system switches to the screen for uploading the Excel Spreading Template definition (standard screen from the financial spreading module) |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1101**  Approved | **DSC1101 Financial Spreading via ACTICO Financial Spreading Module (SPR)**  All requirements related to the Financial Spreading will be realized via the ACTICO Financial Spreading Module (SPR). See the Financial Spreading User Guide for a documentation of the functionality and features of the Financial Spreading Module. |

### UC1210 Search template for financial statements

The user wants to search a template for financial statements. This functionality is provided by the Financial Spreading Module and therefore not specified in full detail in this requirement specification document. See the chapter "Search Template" in the Financial Spreading User Guide for more information about this functionality.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | None |
| **Pre-condition:** |  | All templates for financial statements matching the search criteria are displayed |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user enters search criteria |
| 2 | The user triggers the functionality for searching templates |
| 3 | The system filters the financial statement entities using the entered search criteria |
| 4 | The system displays all financial statements matching the entered search criteria |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1101**  Approved | **DSC1101 Financial Spreading via ACTICO Financial Spreading Module (SPR)**  All requirements related to the Financial Spreading will be realized via the ACTICO Financial Spreading Module (SPR). See the Financial Spreading User Guide for a documentation of the functionality and features of the Financial Spreading Module. |

### UC1211 Save Draft Statement

The user wants to save a financial statement as a draft. This functionality is provided by the Financial Spreading Module and therefore not specified in full detail in this requirement specification document. See the chapter "Workflow of Statements" in the Financial Spreading User Guide for more information about this functionality.

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user identifies the to be saved statement |
| 2 | The user maintains data of the statement (e.g. changes meta information or actual financial data) |
| 3 | The user triggers the action to save the statement as a draft |
| 4 | The system persists the statement ignoring validation errors |
| 5 | The system determines the statement references according to REQ1206 Automatic selection of external statement references |
| 6 | The system displays a confirmation message about saving the statement |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1101**  Approved | **DSC1101 Financial Spreading via ACTICO Financial Spreading Module (SPR)**  All requirements related to the Financial Spreading will be realized via the ACTICO Financial Spreading Module (SPR). See the Financial Spreading User Guide for a documentation of the functionality and features of the Financial Spreading Module. |
| **REQ1204**  Approved | **REQ1204 Create Workitems for Financial Statements**  Each time a statement is saved the following checks are performed (after the save has succeeded)  - If a statement is in Status "Draft", "Calculated" or "Declined" a workitem for the statement will be created for the Role "Financial Analyst". That means, every user with the role "Financial Analyst" will see an entry for this Statement in its Worklist.  - If a statement is in Status "Awaiting Finalization" a workitem for the statement will be created for the Role "Financial Approver". That means, every user with the role "Financial Approver" will see an entry for this Statement in its Worklist.  - if it is in any other status (e.g. "Finalized" or "Discarded") all workitems for the statement will be removed. That means no user will see the Statement in its Worklist. |
| **REQ1206**  Approved | **REQ1206 Automatic selection of external statement references**  If a spreading template references other statements (by defining a reference on the "fs-external" tab, see the Financial Spreading User Guide for details) the statements should be automatically selected by the system. Please see the Use Cases referring to this requirement for the point in time when the system selects the statement references. Once a reference is automatically selected (e.g. their IDs), the references are stored at the statement (and also available for reporting purposes if required). The following type of statement references should be automatically selected:  1) References to previous year statements If a spreading template defines one or multiple statement references with one of the following names: "previous\_year\_1", "previous\_year\_2", "previous\_year\_3", "previous\_year\_4", "previous\_year\_5" the system will determine the referenced statements by applying the following logic (with x being the last character of the statement reference name e.g. 2 for previous\_year\_2):  - Accounting Date criteria:   1. for statements of type annual: accounting date - x years; 2. for statements of type semiannual: accounting date - x years; 3. for statements of type quarterly : accounting date - x years; 4. for statements of type interim : accounting date - x years; 5. the accounting date is always rounded to months end. That means that the available number of days within the months needs to be considered.   - accounting period = accounting period of current statement  - accounting standard = accounting standard of current statement  - consolidation type = consolidation type of current statement  - same internal client ID  - used template = template of current statement  - status in {Calculated, Awaiting Finalization, Finalized}  - type = type of current statement  If there are multiple statements matching the criteria from above for a single year the statements should be ordered first by accounting date (descending), second by modification date (descending) and the first match should be used.  In case the statement references are selected manually a validation of the executed statements will be executed. Please see [REQ1207](#BKM_81137E9C_304D_46C1_BC78_844BE14C410D) for more information about the manual selection of statement references. If the statement references are selected manually it's still possible to force an automatic selection.  The automatic selection of the external statement references and the validation of the manually selected statement references are executed for these use cases:  - Single Statement Creation and Editing  - Multi Statement Creation and Editing  - Statement Aggregation  - Statement Consolidation  - Statement Import from Excel file  - Statement Bulk Import  - Creation of statements with the IFS006 |

### UC1212 Calculate Statement

The user wants to calculate a financial statement. This functionality is provided by the Financial Spreading Module and therefore not specified in full detail in this requirement specification document. See the chapter "Workflow of Statements" in the Financial Spreading User Guide for more information about this functionality.

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user identifies the to calculated statement |
| 2 | The user maintains data of the statement (e.g. changes meta information or actual financial data) |
| 3 | The user triggers the action to calculate the statement |
| 4 | The system determines the statement references according to REQ1206 Automatic selection of external statement references |
| 5 | The system validates the statement  **Alternate:** Validation Errors |
| 6 | The system calculates the statement (calculating all formulas defined in the Spreading template) |
| 7 | The system saves the statement |
| 8 | The system displays a confirmation message about calculating the statement |

**Alternate** Validation Errors

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system displays the validation errors |
| 2 | The system does not save the statement |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1101**  Approved | **DSC1101 Financial Spreading via ACTICO Financial Spreading Module (SPR)**  All requirements related to the Financial Spreading will be realized via the ACTICO Financial Spreading Module (SPR). See the Financial Spreading User Guide for a documentation of the functionality and features of the Financial Spreading Module. |
| **REQ1204**  Approved | **REQ1204 Create Workitems for Financial Statements**  Each time a statement is saved the following checks are performed (after the save has succeeded)  - If a statement is in Status "Draft", "Calculated" or "Declined" a workitem for the statement will be created for the Role "Financial Analyst". That means, every user with the role "Financial Analyst" will see an entry for this Statement in its Worklist.  - If a statement is in Status "Awaiting Finalization" a workitem for the statement will be created for the Role "Financial Approver". That means, every user with the role "Financial Approver" will see an entry for this Statement in its Worklist.  - if it is in any other status (e.g. "Finalized" or "Discarded") all workitems for the statement will be removed. That means no user will see the Statement in its Worklist. |
| **REQ1206**  Approved | **REQ1206 Automatic selection of external statement references**  If a spreading template references other statements (by defining a reference on the "fs-external" tab, see the Financial Spreading User Guide for details) the statements should be automatically selected by the system. Please see the Use Cases referring to this requirement for the point in time when the system selects the statement references. Once a reference is automatically selected (e.g. their IDs), the references are stored at the statement (and also available for reporting purposes if required). The following type of statement references should be automatically selected:  1) References to previous year statements If a spreading template defines one or multiple statement references with one of the following names: "previous\_year\_1", "previous\_year\_2", "previous\_year\_3", "previous\_year\_4", "previous\_year\_5" the system will determine the referenced statements by applying the following logic (with x being the last character of the statement reference name e.g. 2 for previous\_year\_2):  - Accounting Date criteria:   1. for statements of type annual: accounting date - x years; 2. for statements of type semiannual: accounting date - x years; 3. for statements of type quarterly : accounting date - x years; 4. for statements of type interim : accounting date - x years; 5. the accounting date is always rounded to months end. That means that the available number of days within the months needs to be considered.   - accounting period = accounting period of current statement  - accounting standard = accounting standard of current statement  - consolidation type = consolidation type of current statement  - same internal client ID  - used template = template of current statement  - status in {Calculated, Awaiting Finalization, Finalized}  - type = type of current statement  If there are multiple statements matching the criteria from above for a single year the statements should be ordered first by accounting date (descending), second by modification date (descending) and the first match should be used.  In case the statement references are selected manually a validation of the executed statements will be executed. Please see [REQ1207](#BKM_81137E9C_304D_46C1_BC78_844BE14C410D) for more information about the manual selection of statement references. If the statement references are selected manually it's still possible to force an automatic selection.  The automatic selection of the external statement references and the validation of the manually selected statement references are executed for these use cases:  - Single Statement Creation and Editing  - Multi Statement Creation and Editing  - Statement Aggregation  - Statement Consolidation  - Statement Import from Excel file  - Statement Bulk Import  - Creation of statements with the IFS006 |

### UC1213 Send Statement For Finalization

The user wants to send a statement for finalization. This functionality is provided by the Financial Spreading Module and therefore not specified in full detail in this requirement specification document. See the chapter "Workflow of Statements" in the Financial Spreading User Guide for more information about this functionality.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | The Statement is in a status that allows to send it for finalization |
| **Post-condition:** |  | The status of the statement is set to "Awaiting Finalization" |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user identifies the to be processed statement |
| 2 | The user triggers the action to send the statement for finalization |
| 3 | The system triggers the statement calculation |
| 4 | The system determines the statement references according to REQ1206 Automatic selection of external statement references |
| 5 | The system display a confirmation message about sending the statement for finalization |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1101**  Approved | **DSC1101 Financial Spreading via ACTICO Financial Spreading Module (SPR)**  All requirements related to the Financial Spreading will be realized via the ACTICO Financial Spreading Module (SPR). See the Financial Spreading User Guide for a documentation of the functionality and features of the Financial Spreading Module. |
| **REQ1204**  Approved | **REQ1204 Create Workitems for Financial Statements**  Each time a statement is saved the following checks are performed (after the save has succeeded)  - If a statement is in Status "Draft", "Calculated" or "Declined" a workitem for the statement will be created for the Role "Financial Analyst". That means, every user with the role "Financial Analyst" will see an entry for this Statement in its Worklist.  - If a statement is in Status "Awaiting Finalization" a workitem for the statement will be created for the Role "Financial Approver". That means, every user with the role "Financial Approver" will see an entry for this Statement in its Worklist.  - if it is in any other status (e.g. "Finalized" or "Discarded") all workitems for the statement will be removed. That means no user will see the Statement in its Worklist. |
| **REQ1206**  Approved | **REQ1206 Automatic selection of external statement references**  If a spreading template references other statements (by defining a reference on the "fs-external" tab, see the Financial Spreading User Guide for details) the statements should be automatically selected by the system. Please see the Use Cases referring to this requirement for the point in time when the system selects the statement references. Once a reference is automatically selected (e.g. their IDs), the references are stored at the statement (and also available for reporting purposes if required). The following type of statement references should be automatically selected:  1) References to previous year statements If a spreading template defines one or multiple statement references with one of the following names: "previous\_year\_1", "previous\_year\_2", "previous\_year\_3", "previous\_year\_4", "previous\_year\_5" the system will determine the referenced statements by applying the following logic (with x being the last character of the statement reference name e.g. 2 for previous\_year\_2):  - Accounting Date criteria:   1. for statements of type annual: accounting date - x years; 2. for statements of type semiannual: accounting date - x years; 3. for statements of type quarterly : accounting date - x years; 4. for statements of type interim : accounting date - x years; 5. the accounting date is always rounded to months end. That means that the available number of days within the months needs to be considered.   - accounting period = accounting period of current statement  - accounting standard = accounting standard of current statement  - consolidation type = consolidation type of current statement  - same internal client ID  - used template = template of current statement  - status in {Calculated, Awaiting Finalization, Finalized}  - type = type of current statement  If there are multiple statements matching the criteria from above for a single year the statements should be ordered first by accounting date (descending), second by modification date (descending) and the first match should be used.  In case the statement references are selected manually a validation of the executed statements will be executed. Please see [REQ1207](#BKM_81137E9C_304D_46C1_BC78_844BE14C410D) for more information about the manual selection of statement references. If the statement references are selected manually it's still possible to force an automatic selection.  The automatic selection of the external statement references and the validation of the manually selected statement references are executed for these use cases:  - Single Statement Creation and Editing  - Multi Statement Creation and Editing  - Statement Aggregation  - Statement Consolidation  - Statement Import from Excel file  - Statement Bulk Import  - Creation of statements with the IFS006 |

### UC1214 Decline Financial Statement

The user wants to decline a statement that was sent for finalization. This functionality is provided by the Financial Spreading Module and therefore not specified in full detail in this requirement specification document. See the chapter "Workflow of Statements" in the Financial Spreading User Guide for more information about this functionality.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | The Statement has been sent for finalization |
| **Post-condition:** |  | The Status of the Statement is set to "Declined" |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user identifies the to be declined statement |
| 2 | The user triggers the action to decline the financial statement |
| 3 | The system persists the statement |
| 4 | The system displays a confirmation message about declining the financial statement |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1101**  Approved | **DSC1101 Financial Spreading via ACTICO Financial Spreading Module (SPR)**  All requirements related to the Financial Spreading will be realized via the ACTICO Financial Spreading Module (SPR). See the Financial Spreading User Guide for a documentation of the functionality and features of the Financial Spreading Module. |
| **REQ1204**  Approved | **REQ1204 Create Workitems for Financial Statements**  Each time a statement is saved the following checks are performed (after the save has succeeded)  - If a statement is in Status "Draft", "Calculated" or "Declined" a workitem for the statement will be created for the Role "Financial Analyst". That means, every user with the role "Financial Analyst" will see an entry for this Statement in its Worklist.  - If a statement is in Status "Awaiting Finalization" a workitem for the statement will be created for the Role "Financial Approver". That means, every user with the role "Financial Approver" will see an entry for this Statement in its Worklist.  - if it is in any other status (e.g. "Finalized" or "Discarded") all workitems for the statement will be removed. That means no user will see the Statement in its Worklist. |

### UC1215 Finalize Financial Statement

The user wants to finalize a statement that was sent for finalization. This functionality is provided by the Financial Spreading Module and therefore not specified in full detail in this requirement specification document. See the chapter "Workflow of Statements" in the Financial Spreading User Guide for more information about this functionality.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | The statement is in a status that allows to finalize it |
| **Post-condition:** |  | The status of the statement is set to status "Finalized" |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user identifies the to be finalized financial statement |
| 2 | The user triggers the action to finalize the statement |
| 3 | The system persists the statement |
| 4 | The system displays a confirmation message about finalizing the financial statement |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1101**  Approved | **DSC1101 Financial Spreading via ACTICO Financial Spreading Module (SPR)**  All requirements related to the Financial Spreading will be realized via the ACTICO Financial Spreading Module (SPR). See the Financial Spreading User Guide for a documentation of the functionality and features of the Financial Spreading Module. |
| **REQ1204**  Approved | **REQ1204 Create Workitems for Financial Statements**  Each time a statement is saved the following checks are performed (after the save has succeeded)  - If a statement is in Status "Draft", "Calculated" or "Declined" a workitem for the statement will be created for the Role "Financial Analyst". That means, every user with the role "Financial Analyst" will see an entry for this Statement in its Worklist.  - If a statement is in Status "Awaiting Finalization" a workitem for the statement will be created for the Role "Financial Approver". That means, every user with the role "Financial Approver" will see an entry for this Statement in its Worklist.  - if it is in any other status (e.g. "Finalized" or "Discarded") all workitems for the statement will be removed. That means no user will see the Statement in its Worklist. |

### UC1216 Discard Financial Statement

The user wants to discard a statement. This functionality is provided by the Financial Spreading Module and therefore not specified in full detail in this requirement specification document. See the chapter "Workflow of Statements" in the Financial Spreading User Guide for more information about this functionality.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | The statement is in a status that allows to discard it |
| **Post-condition:** |  | The statement is marked as discarded |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user identifies the to be discarded statement |
| 2 | The user triggers the action to discard the statement |
| 3 | The system persists the statement |
| 4 | The system displays a confirmation message about discarding the statement |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1101**  Approved | **DSC1101 Financial Spreading via ACTICO Financial Spreading Module (SPR)**  All requirements related to the Financial Spreading will be realized via the ACTICO Financial Spreading Module (SPR). See the Financial Spreading User Guide for a documentation of the functionality and features of the Financial Spreading Module. |
| **REQ1204**  Approved | **REQ1204 Create Workitems for Financial Statements**  Each time a statement is saved the following checks are performed (after the save has succeeded)  - If a statement is in Status "Draft", "Calculated" or "Declined" a workitem for the statement will be created for the Role "Financial Analyst". That means, every user with the role "Financial Analyst" will see an entry for this Statement in its Worklist.  - If a statement is in Status "Awaiting Finalization" a workitem for the statement will be created for the Role "Financial Approver". That means, every user with the role "Financial Approver" will see an entry for this Statement in its Worklist.  - if it is in any other status (e.g. "Finalized" or "Discarded") all workitems for the statement will be removed. That means no user will see the Statement in its Worklist. |

### UC1217 Export Statement to Excel

The user want to export a financial statement to an Excel file. This functionality is provided by the Financial Spreading Module and therefore not specified in full detail in this requirement specification document. See the chapter "Export Single Statement to Excel" in the Financial Spreading User Guide for more information about this functionality.

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user identifies the to be exported financial statement |
| 2 | The user triggers the action to export the statement |
| 3 | The system creates the excel file representing the statement |
| 4 | The system makese the created file available for download so that the user can open it or store it locally |

### UC1218 Copy Financial Statement

The user wants to copy a financial statement to a new statement draft. This functionality is provided by the Financial Spreading Module and therefore not specified in full detail in this requirement specification document. See the chapter "Copy Statement" in the Financial Spreading User Guide for more information about this functionality.

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1101**  Approved | **DSC1101 Financial Spreading via ACTICO Financial Spreading Module (SPR)**  All requirements related to the Financial Spreading will be realized via the ACTICO Financial Spreading Module (SPR). See the Financial Spreading User Guide for a documentation of the functionality and features of the Financial Spreading Module. |
| **REQ1200**  Approved | **REQ1200 Add financial statements**  The system shall allow to add financial statements to a client |

### UC1219 Print Financial Statement

The user wants to print the latest revision of a financial statement.

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1101**  Approved | **DSC1101 Financial Spreading via ACTICO Financial Spreading Module (SPR)**  All requirements related to the Financial Spreading will be realized via the ACTICO Financial Spreading Module (SPR). See the Financial Spreading User Guide for a documentation of the functionality and features of the Financial Spreading Module. |

### UC1220 Activate/Deactivate template

The user wants to enable / disable an existing template definition in the system. Optionally templates with same name having other versions could be automatically disabled when the template is activated.

This functionality is provided by the Financial Spreading Module and therefore not specified in full detail in this requirement specification document. See the chapter "Create Template" in the Financial Spreading User Guide for more information about this functionality.

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1101**  Approved | **DSC1101 Financial Spreading via ACTICO Financial Spreading Module (SPR)**  All requirements related to the Financial Spreading will be realized via the ACTICO Financial Spreading Module (SPR). See the Financial Spreading User Guide for a documentation of the functionality and features of the Financial Spreading Module. |

### UC1221 Create annualized statement for client

The user wants to create an annualized statement for the client.

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user identifies the client |
| 2 | The user selects to create an annualized statement |
| 3 | The system uses the most recent active version of the selected financial template |
| 4 | The system switches to the statement selection screen for creating an annualized statement |
| 5 | The system shows all statements for this counterparty. |
| 6 | The user selects the statements to be considered for the annualization |
| 7 | The user selects to start the annualization DSC2600 Statement Selection for annualization |
| 8 | The system switches to the screen for capturing an annualized statement  **Alternate:** Selected statements are not valid |

**Alternate** Selected statements are not valid

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The selected statements do not fullfil the requirements for valid statements regarding annualization. DSC2600 Statement Selection for annualization |
| 2 | The system informs the user about the invalid statement selection |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC2600**  Approved | **DSC2600 Statement Selection for annualization**  The system must support the creation of annualized statements. Therefore it must fulfill the following general requirements:   * It should be possible to produce annualized statements based on interim statements. * If the spreading template contains a sheet with the name "balance-sheet" then the data of this sheet will be taken from the most recent statement (the statement with the highest accounting date). * Values of all other sheets are derived according to business rules defined below, by combining available statements * The system has to prevent the user from selecting statements from another client different from the current one.   To create an annualized statement the system has to check, if the selected statements result in one of the following two approaches. If the selection and therefore the check is ok, the annualized statement has to be calculated by the system as given in the respective approach.  1.) Interim Statement Approach   * Required statements: [Y-1 interim], [Y-1 EOY], [Y interim] where "interim" must be of same period (e.g. YTD, Q2, H1,...) in both years. * Calculated annualized statement = [Y-1 EOY]-[Y-1 interim]+[Y interim]   2.) Continuous Statement Approach   * Required statements: any combination of statements that covers a consecutive non-overlapping period of 12 months. * Calculated annualized statement = summing up the selected statements (e.g. [Y-1 Q3]+[Y-1 Q4] + [Y Q1] + [Y Q2] or [Y Q1] + [Y Q2] + [Y H2])   Legend:  YTD: year-to-date: period starting at the beginning of a year and lasting to a given date  Qn: n-th quarter of a year  Hn: n-th half of a year  Y: year  Y-1: last year  EOY: annual statement of the given year   * For the check the system has to use the period and the accounting date of the statement. Hereby the accounting date marks the end of the period. * The system should show an error if the user has selected statements that are not fulfilling the validation rules regarding the correct statement selection. |

### UC1223 Restate financial statements

The user wants to restate a finalized financial statement to a new statement in Status Draft. This functionality is provided by the Financial Spreading Module and therefore not specified in full detail in this requirement specification document. See the chapter "Restate Statement" in the Financial Spreading User Guide for more information about this functionality.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | Statement in status "finalized" |
| **Post-condition:** |  | Restated statement discarded |
| **Post-condition:** |  | New statement |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user identifies the to be restated statement(s) |
| 2 | The user chooses the reasons for the restatement ("internal reasons" or "external reasons") |
| 3 | The system adds an entry to the acitivity history of the statement "Statement discarded due to restatement" |
| 4 | The system transfers the statement to the status "Discarded" |
| 5 | The system persists the statement |
| 6 | The system performs the publishing of the statement |
| 7 | The system creates an unsaved copy of the statement, copying all data fof the statement (e.g. meta information, financial items, custom rations, details line items) updating to the most recent version of the template. |
| 8 | The system saves the copied statement |
| 9 | The system displays the screen for capturing and saving the statement (same as if UC1200 was triggered for a single statement) |

### UC1224 View financial statements side-by-side

The user wants to view/edit multiple statements at once. Therefore there is a functionality to edit all drafts or selected statements

of a client side-by-side. Editable statements are statements in status "draft", "calculated", "declined", "AwaitingFinalization".

Even if there is only one statement matching the aforementioned criteria the Side-By-Side editing will be shown. Statements in status "AwaitingFinalization" will only be shown, if they are saved in the currently active rulemodel version.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | Client is already created in the system |
| **Pre-condition:** |  | At least one editable statement exists for the selected client |
| **Post-condition:** |  | The screen for viewing/editing multiple statements side-by-side is displayed |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user identifies the client |
| 2 | The user selects to edit multiple statement side-by-side |
| 3 | The system switches to the screen for editing multiple statements side-by-side  **Exception:** The template or template version of all matching statements is not identical  **Exception:** No statements available for editing |

**Exception** The template or template version of all matching statements is not identical

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system informs the user with a corresponding message that the template / template version of all matching statements is not identical and thsu the side-by-side editing can not be displayed. |

**Exception** No statements available for editing

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system informs the user with a corresponding message that no statements are available and thus the side-by-side editing can not be displayed. |

### UC1225 Manual statement reference selection

The user wants to select statement references manually (e.g. to override automatic selection as defined in [REQ1206](#BKM_A88D26C8_B56C_411B_89E2_365C12094093)).

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user identifies the statement |
| 2 | The user triggers the manual statement reference selection |
| 3 | The user identifies one or more statement references to be selected |
| 4 | The system verifies the selection of the user according to REQ1207 Manual selection of external statement references |
| 5 | The user confirms the selection |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **REQ1207**  Approved | **REQ1207 Manual selection of external statement references**  If a spreading template references other statements (by defining a reference on the "fs-external" tab, see the Financial Spreading User Guide for details) the statements are automatically selected by the system. Please see [REQ1206](#BKM_A88D26C8_B56C_411B_89E2_365C12094093) and the linked Use Cases for more information. Once a reference is automatically selected, the references are stored at the statement. Nevertheless it's still possible to execute the selection of external statements manually. The custom meta data META\_DATA\_KEY\_MANUAL\_SELECTION\_STATEMENT\_REF defines if the external statements selection is executed manually or not.  After a manual selection of external statements a validation is executed. This validation considers the following criteria:  - accounting date is older as the accounting date of the current statement  - accounting standard = accounting standard of current statement  - consolidation type = consolidation type of current statement  - same internal client ID  - used template = template of current statement  - status in {Calculated, Awaiting Finalization, Finalized}  - type = type of current statement  If one of these criterias isn't fulfilled the validation will fail and the manually selected external statement references won't be saved. |

### Traceability



Figure Diagram Sequence: Maintain financial statement



Figure Diagram Sequence: Maintain financial template



Figure Diagram Sequence: View financial statements

## Rating

After the user has prepared the details of the financial analysis the client is ready to be rated. The section "Rating" explains all use cases that are related to this process.



Figure Diagram Sequence: Rating

### UC1306 Confirm rating

The user wants to confirm the rating as ready for the approval process. Before the rating can be sent into the approval process it needs to be calculated again with the current input values. That is why the rating is confirmed. The input values are set to read-only so that no further changes are possible.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | Existing rating |
| **Post-condition:** |  | The rating is in state CALCULATED |
| **Post-condition:** |  | The rating is in state CONFIRMED |
| **Post-condition:** |  | The rating is persisted |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user triggers to confirm the rating |
| 2 | The system checks the data for completeness and consistency  **Exception:** Invalid input values |
| 3 | The system calculates the rating by calling UC1008 Calculate Rating |
| 4 | The system changes the state of the rating to CONFIRMED |
| 5 | The system adds an entry to the activity history, description "Rating confirmed" |
| 6 | The system persists the rating |
| 7 | The system informs the user about the action with a corresponding message |

**Exception** Invalid input values

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system informs the user about the validation result with corresponding messages |

### UC1307 Enable confirmed rating for editing

The user wants to edit the rating again at the ratings state confirmed. If the user needs to make some changes on the confirmed rating before sending it for approval, he needs to transfer the rating to an editable state again.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | The rating is in state CONFIRMED |
| **Post-condition:** |  | The rating is in state CALCULATED |
| **Post-condition:** |  | The rating is persisted |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user triggers edit of the rating |
| 2 | The system changes the state of the rating to CALCULATED |
| 3 | The system adds an entry to the activity history, description "Edit Rating" |
| 4 | The system persists the rating |
| 5 | The system removes the rating from any worklist |
| 6 | The system assigns the rating to the worklist of the role ACT0102 Rating Analyst |
| 7 | The system informs the user about the action with a corresponding message |

### UC1313 View rating

The user wants to view the detail information of a rating.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | Existing rating |
| **Post-condition:** |  | The rating data is displayed |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user identifies the rating |
| 2 | The user triggers the functionality for viewing the rating |
| 3 | The system displays the rating data to the user |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1306**  Approved | **DSC1306 Display older rating revisions**  When displaying an older revision of the rating the system displays a historic snapshot of the rating data. |
| **DSC2007**  Approved | **DSC2007 Viewing content of PDF document**  The system is not responsible for displaying content of provided PDF documents. For displaying the content of a PDF document the Web Browser is responsible (PDF viewer is registered as a browser plugin and can display PDF documents). The system only provides the PDF document. |
| **REQ1303**  Approved | **REQ1303 View rating details**  The system shall allow to view the details of a rating. |
| **REQ1312**  Approved | **REQ1312 Print rating**  The system shall be able to print rating data based on the current printing template. |

### UC1314 Search rating

The user wants to lookup a rating using a set of search criteria. The system displays the result set (all ratings matching the search criteria) paginated.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | None |
| **Post-condition:** |  | All ratings matching the search criteria are displayed |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user enters search criteria |
| 2 | The user triggers the functionality for searching ratings |
| 3 | The system filters the rating entities using the entered search criteria |
| 4 | The system confirms the action with displaying all ratings matching the entered search criteria |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1307**  Approved | **DSC1307 Display of discarded ratings**  It is not possible to view or search a rating in status "Discarded". |
| **REQ1310**  Approved | **REQ1310 Search rating**  The system shall provide functionality to search for ratings (e.g. PD) based on search criteria defined in the corresponding GUI specification. |

### UC1316 Print rating

The user wants to print the latest revision of a rating using the printing button.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | The rating is persisted. |
| **Post-condition:** |  | The printed document is provided to the user. |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user identifies the rating |
| 2 | The user triggers the generation of the print including the selection if it should be generated in PDF format |
| 3 | The system confirms the action by showing the generated file (based on the information currently stored in the database),  **Exception:** No matching template found |

**Exception** No matching template found

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | If no print template can be found a coresponding error message is shown |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC2005**  Approved | **DSC2005 rating print template**  The print template with the name "default\_rating\_report" is used for creating the print view of the rating.  By using this template all elements shown on the user interface (e.g. tabs, sections, input fields, tables) are visible in the generated document.  It is possible to exclude elements by setting the "visibleInReports" flag. This functionality is documented in more details in the Workplace User Guide. |

### UC1301 Maintain rating

The user wants to maintain a rating.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | A rating for the client is existing |
| **Post-condition:** |  | Updated rating is persisted |
| **Pre-condition:** |  | Rating is in status NEW, DRAFT or CALCULATED |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user identifies the rating |
| 2 | The user maintains input values of the rating |
| 3 | The user triggers the functionality for saving the rating |
| 4 | The system checks if all mandatory fields are filled (given they are visible and editable)  **Alternate:** Invalid user input |
| 5 | The system adds an entry to the activity history, Description "Rating saved" |
| 6 | The system persists the updated rating information |
| 7 | The system assigns the rating to the worklist of the current user´s role |
| 8 | The system informs the user about the action |

**Alternate** Invalid user input

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system informs the user about vaildation errors that prevented the persistence of the updated information |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1300**  Approved | **DSC1300 No automatic rescoring for clients**  The system will not provide functionality for an automatic scoring or rating of clients. All scoring functionality must be triggered either by a user or an external system |
| **DSC1301**  Approved | **DSC1301 Rating is based on finalized financial statements only**  Only finalized financial statements will be taken into consideration for the rating of a client |
| **DSC2003**  Approved | **DSC2003 Update of rule model version**  The functionality (e.g. business logic, layout logic etc.) of a top level entity (client, rating, financial statement, application) in the Credit Risk Management Platform is defined by a corresponding ACTICO Rules model and its version. The default behavior of the system is that once an entity (e.g. a client) gets created in the system, the system will always process the entity with the ACTICO Rules model version that was used to persist the entity.  That means that e.g. if a new field is added at the client user interface, this field would only appear for clients created with a ACTICO Rules model version that contains the new field. In order to display the field on the UI it would be necessary to delete the client and recreate it from scratch.  In order to prevent this default behavior, the system has been adapted in a way that for ratings in the DRAFT or CALCULATED state and for client entities in the SAVED state the system performs the following check as soon as the entity is opened by the user (e.g. loading a rating or client for displaying it)  - check if the currently valid rule model version is different than the version associated with the entity  - if this is the case, the system performs an automatic rule model update if the user has the required permission for the current rule model (AUTOMATED\_RULE\_MODEL\_UPGRADE\_CLIENT, AUTOMATED\_RULE\_MODEL\_UPGRADE\_RATING, AUTOMATED\_RULE\_MODEL\_UPGRADE\_ORI, AUTOMATED\_RULE\_MODEL\_UPGRADE\_BULK\_APPROVAL)  If the rule model version is updated, the system:  - adds a diary entry  - performs an update of the rule model version of the entity to the currently valid rule model version  - saves the entity  - in case of errors during the update: display a warning message to the user  Displaying an error is necessary as changes between rule model versions could be incompatible (e.g. the datatype of a field could change from an alpha-numeric to a numeric field - and it is impossible for the system to convert a string (e.g. "asdf") to a number (e.g. 42). In this case the system will inform the user that there have been mapping errors. The user can then re-fill data for changed datatypes or e.g. reload client data from external client management system.  The entity is persisted after the upgrade of the rule model version. |
| **DSC2010**  Approved | **DSC2010 Rating Rule Model update**  Updating the rule model version (see [DSC2003](#BKM_EB178B1C_CC77_455B_9B8F_97BB2494E3E9)) of a rating is only possible if the rating is in status DRAFT or CALCULATED. |
| **REQ1300**  Approved | **REQ1300 Update ratings**  The system shall allow to update a rating as far as the rating is not in a final state. The final states for a rating are: APPROVED, DECLINED or DISCARDED. |

### UC1308 Discard rating

The user wants to discard a rating.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | The rating is in state either DRAFT, CALCULATED or CONFIRMED |
| **Post-condition:** |  | The rating is persisted |
| **Post-condition:** |  | The rating state is changed to DISCARDED |
| **Post-condition:** |  | The rating is removed from any worklist |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user identifies the rating to be discarded |
| 2 | The user triggers the functionality for discarding the rating |
| 3 | The system displays a dialog for confirmation of discarding of the current rating  **Alternate:** The user cancels the action |
| 4 | The user confirms the input |
| 5 | The system changes the rating state to DISCARDED |
| 6 | The system removes the rating from any worklist |
| 7 | The system persists the rating |
| 8 | The system adds an entry to the activity history, Description "Rating discarded" |
| 9 | The system informs the user about the action |

**Alternate** The user cancels the action

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system confirms the action by closing the dialog |

### UC1300 Create new rating

The user wants to create a new rating of a specific rating type (e.g. PD) for the client based on the provided input data.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | Existing client |
| **Pre-condition:** |  | No rating of the same rating type in a non-final state is existing for the client |
| **Post-condition:** |  | The new rating in initial state is displayed. |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user identifies the client |
| 2 | The user identifies the type of rating to be created (PD or LGD). |
| 3 | The user triggers the functionality for creating a rating for the client |
| 4 | The system creates a new rating in initial state  **Exception:** Rating in a non final state already exists |
| 5 | The system adds an entry to the activity history, description "Rating created" |

**Exception** Rating in a non final state already exists

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system informs the user with a corresponding error message that the rating cannot be created due to an already existing rating. |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1302**  Approved | **DSC1302 Only one non-final rating per client**  There will be only one rating per rating model in a non-final state for the client (PD) |

### UC1303 Trigger rating calculation

The user wants to calculate the rating. The actual scorecard logic is specified in the external file "CRMP Template PD Scorecard Specification".

The calculation might fail due to errors in the scorecard.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | Rating in state DRAFT or CALCULATED |
| **Post-condition:** |  | The rating is persisted |
| **Post-condition:** |  | The rating is in state CALCULATED |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user identifies the rating |
| 2 | The user provides information about the rating which may be used during the calculation. |
| 3 | The user triggers the functionality for calculating the rating |
| 4 | The system calculates the rating by calling UC1304 Calculate rating  **Exception:** Rating Calculation failed |
| 5 | The system adds an entry to the activity history, description "Rating calculated" |
| 6 | The system changes the state of the rating to CALCULATED |
| 7 | The system persists the rating |
| 8 | The system confirms the action with a corresponding message |

**Exception** Rating Calculation failed

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system informs the user with a corresponding message that the calculation failed |
| 2 | The rating is not persisted |

### UC1305 Add override to rating result

The user wants to override the calculated rating and provides an adjusted value for the calculated rating manually.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | The rating is in state CALCULATED |
| **Post-condition:** |  | An overruled rating is displayed |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user identifies the rating |
| 2 | The user identifies the value for the override rating field and the comment of the override |
| 3 | The user triggers the functionality for saving an override rating value |
| 4 | The system saves the rating |
| 5 | The system displays the overwritten rating value as final rating to the user |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **REQ1301**  Approved | **REQ1301 Manual overruling of ratings**  The system shall allow entering a value for override rating at the rating only if the relevant rating is in state CALCULATED. |

### UC1309 Send for Approval

The user wants to recommend the rating for approval and sends it therefor to the approval user. This is the first step of the approval process for every client rating. According to the business rules a rating becomes valid after two distinct users recommended and approved it.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | The rating is in state CONFIRMED |
| **Post-condition:** |  | The rating is persisted |
| **Pre-condition:** |  | A analyst comment exists |
| **Post-condition:** |  | The rating is assigned to the worklist of the approval user. Other worklist assignments are removed |
| **Post-condition:** |  | The rating is in state SentForApproval |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user identifies the rating to be send for approval |
| 2 | The user triggers the functionality for sending the rating to approval process |
| 3 | The system changes the state of the rating to SendForApproval  **Exception:** The analyst comment is missing |
| 4 | The system adds an entry to the activity history, description "Rating send for approval" |
| 5 | The system removes the rating from any worklist |
| 6 | The system assigns the rating to the worklist of the role ACT0107 Rating Approver |
| 7 | The system persists the rating |
| 8 | The system informs the user about the action with a corresponding message |

**Exception** The analyst comment is missing

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system informs the user about the missing comment with a corresponding message |
| 2 | The system does not change the rating state |
| 3 | The system does not persist the rating |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **REQ1300**  Approved | **REQ1300 Update ratings**  The system shall allow to update a rating as far as the rating is not in a final state. The final states for a rating are: APPROVED, DECLINED or DISCARDED. |
| **REQ1302**  Approved | **REQ1302 Decide rating by defined approval process**  The system shall provide functionality for executing a decision making process for ratings. |
| **REQ1309**  Approved | **REQ1309 Decider and analyst sent rating for approval need to be different user**  The system shall not allow sending a rating for approval and deciding of a rating by the identical user. The system must ensure that there are always two different users involved in the approval process. |

### UC1311 Decide rating

The user wants to decide the rating of a client. The user decides if he approves or declines the rating. This is 2nd and last part of the approval process of any rating. According to the business rules a rating becomes only valid after two distinct users recommended and finalize it.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | The rating is in state SentForApproval |
| **Pre-condition:** |  | A approver comment exists |
| **Post-condition:** |  | The rating is in state APPROVED or DECLINED |
| **Post-condition:** |  | The rating is persisted |
| **Post-condition:** |  | The rating is removed from any worklist |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user identifies the rating to be approved  **Alternate:** Decline rating |
| 2 | The user triggers the functionality for declining the rating |
| 3 | The system changes the rating state to APPROVED  **Exception:** The approver comment is missing |
| 4 | The system adds an entry to the activity history, description "Rating approved" |
| 5 | The system removes the rating from any worklist |
| 6 | The system persists the rating |
| 7 | The system updates the final rating information of the client by updating the client document |
| 8 | The system informs the user about the performed action with a corresponding message |

**Alternate** Decline rating

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user identifies the rating to be declined |
| 2 | The user confirms the input |
| 3 | The system changes the rating state to DECLINED |
| 4 | The system adds an entry to the activity history, description "Rating declined" |

**Exception** The approver comment is missing

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system informs the user about the missing comment with a corresponding message |
| 2 | The system does not change the rating state |
| 3 | The system does not persist the rating |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1304**  Approved | **DSC1304 User role same for all assigned rating models**  Via the role that is assigned to the user, the user gets certain permissions. These permissions define what action the user is allowed to perform on ratings. But it is not possible to assign permissions just for certain rating models, e.g. user has the roles [ACT0103 Rating Analyst](#BKM_F74A9AD4_89E8_41BF_A967_19B667F32E97) and [ACT0107 Rating Approver](#BKM_F65F1B81_0C73_4871_B626_BFBA6A8CA393). Rating model a and b are assigned to the user as well. For both rating models the user is allowed to work on the ratings as analyst or approver. But it is not possible to restrict that the user is just analyst for rating model a and just approver for rating model b. |
| **REQ1302**  Approved | **REQ1302 Decide rating by defined approval process**  The system shall provide functionality for executing a decision making process for ratings. |
| **REQ1309**  Approved | **REQ1309 Decider and analyst sent rating for approval need to be different user**  The system shall not allow sending a rating for approval and deciding of a rating by the identical user. The system must ensure that there are always two different users involved in the approval process. |
| **REQ1313**  Approved | **REQ1313 Publishing of ratings**  The system shall publish the rating if the rating is saved. |

### UC1304 Calculate rating

This is a technical use case and it is called from use cases that require an implicit calculation of the rating value.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | None |
| **Post-condition:** |  | Rating is calculated |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system checks the data for completeness and consistency  **Exception:** Invalid input data |
| 2 | The system calculates the rating based on the predefined logic |

**Exception** Invalid input data

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system does not calculate the rating and returns the corresponding details to the calling UC |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1301**  Approved | **DSC1301 Rating is based on finalized financial statements only**  Only finalized financial statements will be taken into consideration for the rating of a client |
| **REQ1307**  Approved | **REQ1307 Only finalized financial statements not older than 12 month available for rating calculation**  The system must ensure that only financial statements in state FINAL and with the date of finalization is not older than 12 months are used for rating calculation. |

### UC1310 Request adjustment

The user wants to request adjustments to the recommended rating. Therefore the user rejects the rating which is sent for approval and indicates that the user who has initiated the approval process needs to adjust the rating for specific reasons. Theses reasons are provided by the current user as comments.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | The rating is in state SentForApproval |
| **Post-condition:** |  | The rating is in state CALCULATED |
| **Post-condition:** |  | The rating is persisted |
| **Post-condition:** |  | The input values for the rating are editable again |
| **Post-condition:** |  | The rating is assigned to the worklist of the user who originally sent the rating for approval. All other assignments to worklists are removed |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user identifies the rating which needs adjustments |
| 2 | The user triggers the functionality for requesting adjustment |
| 3 | The system changes the state of the rating to CALCULATED |
| 4 | The system removes the rating from any worklist |
| 5 | The system assigns the rating to the worklist of the user who sent it for approval |
| 6 | The system adds an entry to the activity history, description "Rating adjustment requested" |
| 7 | The system persists the rating |
| 8 | The system informs the user about the performed action with a corresponding message |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **REQ1300**  Approved | **REQ1300 Update ratings**  The system shall allow to update a rating as far as the rating is not in a final state. The final states for a rating are: APPROVED, DECLINED or DISCARDED. |

### UC1318 View rating worklist

The user wants to view the list of ratings that are assigned to him. Those are the ratings the user should perform an action on.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | None |
| **Post-condition:** |  | All ratings assigned to the user´s role are displayed, dependent of the selected workflow view |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user enters the filter criteria |
| 2 | The user triggers the functionality for viewing rating worklist |
| 3 | The system filters the list of ratings based on the following information: Assigned to current user, selected worklist view |
| 4 | The system displays all ratings that match the filter criteria  **Alternate:** No matching ratings found |

**Alternate** No matching ratings found

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system cannot find any rating matching the search criteria |
| 2 | The system displays an empty rating worklist |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **REQ1000**  Approved | **REQ1000 Standard Worklists**  The system shall provide worklists for clients, financial statements, ratings and applications. |
| **REQ1001**  Approved | **REQ1001 Worklist items visibility**  The user shall see the worklist items that are assigned to him. |

### UC1321 View rating activity history

The user wants to view the system's activity history of the rating. The activity history records and contains entries for all important changes to a rating entity. The particular types of entries for the rating activity history are specified as part of the specific use cases that trigger an entry in the activity history .

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | The rating exists in the system |
| **Post-condition:** |  | The rating´s activity history is shown |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user identifies the rating  **Alternate:** An older revision of the client is displayed |
| 2 | The user confirms the action to view the activity history |
| 3 | The systems displays the rating activity history |

**Alternate** An older revision of the client is displayed

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system displays the historic diary (only the diary entries that were available in the system when the displayed client revision was saved - and not the diary entries that are now available in the system) |
| 2 | The system does not offer any functionality to navigate to older revisions (e.g client) or maintain data of historic revisions. |

### Traceability



Figure Diagram Sequence: Create rating



Figure Diagram Sequence: Decide rating



Figure Diagram Sequence: Maintain rating



Figure Diagram Sequence: Search rating



Figure Diagram Sequence: View rating

## Bulk Operation

A Bulk Operation defines a set of ratings that should be processed automatically without user interaction after starting the bulk operation. An example for this is a bulk-approval of ratings in the status "SentForApproval".



Figure Diagram Sequence: Bulk Operation

### UC1319 Create Bulk Approve

A user wants to decide multiple ratings at once. This use case describes the selection of the to be approved ratings and combining them in a Bulk Operation.

|  |  |  |
| --- | --- | --- |
| **Post-condition:** |  | None |
| **Post-condition:** |  | Bulk Approve successfully created |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user enters filter criteria for identifying the to be approved ratings |
| 2 | The user triggers the creation of a Bulk Approve |
| 3 | The system displays a list of ratings based on the entered filter criteria. |
| 4 | The user selects one or more of the displayed ratings |
| 5 | The user triggers the functionality for creating a bulk approve  **Alternate:** No ratings selected for bulk approve |
| 6 | The system adds an entry to the activity history of the Bulk Approve, description "Bulk Operation Saved" |
| 7 | The system confirms the action and displays the Bulk Approve |

**Alternate** No ratings selected for bulk approve

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user did not select any ratings for bulk approve |
| 2 | The system displays an error message |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC2003**  Approved | **DSC2003 Update of rule model version**  The functionality (e.g. business logic, layout logic etc.) of a top level entity (client, rating, financial statement, application) in the Credit Risk Management Platform is defined by a corresponding ACTICO Rules model and its version. The default behavior of the system is that once an entity (e.g. a client) gets created in the system, the system will always process the entity with the ACTICO Rules model version that was used to persist the entity.  That means that e.g. if a new field is added at the client user interface, this field would only appear for clients created with a ACTICO Rules model version that contains the new field. In order to display the field on the UI it would be necessary to delete the client and recreate it from scratch.  In order to prevent this default behavior, the system has been adapted in a way that for ratings in the DRAFT or CALCULATED state and for client entities in the SAVED state the system performs the following check as soon as the entity is opened by the user (e.g. loading a rating or client for displaying it)  - check if the currently valid rule model version is different than the version associated with the entity  - if this is the case, the system performs an automatic rule model update if the user has the required permission for the current rule model (AUTOMATED\_RULE\_MODEL\_UPGRADE\_CLIENT, AUTOMATED\_RULE\_MODEL\_UPGRADE\_RATING, AUTOMATED\_RULE\_MODEL\_UPGRADE\_ORI, AUTOMATED\_RULE\_MODEL\_UPGRADE\_BULK\_APPROVAL)  If the rule model version is updated, the system:  - adds a diary entry  - performs an update of the rule model version of the entity to the currently valid rule model version  - saves the entity  - in case of errors during the update: display a warning message to the user  Displaying an error is necessary as changes between rule model versions could be incompatible (e.g. the datatype of a field could change from an alpha-numeric to a numeric field - and it is impossible for the system to convert a string (e.g. "asdf") to a number (e.g. 42). In this case the system will inform the user that there have been mapping errors. The user can then re-fill data for changed datatypes or e.g. reload client data from external client management system.  The entity is persisted after the upgrade of the rule model version. |
| **DSC2008**  Approved | **DSC2008 Bulk Operation Rule Model Update.**  Updating the rule model version (see [DSC2003](#BKM_EB178B1C_CC77_455B_9B8F_97BB2494E3E9)) of a bulk operation is possible if the status of the bulk operation in SAVED |
| **REQ1309**  Approved | **REQ1309 Decider and analyst sent rating for approval need to be different user**  The system shall not allow sending a rating for approval and deciding of a rating by the identical user. The system must ensure that there are always two different users involved in the approval process. |
| **REQ1510**  Approved | **REQ1510 Decide multiple ratings at same time - bulk approval**  The system shall provide the functionality for deciding (e.g. approve or decline) multiple ratings in a bulk approval job. |
| **REQ1512**  Approved | **REQ1512 Fixed rating filter for bulk approve**  The system must ensure that only ratings which are in state "SendForApproval" can be decided via bulk approval. Additionally the system must ensure that the user who sent the rating for approval process and the user who wants to decide the ratings via bulk approval are not identical. |

### UC1315 Execute Bulk Approve

The user wants to decide (e.g. decline, approve) multiple ratings via bulk approval.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | At least one rating is ready for decision. |
| **Post-condition:** |  | Ratings displayed with status information |
| **Post-condition:** |  | Successfully processed ratings are in corresponding final state. |
| **Post-condition:** |  | The ratings are persisted. |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user identifies the bulk approval |
| 2 | The user enters input values for the decision (e.g. Approve or Decline) |
| 3 | The user triggers the functionality for executing the bulk approval |
| 4 | The system adds an entry to the activity history of the Bulk Approve, description "Bulk Operation Executed" |
| 5 | The system executes the Bulk Approve of the selected ratings by invoking UC1311 Decide rating - handind over the decision (approved or declined) |
| 6 | The system confirms the action by showing the status of the execution for each rating  **Exception:** An error occured during rating processing |

**Exception** An error occured during rating processing

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system logs the error and persists the error message |
| 2 | The system continues with the next rating |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1304**  Approved | **DSC1304 User role same for all assigned rating models**  Via the role that is assigned to the user, the user gets certain permissions. These permissions define what action the user is allowed to perform on ratings. But it is not possible to assign permissions just for certain rating models, e.g. user has the roles [ACT0103 Rating Analyst](#BKM_F74A9AD4_89E8_41BF_A967_19B667F32E97) and [ACT0107 Rating Approver](#BKM_F65F1B81_0C73_4871_B626_BFBA6A8CA393). Rating model a and b are assigned to the user as well. For both rating models the user is allowed to work on the ratings as analyst or approver. But it is not possible to restrict that the user is just analyst for rating model a and just approver for rating model b. |
| **REQ1302**  Approved | **REQ1302 Decide rating by defined approval process**  The system shall provide functionality for executing a decision making process for ratings. |
| **REQ1309**  Approved | **REQ1309 Decider and analyst sent rating for approval need to be different user**  The system shall not allow sending a rating for approval and deciding of a rating by the identical user. The system must ensure that there are always two different users involved in the approval process. |
| **REQ1313**  Approved | **REQ1313 Publishing of ratings**  The system shall publish the rating if the rating is saved. |
| **REQ1501**  Approved | **REQ1501 View bulk operation details**  The system shall allow to view the details of a bulk operation (e.g. bulk approval) including the ratings involved, status of execution and result of execution. |
| **REQ1510**  Approved | **REQ1510 Decide multiple ratings at same time - bulk approval**  The system shall provide the functionality for deciding (e.g. approve or decline) multiple ratings in a bulk approval job. |
| **REQ1511**  Approved | **REQ1511 Verify rating status during bulk approve**  Before deciding a rating in a bulk approve it must be ensured that the rating is in the status "send for approval". If this is not the case an error must be logged and the error message must be stored so it can be viewed by the user who triggered the bulk approval operation. |

### UC1317 Search Bulk Operation

The user wants to lookup a bulk-operation using a set of search criteria. The system displays the result set (all bulk-operations matching the search criteria) paginated.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | None |
| **Post-condition:** |  | All bulk-operations matching the search criteria are displayed |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user enters search criteria |
| 2 | The user triggers the functionality for searching Bulk Operations |
| 3 | The system filters the Bulk Operations using the entered search criteria |
| 4 | The system confirms the action with displaying all Bulk Operations matching the entered search criteria |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **REQ1500**  Approved | **REQ1500 Search bulk operations**  The system shall provide functionality to search for bulk approvals that were defined and/or executed based on search criteria defined in the corresponding GUI specification. |

### UC1320 View Bulk Operation

The user want's to view details about a specific bulk operation (e.g. bulk approval)

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | None |
| **Post-condition:** |  | The Bulk Operation is displayed to the user |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user identifies the Bulk Operation |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **REQ1501**  Approved | **REQ1501 View bulk operation details**  The system shall allow to view the details of a bulk operation (e.g. bulk approval) including the ratings involved, status of execution and result of execution. |

### UC1322 View Bulk Operation activity history

The user wants to view the system's activity history of the Bulk Operation. The activity history records and contains entries for all important changes to a Bulk Operation entity. The particular types of entries for the Bulk Operation activity history are specified as part of the specific use cases that trigger an entry in the activity history .

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | The Bulk Operation exists in the system |
| **Post-condition:** |  | The Bulk Operation´s activity history is shown |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user identifies the Bulk Operation |
| 2 | The user confirms the action to view the activity history |
| 3 | The systems displays the Bulk Operation activity history  **Alternate:** An older revision of the client is displayed |

**Alternate** An older revision of the client is displayed

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system displays the historic diary (only the diary entries that were available in the system when the displayed client revision was saved - and not the diary entries that are now available in the system) |
| 2 | The system does not offer any functionality to navigate (e.g. to older client revision) or maintain |

### Traceability



Figure Diagram Sequence: Create Bulk Operation



Figure Diagram Sequence: Maintain Bulk Operation



Figure Diagram Sequence: Search and View Bulk Operation

## Limit Application

The limit application enables the user to manage the limits granted to clients and groups of clients.



Figure Diagram Sequence: Limit Application

### UC1800 Create application manually

The user can create a limit application for a selected client and his group.

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | A user triggers event "create application" |
| 2 | The system validates DSC1403 Only one non-final limit application per client **Exception:** A participating client has an open non-final application |
| 3 | The system creates an application |
| 4 | The system retrieves the client information of all participating clients using UC1811 Retrieve client information |
| 5 | The system stores the new client information at application level |
| 6 | The system adds an entry to the activitiy history, that the application has been created |
| 7 | The system persists and publishes the application |
| 8 | The system creates a workitem for the role "Application Maintainer" |

**Exception** A participating client has an open non-final application

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system displays an error message an prevents to create an application |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1403**  Approved | **DSC1403 Only one non-final limit application per client**  There will be only one limit application in a non-final state where a client participates. |
| **DSC1405**  Approved | **DSC1405 Limit applications are created for the group of a client**  When creating a limit application, the application is created for a specific group of the client. All clients within the selected group are participating within the application and their limit can be modified. If the client is not part of a group, the client itself will be the main client and treated as its own group. |
| **REQ1405**  Approved | **REQ1405 Client data used within limit applications**  Each application has a main client. The following information of the main client are used and displayed:  - general data  - client analysis  Other information is used and displayed of all participating clients:  - rating  - financials  - colatterals |
| **REQ1409**  Approved | **REQ1409 Publishing of limit applications**  The system shall publish the limit application if the application is saved. |
| **REQ1410**  Proposed | **REQ1410 Determine limit key figures**  The system determines the limit key figures, whenever the user changes information about the requested limits:  - Total requested limit (sum of all new limit requests)  - Total limit gap (gap of new limit and current limit)  - Sum of collaterals (sum of all nomin  - Unsecured % (max(0;1-(total requested limit / sum of collaterals))) |

### UC1816 Create application by interface

Another system (Remote API user) can create a limit application via an interface call.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | The provided main client is a single client or the head of the group |
| **Post-condition:** |  | An application has been created. |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | A remote API user triggers the functionality to create a new application |
| 2 | The system validates that all client exists and the main client is the head of his group  **Exception:** The provided main client is not the head of his group  **Exception:** Any of the provided clients does not exist |
| 3 | The system validates DSC1403 Only one non-final limit application per client **Exception:** A participating client has an open non-final application |
| 4 | The system creates an application |
| 5 | The system retrieves the client information of all participating clients of the identified group using UC1811 Retrieve client information |
| 6 | The system stores the new client information at application level |
| 7 | The system adds an entry to the activitiy history, that the application has been created |
| 8 | The system persists and publishes the application |
| 9 | The system submitts the application using UC1804 Submit application |

**Exception** The provided main client is not the head of his group

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system displays an error message and no application is created |

**Exception** Any of the provided clients does not exist

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system displays an error message and no application is created |

**Exception** A participating client has an open non-final application

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system displays an error message and no application is created |

**Alternate** Application is approved / declined

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system displays the application as read only |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1403**  Approved | **DSC1403 Only one non-final limit application per client**  There will be only one limit application in a non-final state where a client participates. |
| **DSC1405**  Approved | **DSC1405 Limit applications are created for the group of a client**  When creating a limit application, the application is created for a specific group of the client. All clients within the selected group are participating within the application and their limit can be modified. If the client is not part of a group, the client itself will be the main client and treated as its own group. |
| **REQ1405**  Approved | **REQ1405 Client data used within limit applications**  Each application has a main client. The following information of the main client are used and displayed:  - general data  - client analysis  Other information is used and displayed of all participating clients:  - rating  - financials  - colatterals |
| **REQ1409**  Approved | **REQ1409 Publishing of limit applications**  The system shall publish the limit application if the application is saved. |
| **REQ1410**  Proposed | **REQ1410 Determine limit key figures**  The system determines the limit key figures, whenever the user changes information about the requested limits:  - Total requested limit (sum of all new limit requests)  - Total limit gap (gap of new limit and current limit)  - Sum of collaterals (sum of all nomin  - Unsecured % (max(0;1-(total requested limit / sum of collaterals))) |

### UC1801 Maintain application

The user maintains the limit application and its changeable attributes.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | The application is opened and viewed by the user. |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user changes application information |
| 2 | The user triggers the functionallity to save the application |
| 3 | The system adds an entry to the activity history that the application has been saved |
| 4 | The system persists and publishes the changes |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1004**  Approved | **DSC1004 Limited support of multi currencies**  With the exception of the Financial Spreading module the system does not provide any features related to exchange rates. For this reason no conversion of amounts is supported. Currencies can only be used as an indicator of a values unit when displayed or exposed on any system interface.  When a currency value is persisted (see application entity) the value is persisted alongside with a currency ([BO0028 Currency Amount](#BKM_3771021A_DFBA_4A71_8960_F2655E12049B) - set to EUR per default).  Within interfaces a currency can be provided for currency values, in order to prepare the implementation of multi-currency support.  The currency values must be set to "EUR" when providing data to the interface.  If any other currency than "EUR" is provided, an error message is created and blocks further execution. |
| **REQ1300**  Approved | **REQ1404 Limit request needs to be higher than the drawdown amount**  The limit of each participating client is greater than his drawdown amount. |
| **REQ1301**  Approved | **REQ1407 Validate and update group information**  The system must check if the group information of the limit application is still valid. It must return a warning if the group information is no longer valid. As long as the limit application is in a draft state, the group information is automatically updated, once the system notices, that the group information has been changed. |
| **REQ1409**  Approved | **REQ1409 Publishing of limit applications**  The system shall publish the limit application if the application is saved. |
| **REQ1410**  Proposed | **REQ1410 Determine limit key figures**  The system determines the limit key figures, whenever the user changes information about the requested limits:  - Total requested limit (sum of all new limit requests)  - Total limit gap (gap of new limit and current limit)  - Sum of collaterals (sum of all nomin  - Unsecured % (max(0;1-(total requested limit / sum of collaterals))) |

### UC1802 View application

The user wants to view the limit application.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | The application already exists. |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user triggers the functionality for viewing an application |
| 2 | The system retrieves the current client information of all participating clients using UC1811 Retrieve client information |
| 3 | The system stores the new client information at application level |
| 4 | The system displays the application data |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1404**  Approved | **DSC1404 Display older limit application revisions**  When displaying an older revision of the limit application the system displays a historic snapshot of the rating data. |
| **REQ1400**  Approved | **REQ1400 View limit application details**  The system shall allow to view the details of a limit application. |
| **REQ1401**  Approved | **REQ1401 Only finalized financial statements not older than 12 month are displayed**  The system must ensure that only the latest financial statement, which is in a FINAL state and with the date of finalization is not older than 12 months is displayed for each participating client. |
| **REQ1405**  Approved | **REQ1405 Client data used within limit applications**  Each application has a main client. The following information of the main client are used and displayed:  - general data  - client analysis  Other information is used and displayed of all participating clients:  - rating  - financials  - colatterals |
| **REQ1410**  Proposed | **REQ1410 Determine limit key figures**  The system determines the limit key figures, whenever the user changes information about the requested limits:  - Total requested limit (sum of all new limit requests)  - Total limit gap (gap of new limit and current limit)  - Sum of collaterals (sum of all nomin  - Unsecured % (max(0;1-(total requested limit / sum of collaterals))) |

### UC1804 Submit application

The user can submit the application. Dependend upon the necessary decision competence (UC1807) the application will be automatically approved/declined (UC1812) or send to a manual decision workflow. The requested limits are no longer editable.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | The application is in a draft state |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user triggers the functionality to submit the application |
| 2 | The system validates REQ1404 Limit request needs to be higher than the drawdown amount **Exception:** The limit request is invalid |
| 3 | The system validates that the client group information are unchanged using UC1811 Retrieve client information **Exception:** The client group information has changed |
| 4 | The system adds an entry to the activity history |
| 5 | The systems determines the decision attributes using UC1807 Determine decision attributes |
| 6 | The system moves the application in state "Awaiting Approval"  **Alternate:** Application can be decided automatically |
| 7 | The system persists and publishes the application |
| 8 | The system deletes all workitems for the "Application Maintainer" and creates a workitem for the next decider role |

**Exception** The client group information has changed

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system displays an error message |

**Alternate** Application can be decided automatically

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The systems performs an automated application decision using UC1812 Automated application decision |

**Exception** The limit request is invalid

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system displays an error message |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **REQ1300**  Approved | **REQ1404 Limit request needs to be higher than the drawdown amount**  The limit of each participating client is greater than his drawdown amount. |
| **REQ1301**  Approved | **REQ1407 Validate and update group information**  The system must check if the group information of the limit application is still valid. It must return a warning if the group information is no longer valid. As long as the limit application is in a draft state, the group information is automatically updated, once the system notices, that the group information has been changed. |
| **REQ1409**  Approved | **REQ1409 Publishing of limit applications**  The system shall publish the limit application if the application is saved. |

### UC1803 Decide application

The user decides an application. Following decisions are available, if the user has necessary permission, :

- approve application (final state)

- decline application (final state)

- positive & negative vote for the application

- return application to an earlier decision stage

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | The application is in state "Awaiting Approval". |
| **Pre-condition:** |  | The group information of the application is still valid. |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user triggers the functionality to submit a decision |
| 2 | The system validates the user input |
| 3 | The system validates that the client group information is unchanged using UC1811 Retrieve client information **Exception:** Client group information has changed |
| 4 | The system adds an entry to the activity history |
| 5 | The system determines the next state of the application, as defined in REQ1411 Determine final decision level of application **Alternate:** Approved application  **Alternate:** Declined application |
| 6 | The system persists and publishes the application |
| 7 | The system deletes all workitems of the application and creates one for the next decider role |

**Alternate** Approved application

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system persists and publishes the application |
| 2 | The system deletes all workitems of the application |
| 3 | The system updates the client limit information using UC1816 Update client limit information |

**Exception** Client group information has changed

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system returns an error message |

**Alternate** Declined application

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system persists and publishes the application |
| 2 | The system deletes all workitems of the application |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **REQ1406**  Approved | **REQ1406 Decide application by defined approval process**  The system shall provide functionality for executing a decision making process for applications.  The system shall not allow a user to perform two steps of the decision workflow. |
| **REQ1301**  Approved | **REQ1407 Validate and update group information**  The system must check if the group information of the limit application is still valid. It must return a warning if the group information is no longer valid. As long as the limit application is in a draft state, the group information is automatically updated, once the system notices, that the group information has been changed. |
| **REQ1409**  Approved | **REQ1409 Publishing of limit applications**  The system shall publish the limit application if the application is saved. |
| **REQ1411**  Proposed | **REQ1411 Determine final decision level of application**  The final decision level of the application depends upon the automatically determined decision level in [UC1807](#BKM_8841EF37_2EA1_4E74_97AD_8382F2AFD006) and the potential overwrite within [UC1808](#BKM_D5C6E984_C3A6_4A76_AFD2_3132284EF4D1).  If the user has not overwritten the decision level, the automatically determined decision level is used.  The decision level of the application effects the process after the risk vote has been made. There are three paths for the different selection options:   * If the decision level "Single Competence" is chosen by the user or automatically determined by the system, the system will display the section "Single Competence" and allow a single user to approve or decline the application. * If the decision level "Four Eyes" is chosen by the user or automatically determined by the system, the system will display the section "Four Eyes" for a user to recommend approval or recommend declination of the application or return it to risk vote or sales vote. After the first user has provided a recommendation, the system will display the section "Four Eyes" for a second user who is able to approve or decline the application or return it to risk vote or sales vote. * If the decision level "Committee Decision" is chosen by the user or automatically determined by the system, the system will display the section "Committee Decision Recommendation for a user to recommend approval or recommend declination of the application or return it to risk vote or sales vote. After the first user has provided a recommendation the system will display the section "Committee Decision" for a second user who is able to approve or decline the application or return it to risk vote or sales vote. |

### UC1805 Restart application

The user restarts the application. The decision process is reset and the application will return to DRAFT state.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | The application is in the state "Awaiting Approval" |
| **Post-condition:** |  | The application is in the state "Draft" |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The users triggers the functionality to restart an application |
| 2 | The system resets all decision attributes |
| 3 | The system adds an entry to the activity history |
| 4 | The system persits and publishes the application |
| 5 | The system deletes all workitems for the current decider role and creates a workitem for the role "Application Maintainer" |
| 6 | The system reopens the application using UC1802 View application |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **REQ1301**  Approved | **REQ1407 Validate and update group information**  The system must check if the group information of the limit application is still valid. It must return a warning if the group information is no longer valid. As long as the limit application is in a draft state, the group information is automatically updated, once the system notices, that the group information has been changed. |
| **REQ1409**  Approved | **REQ1409 Publishing of limit applications**  The system shall publish the limit application if the application is saved. |

### UC1806 Discard application

The user discards the application. The application is then in a final state and can no longer be edited.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | The application already exists and is in a non-final state |
| **Post-condition:** |  | The application is in a discarded state |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user triggers the functionality to discard the application |
| 2 | The system adds an entry to the activity history |
| 3 | The system persits and publishes the application |
| 4 | The system removes all workitems |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **REQ1409**  Approved | **REQ1409 Publishing of limit applications**  The system shall publish the limit application if the application is saved. |

### UC1807 Determine decision attributes

The system determines:

- the necessary decision competence

- the proposed limit review date.

The decision competence is determined by the worst rating of any participating client and the requested limit. The default review date is one year after the application has been requested.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | The application has been submitted. |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system is triggered to determine the decision attributes |
| 2 | The system calculates the proposed next limit review date |
| 3 | The system determines the necessary decision level according to REQ1413 Determine the decision level |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **REQ1309**  Approved | **REQ1403 Next limit review date needs to be in the future**  The next limit review date needs to be in the future. The automatically determined review date is one year after the request of the limit application. |
| **REQ1412**  Proposed | **REQ1412 Rating to be used for application decision**  During the decision of the application a rating must be sourced to determine the decision level (see [REQ1413 Determine the decision level](#BKM_B466E6C9_E852_4262_B2D7_E1B6F8D6FFE7)).  The rating to be used can be determined as followed:   * The weakest rating of all participating clients ([BO0001 Client](#BKM_1B370D5B_B38D_4C8B_AAC4_650204E16EE5).active\_rating.rating\_class) is used |
| **REQ1413**  Proposed | **REQ1413 Determine the decision level**  The calculated decision level of the application is determined by the rating linked to the application ([BO2003 Rulemodel Limit Application](#BKM_13150962_1B2F_45BC_94E1_2E1AE24A0D77).rating) and the requested total limit ([BO0031 Limit Key Figures.](#BKM_B7D85925_17EB_4899_92A4_3DDC192EA589)total\_new\_limit) by the following rules:  If the requested limit is:  - below 300.000€ and the rating class  -- is between 1 and 10, the calculated decision level is "Single Competence"  -- is above 10, the calculated decision level is "Four Eyes"  - above 300.000€ but below 1.000.000€ and the rating class  -- is between 1 and 10, the calculated decision level is "Four Eyes"  -- is above 10, the calculated decision level is "Committee"  - above 1.000.000€ the calculated decision level is "Committee" |

### UC1808 Overwrite decision attributes

The user can overwrite the decision attributes:

- necessary decision competence

- next limit review date.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | Application is in state "Awaiting Approval" |
| **Pre-condition:** |  | The user has the permission to overwrite the decision attributes |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user selects to overrule a decision attribute |
| 2 | The user selects a new value for the selected decision attribute |
| 3 | The system validates that the selection by the user is valid using REQ1403 Next limit review date needs to be in the future, REQ1402 Overwrite of decision competence |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **REQ1402**  Approved | **REQ1402 Overwrite of decision competence**  The user is just allowed to override the decision competence with a competence higher than the one determined by the system. |
| **REQ1309**  Approved | **REQ1403 Next limit review date needs to be in the future**  The next limit review date needs to be in the future. The automatically determined review date is one year after the request of the limit application. |

### UC1810 View application activity history

The user wants to view the system's activity history of the application. The activity history records and contains entries for all important changes to an application entity. The particular types of entries for the activity history are specified as part of the specific use cases that trigger an entry in the activity history .

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | The application already exists |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user navigates to view the activity history |
| 2 | The system displays the activity history |

### UC1811 Retrieve client information

The system retrieves all participating clients (client entities) and the information stored at the application entity.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | The application already exists and is in a draft state. |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system is being triggered to update the client information of all participating clients |
| 2 | The system determines the rating to be used for the application according to REQ1412 Rating to be used for application decision |
| 3 | The system returns the current client information to the calling usecase |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **REQ1405**  Approved | **REQ1405 Client data used within limit applications**  Each application has a main client. The following information of the main client are used and displayed:  - general data  - client analysis  Other information is used and displayed of all participating clients:  - rating  - financials  - colatterals |
| **REQ1412**  Proposed | **REQ1412 Rating to be used for application decision**  During the decision of the application a rating must be sourced to determine the decision level (see [REQ1413 Determine the decision level](#BKM_B466E6C9_E852_4262_B2D7_E1B6F8D6FFE7)).  The rating to be used can be determined as followed:   * The weakest rating of all participating clients ([BO0001 Client](#BKM_1B370D5B_B38D_4C8B_AAC4_650204E16EE5).active\_rating.rating\_class) is used |

### UC1812 Automated application decision

The system is being triggered to decline / approve an application, if the determined decision competence from [UC1807](#BKM_8841EF37_2EA1_4E74_97AD_8382F2AFD006) allows an automatic decision. The decision depends upon the worst rating of any participating client and the total requested limit within the application.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | The application exists and the decision competence is within the system competence. |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system is being triggered to make an autmated decision |
| 2 | The system determines the automated decision by evaluating the client rating and the total requested limit using |
| 3 | The system declines / approves the application |
| 4 | The system persists and publishes the application |
| 5 | The system deletes all workitems for the application |
| 6 | If the application has been approved, the system updates the client limit information using UC1816 Update client limit information |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **REQ1412**  Proposed | **REQ1412 Automatic decision**  If the system is triggered to decide automatically it determines the decision by using the total requested limit and the worst rating of all participating clients.  Is the total requested amount below 200,000  - and the rating class between 1 and 10, the application is approved  - and the rating class between 11 and 18, the application cannot be decided by the system  - and the rating class above 18, the application is declined  Is the total requested amount above 200,000  - and the rating class between 1 and 16, the application cannot be decided by the system  - and the rating class above 16, the application is declined |

### UC1814 Search application

The user wants to search an application using a set of search criteria. The system displays the result set (all application matching the search criteria) paginated. The client information displayed and used to filter for application refer to the main clients data.

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user enters search criteria |
| 2 | The user triggers the search functionality |
| 3 | The system determines all applications that match the search criteria |
| 4 | The system displays all applications that match the search criteria in a paginated table |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1401**  Approved | **DSC1401 Display of discarded limit applications**  It is not possible to view or search a limit application in status "Discarded". |
| **REQ1408**  Approved | **REQ1408 Search limit application**  The system shall provide functionality to search for limit applications based on search criteria defined in the corresponding GUI specification. |

### UC1815 View application worklist

The user wants to view the list of applications that are assigned to him. Those are the applications the user should perform an action on. The client information displayed refer to the main clients data.

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user navigates to see the application worklist |
| 2 | The system determines all applications with workitems that are visible to the user (roles/groups/user) |
| 3 | The system displays the determined applications |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1401**  Approved | **DSC1401 Display of discarded limit applications**  It is not possible to view or search a limit application in status "Discarded". |

### UC1816 Update client limit information

The system is beeing triggered to update the client limit information.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | The application has been approved |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The system updates the client limit information of all participating client documents on CLI level |
| 2 | If the clients are imported from an external systen, the system updates the external client limit information of all particcipating clients using IFC011 Update client limit information |

### Traceability



Figure Diagram Sequence: Create Application



Figure Diagram Sequence: Maintain Application



Figure Diagram Sequence: View Application



Figure Diagram Sequence: Search Application



Figure Diagram Sequence: Process Application

## Report



Figure Diagram Sequence: Report

### UC1701 Creating a portfolio report

The user wants to create a report that covers the entire or a subset of the existing portfolio.

### Traceability



Figure Diagram Sequence: Report

## Attachments

The Credit Risk Management Platform provides a set of features that allow the user to manage any type of attached documents for a client. The following section documents all use cases related to this functionality.



Figure Diagram Sequence: Attach file to document

### UC1400 Attach file to document

The user wants to attach a file to a document (client, application, rating).

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | None |
| **Post-condition:** |  | The file is attached to the document |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user selects the document to be uploaded |
| 2 | The user triggers the functionality for attaching a document to the document |
| 3 | The system adds the uploaded document to the document |
| 4 | The system confirms the action with displaying the updated attachment list |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **REQ1400**  Approved | **REQ1400 Allowed document states for adding, removing or retrieving document attachments**  The system shall allow attaching, removing and retrieving documents in any state of the client, application or rating except final states like approved or declined. |
| **REQ1404**  Approved | **REQ1404 Adding attachment to an existing document**  The system shall allow adding an attachment to a client, application or rating. |

### UC1402 Delete Attachment from document

The user wants to delete an existing attachment file from a document(client,rating,application).

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | At least one document is attached to the client |
| **Post-condition:** |  | The attachment is removed from the client |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user identifies the client and attachment |
| 2 | The user triggers the functionality for removing the attachment from the client |
| 3 | The system removes the selected attachment from the client |
| 4 | The system confirms the action with displaying the updated attachment list |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **REQ1400**  Approved | **REQ1400 Allowed document states for adding, removing or retrieving document attachments**  The system shall allow attaching, removing and retrieving documents in any state of the client, application or rating except final states like approved or declined. |
| **REQ1406**  Approved | **REQ1406 Delete Attachment from an existing document**  The system shall allow deleting an attachment from an existing client, application or rating. |

### UC1401 Retrieve attached file from document

The user wants to retrieve an attached file from the document (client,application,rating).

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | At least one document is attached to the client |
| **Post-condition:** |  | The attached document is retrieved |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user identifies the client and attachment |
| 2 | The user triggers the functionality for retrieving the attachment from the client |
| 3 | The system retrieves the selected attachment from the client |

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **REQ1400**  Approved | **REQ1400 Allowed document states for adding, removing or retrieving document attachments**  The system shall allow attaching, removing and retrieving documents in any state of the client, application or rating except final states like approved or declined. |
| **REQ1405**  Approved | **REQ1405 Retrieve attachment from an existing document**  The system shall allow retrieving an attachment from an existing client, application or rating. |

### Traceability



Figure Diagram Sequence: Attach file to document

## Platform Administration

The Credit Risk Management Platform and the underlying ACTICO Workplace product provides various functionalities for administrating the system. Since they are standard product functionality only the most important ones are mentioned here. Additional details about the administration functionality can be found in the Workplace User Guide and Workplace Operations Guide.



Figure Diagram Sequence: Platform Administration

### UC1500 Administrate rule model version

It is possible to display all versions of a rule model, to download them and to define validity start and end dates.

When a new risk rating is created the validity dates and the active flag are used to decide which version of a rule model should be used. If multiple versions of one rule model are active and valid at the same time, the system displays an error message that two models are uploaded, active and valid at the same time.

This functionality is part of the product and not customized during the project.

|  |  |  |
| --- | --- | --- |
| **Post-condition:** |  | Rule model version is saved and all rule model versions settings are persisted |
| **Pre-condition:** |  | None |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user selects a rule model from the list of all currently uploaded rule models. |
| 2 | The system displays a list of all rule model version of the selected rule model |
| 3 | The user changes one of the multiples attributes for one or multiple rule model version.  The following attributes can be changed per rule model version: active y/n, valid from date, valid to date, description |
| 4 | The user triggers the functionality for changing the rule model version |
| 5 | The system persists the changed attributes |

### UC1501 Administrate users, roles, permissions

Although users are authenticated against the central customers active directory it is necessary to manually create a new user in the system before the user is able to logon to it.

A user can be assigned to any combination of roles, groups and rule models. The assignment is done via the web front-end.

This functionality is part of the product and not customized during the project.

|  |  |  |
| --- | --- | --- |
| **Pre-condition:** |  | None |
| **Post-condition:** |  | Roles, groups and rule model assignment successfully persisted |
| **Post-condition:** |  | User details (e.g. email, password) successfully persisted |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user either picks the to be changed entity (user, role, group or permission) or decides to create a new one |
| 2 | The user changes the required attributes |
| 3 | The user triggers the functionality for saving the entity |
| 4 | The system persists the changed entity. |

### UC1502 Administrate report templates

The user requires to upload a new report template or a new version of an existing report template. This includes activating a different version.

This functionality is part of the product and not customized during the project.

### UC1503 Administrate print-out templates

The user requires to upload a new print-out template or a new version of an existing print-out template. This includes activating a different version.

This functionality is part of the product and not customized during the project.

### Traceability



Figure Diagram Sequence: Platform Administration

## Rule Model Development



Figure Diagram Sequence: Rule Model Development

### UC1600 ACTICO Rules model development

An important part of the CRMP is the usage of ACTICO Rules for the modeling of the business, layout and workflow rules. Those Rule models are administrated in ACTICO Rules (often also called Model Authoring Platform (MAP)) and can be deployed to the Credit Manager web application as described in the use case [UC1601 Upload and activate rule model](#BKM_D524CA2D_D20E_4034_954B_34ACB1E2392E).

Following documents help the user to develop ACTICO Rules models:

* The ACTICO Rules "Rule Modeling Guide" describes how to model business logic with ACTICO rules
* The Workplace User Guide describes how to model workflow, business and layout logic with ACTICO Workplace – the technical platform the Credit Risk Management Platform is based on. This guide is independent of a specific domain.

This usecase does not describe an actual user interaction with the system but serves as a sort of a placeholder so that it can be made clear which Requirements, Disclaimer and Business Rules are related to Modeling in ACTICO Rules.

**Related Requirements, Disclaimer and Business Rules**

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1007**  Approved | **DSC1007 Available currencies in the system**  The Rule Model Administrator is able to maintain the list of available currencies |

### UC1601 Upload and activate rule model

Once modeling in ACTICO Rules - (the Model Authoring Platform) is completed the models need to be deployed to the Credit Manager web application using a web interface. Deployment of ACTICO Rules models requires no restart of the servlet container/server.

This functionality is part of the product and not customized during the project. Additional Information can be found in the ACTICO Workplace User Guide.

|  |  |  |
| --- | --- | --- |
| **Post-condition:** |  | A rule model has been uploaded |

**Basic Path** Basic Path

|  |  |
| --- | --- |
| **Step** | **Description** |
| 1 | The user picks the rule model archive from the local filesystem |
| 2 | The user decides if the rule model should be activated. |
| 3 | The user triggers the functionality for uploading rule models |
| 4 | The system persists the rule model archive |
| 5 | The system displays a success message |

### Traceability



Figure Diagram Sequence: Traceability

# User Interface

The chapter "User Interface" explains all GUIs implemented in the system. In addition to the formal description of every user interface it also describes what use cases are realized with that GUI.

While this section gives an abstract description of all GUIs of the system it does not describe all elements of the user interface, its behavior or the mapping to the business entities. This information can be found in the individual GUI-Templates provided in Excel format.

## Client Management

Describing the user interface for the client management is part of this section.

### SCR1100 Create Internal client

Using this screen, the user creates a new Internal client (not imported from an external system).

The detailed layout is being defined in the UI template "CLI Create Internal Client".

### SCR1110 Import Client

Using this screen, the user imports the data from the external system for a new client.

The detailed layout is being defined in the UI template "CLI Import Client"

### SCR1120 Maintain client

On this screen the user can view and maintain a client with all its information.

The detailed layout is being defined in the UI templates "CLI Maintain Client".

### SCR1130 Search client

Using this screen, the user can search clients.

The detailed layout is being defined in the UI template "CLI Search Client".

### SCR1140 Worklist client

Using this screen, the user can view the last 10 clients that were maintained by him.

The detailed layout is being defined in the UI template "CLI Worklist Client".

## Rating Management

Describing the user interface for the rating management is part of this section.

### SCR1200 Search Rating

Using this screen, the user can search ratings.

The detailed layout is being defined in the UI template "CRR Search Rating".

### SCR1220 Rating PD

On this screen the user can view and maintain a PD rating with all its information.

The detailed layout is being defined in the UI template "CRR Template PD Rating".

### SCR1210 Worklist Rating

On this screen, a user finds all work items for ratings, that are assigned to him. (e.g. for providing a decision input).

The detailed layout is being defined in the UI template "CRR Worklist Rating".

## Financial Statement

Describing the user interface for handling of financial statements are part of this section.

### SCR1300 Worklist financial statement

On this screen, a user finds all work items for financial statements, that are assigned to him. (e.g. for providing a decision input).

The detailed layout is being defined in the UI template "CRMP Worklist Financials".

## Limit Application Management

Describes the user interface for the limit application management.

### SCR1200 Search Application

On this screen, the user can search applications.

The detailed layout is being defined in the UI template "ORI Search Application".

### SCR1220 Maintain Application

On this screen, the user can view and maintain an application with all its information.

The detailed layout is being defined in the UI template "ORI Maintain Application".

### SCR1210 Worklist Application

On this screen, the user finds all work items for applications, that are assigned to him. (e.g. for providing a decision input).

The detailed layout is being defined in the UI template "ORI Worklist Application".

## Report

### SCR1700 Workplace Report Executor

On this screen a user can trigger a report based on the user permission and report template parameters.

The detailed layout is not being defined in the project as they are part of the standard product provided as "Workplace Report Executor". See the ACTICO Workplace documentation for more information regarding this screen.

## Bulk Operation

Describing the user interface for handling of bulk operations are part of this section.

### SCR1240 Bulk approval rating

On this screen the user can view and maintain a bulk-approval definition with all its information.

The detailed layout is being defined in the UI template "CRR Bulk Approval Rating".

### SCR1250 Search bulk operation

Using this screen, the user can search bulk-approvals, means definitions of bulk-approvals with the selected ratings, input values for the decision and the status of executed bulk decision executions.

The detailed layout is being defined in the UI template "CRMP Search Bulk Operation".

## Platform Administration

Describing the user interface for platform administration are part of this section.

### SCR1500 Platform Administration

On this screen a user with administrative privileges has the possibility to administrate the system (e.g. administrate users, configure format patterns, administrate templates etc.).

The detailed layout is not being defined in the project as they are part of the standard product. See the ACTICO Workplace documentation for more information regarding this screen.

## Rule Models

Describing the user interface for handling the rule models are part of this section.

### SCR1600 Rule Model Administration

On this tab the screen (with special privileges) has the possibility to administrate installed rule models.

The detailed layout is not being defined in the project as they are part of the standard product. See the ACTICO Workplace documentation for more information in regards to this screen.

# Business Rule Model

The following chapter "Business Rule Model" explains all Business Rules of relevance to the Credit Risk Management Platform system.

A Business Rule is a statement that defines or constrains some aspect of the business. It is intended to assert business structure or to control or influence the behavior of the business. The Business Rules that concern the project are atomic -- that is, they cannot be broken down further.

## Rating

The following section covers the business rules related to ratings.

|  |  |
| --- | --- |
| **id** | **Item** |
| **BR1301**  Approved | **BR1301 Criteria for choosing scorecard logic** |
| The criteria for choosing the scorecard is a project specific requirement based on a customer project |

# Functional Requirements

The chapter "Functional Requirements" explains all Functional Requirements of relevance to the Credit Risk Management Platform system.

Functional Requirements may be calculations, technical details, data manipulation and processing and other specific functionality that define "WHAT" the Credit Risk Management Platform system is supposed to accomplish. This should be contrasted with Non-Functional Requirements. In general, Functional Requirements define WHAT a system is supposed to do whereas Non-Functional Requirements define "HOW" a system is supposed to "BE".

## General

Contains general functional requirements that are not specific to use cases.

### Worklist

Contains general functional requirements related to worklists.

|  |  |
| --- | --- |
| **id** | **Item** |
| **REQ1000**  Approved | **REQ1000 Standard Worklists** |
| The system shall provide worklists for clients, financial statements, ratings and applications. |
| **REQ1001**  Approved | **REQ1001 Worklist items visibility** |
| The user shall see the worklist items that are assigned to him. |

## Client Management

Contains functional requirements related to client management.

|  |  |
| --- | --- |
| **id** | **Item** |
| **REQ1107**  Approved | **REQ1107 Search group member from client management** |
| The system shall provide the possibility to search an existing client in the system in order to add the found client as a group member to a group structure. |
| **REQ1108**  Approved | **REQ1108 Group clients by group type** |
| The system shall allow to group clients by group type. At an assignment of a relation of a client to another, the group type needs to be defined.  A client can be assigned to multiple groups of different group types as parent or child. |
| **REQ1109**  Approved | **REQ1109 Remove client from group** |
| The system shall allow to remove a client from a group, that is, to remove relations between clients. |
| **REQ1110**  Approved | **REQ1110 Print client** |
| The system shall allow to print client data based on the current printing template. |
| **REQ1100**  Approved | **REQ1100 Provide client management** |
| The solution shall include a standard functionality for client management, including the following entities:  \* Clients  \* Client relationships via client groups (e.g. for risk units)  \* Collaterals  The solution shall provide an extendable standard data model for these entities. |
| **REQ1101**  Approved | **REQ1101 Update client with latest data** |
| The system shall allow to manually update the client information with the latest external client management system data. |
| **REQ1106**  Approved | **REQ1106 List all client rating** |
| The system shall list all ratings associated with a client. |
| **REQ1102**  Approved | **REQ1102 View client details** |
| The system shall allow to view the details of a client. |
| **REQ1104**  Approved | **REQ1104 Comments for client** |
| The system shall allow to add comments to a client. |
| **REQ1105**  Approved | **REQ1105 Search client** |
| The system shall provide functionality to search for clients based on search criteria defined in the corresponding GUI specification. |
| **REQ1111**  Approved | **REQ1111 List all client applications** |
| The system shall list all applications where the client is participating. |

## Financial Statements

Contains functional requirements related to financial statements.

|  |  |
| --- | --- |
| **id** | **Item** |
| **REQ1203**  Approved | **REQ1203 Search financial statement** |
| The system shall provide functionality to search for financial statements based on search criteria. |
| **REQ1204**  Approved | **REQ1204 Create Workitems for Financial Statements** |
| Each time a statement is saved the following checks are performed (after the save has succeeded)  - If a statement is in Status "Draft", "Calculated" or "Declined" a workitem for the statement will be created for the Role "Financial Analyst". That means, every user with the role "Financial Analyst" will see an entry for this Statement in its Worklist.  - If a statement is in Status "Awaiting Finalization" a workitem for the statement will be created for the Role "Financial Approver". That means, every user with the role "Financial Approver" will see an entry for this Statement in its Worklist.  - if it is in any other status (e.g. "Finalized" or "Discarded") all workitems for the statement will be removed. That means no user will see the Statement in its Worklist. |
| **REQ1205**  Approved | **REQ1205 Counterparty Information stored on the statement level** |
| All counterparty attributes (see BO0001 Client) should be copied to the statement level so that they can potentially be used to search for statements by historic counterparty information. The information should also be available for reporting.  When creating a statement (e.g. when creating a new statement or when copying an existing one) the counterparty information is re-loaded. This means that if the name of a counterparty changes the new name is used when an existing statement is copied.  As long as the statement is in status draft, calculated or declined the counterparty information is reloaded each time the statement is opened. |
| **REQ1200**  Approved | **REQ1200 Add financial statements** |
| The system shall allow to add financial statements to a client |
| **REQ1201**  Approved | **REQ1201 View details of financial statement** |
| The system shall allow to view the details of a financial statement for a client |
| **REQ1202**  Approved | **REQ1202 View list of financial statements** |
| The system shall allow to view the list of financial statements for a client |
| **REQ1206**  Approved | **REQ1206 Automatic selection of external statement references** |
| If a spreading template references other statements (by defining a reference on the "fs-external" tab, see the Financial Spreading User Guide for details) the statements should be automatically selected by the system. Please see the Use Cases referring to this requirement for the point in time when the system selects the statement references. Once a reference is automatically selected (e.g. their IDs), the references are stored at the statement (and also available for reporting purposes if required). The following type of statement references should be automatically selected:  1) References to previous year statements If a spreading template defines one or multiple statement references with one of the following names: "previous\_year\_1", "previous\_year\_2", "previous\_year\_3", "previous\_year\_4", "previous\_year\_5" the system will determine the referenced statements by applying the following logic (with x being the last character of the statement reference name e.g. 2 for previous\_year\_2):  - Accounting Date criteria:   1. for statements of type annual: accounting date - x years; 2. for statements of type semiannual: accounting date - x years; 3. for statements of type quarterly : accounting date - x years; 4. for statements of type interim : accounting date - x years; 5. the accounting date is always rounded to months end. That means that the available number of days within the months needs to be considered.   - accounting period = accounting period of current statement  - accounting standard = accounting standard of current statement  - consolidation type = consolidation type of current statement  - same internal client ID  - used template = template of current statement  - status in {Calculated, Awaiting Finalization, Finalized}  - type = type of current statement  If there are multiple statements matching the criteria from above for a single year the statements should be ordered first by accounting date (descending), second by modification date (descending) and the first match should be used.  In case the statement references are selected manually a validation of the executed statements will be executed. Please see [REQ1207](#BKM_81137E9C_304D_46C1_BC78_844BE14C410D) for more information about the manual selection of statement references. If the statement references are selected manually it's still possible to force an automatic selection.  The automatic selection of the external statement references and the validation of the manually selected statement references are executed for these use cases:  - Single Statement Creation and Editing  - Multi Statement Creation and Editing  - Statement Aggregation  - Statement Consolidation  - Statement Import from Excel file  - Statement Bulk Import  - Creation of statements with the IFS006 |
| **REQ1207**  Approved | **REQ1207 Manual selection of external statement references** |
| If a spreading template references other statements (by defining a reference on the "fs-external" tab, see the Financial Spreading User Guide for details) the statements are automatically selected by the system. Please see [REQ1206](#BKM_A88D26C8_B56C_411B_89E2_365C12094093) and the linked Use Cases for more information. Once a reference is automatically selected, the references are stored at the statement. Nevertheless it's still possible to execute the selection of external statements manually. The custom meta data META\_DATA\_KEY\_MANUAL\_SELECTION\_STATEMENT\_REF defines if the external statements selection is executed manually or not.  After a manual selection of external statements a validation is executed. This validation considers the following criteria:  - accounting date is older as the accounting date of the current statement  - accounting standard = accounting standard of current statement  - consolidation type = consolidation type of current statement  - same internal client ID  - used template = template of current statement  - status in {Calculated, Awaiting Finalization, Finalized}  - type = type of current statement  If one of these criterias isn't fulfilled the validation will fail and the manually selected external statement references won't be saved. |

## Rating

Contains functional requirements related to ratings.

|  |  |
| --- | --- |
| **id** | **Item** |
| **REQ1303**  Approved | **REQ1303 View rating details** |
| The system shall allow to view the details of a rating. |
| **REQ1305**  Approved | **REQ1305 Re-rate just allowed for decided ratings** |
| The system shall provide re-rating of a client's rating only for ratings in state APPROVED or DECLINED. |
| **REQ1307**  Approved | **REQ1307 Only finalized financial statements not older than 12 month available for rating calculation** |
| The system must ensure that only financial statements in state FINAL and with the date of finalization is not older than 12 months are used for rating calculation. |
| **REQ1308**  Approved | **REQ1308 Rating override just 2 notches better than calculated rating** |
| The user is just allowed to override the rating by 2 notches better than the calculated rating. He is always allowed to make it worse. |
| **REQ1309**  Approved | **REQ1309 Decider and analyst sent rating for approval need to be different user** |
| The system shall not allow sending a rating for approval and deciding of a rating by the identical user. The system must ensure that there are always two different users involved in the approval process. |
| **REQ1300**  Approved | **REQ1300 Update ratings** |
| The system shall allow to update a rating as far as the rating is not in a final state. The final states for a rating are: APPROVED, DECLINED or DISCARDED. |
| **REQ1301**  Approved | **REQ1301 Manual overruling of ratings** |
| The system shall allow entering a value for override rating at the rating only if the relevant rating is in state CALCULATED. |
| **REQ1302**  Approved | **REQ1302 Decide rating by defined approval process** |
| The system shall provide functionality for executing a decision making process for ratings. |
| **REQ1310**  Approved | **REQ1310 Search rating** |
| The system shall provide functionality to search for ratings (e.g. PD) based on search criteria defined in the corresponding GUI specification. |
| **REQ1312**  Approved | **REQ1312 Print rating** |
| The system shall be able to print rating data based on the current printing template. |
| **REQ1313**  Approved | **REQ1313 Publishing of ratings** |
| The system shall publish the rating if the rating is saved. |

## Bulk Operation

Contains functional requirements related to bulk operations.

|  |  |
| --- | --- |
| **id** | **Item** |
| **REQ1500**  Approved | **REQ1500 Search bulk operations** |
| The system shall provide functionality to search for bulk approvals that were defined and/or executed based on search criteria defined in the corresponding GUI specification. |
| **REQ1501**  Approved | **REQ1501 View bulk operation details** |
| The system shall allow to view the details of a bulk operation (e.g. bulk approval) including the ratings involved, status of execution and result of execution. |
| **REQ1510**  Approved | **REQ1510 Decide multiple ratings at same time - bulk approval** |
| The system shall provide the functionality for deciding (e.g. approve or decline) multiple ratings in a bulk approval job. |
| **REQ1511**  Approved | **REQ1511 Verify rating status during bulk approve** |
| Before deciding a rating in a bulk approve it must be ensured that the rating is in the status "send for approval". If this is not the case an error must be logged and the error message must be stored so it can be viewed by the user who triggered the bulk approval operation. |
| **REQ1512**  Approved | **REQ1512 Fixed rating filter for bulk approve** |
| The system must ensure that only ratings which are in state "SendForApproval" can be decided via bulk approval. Additionally the system must ensure that the user who sent the rating for approval process and the user who wants to decide the ratings via bulk approval are not identical. |

## Limit Application

Contains functional requirements related to limit applications.

|  |  |
| --- | --- |
| **id** | **Item** |
| **REQ1412**  Proposed | **REQ1412 Automatic decision** |
| If the system is triggered to decide automatically it determines the decision by using the total requested limit and the worst rating of all participating clients.  Is the total requested amount below 200,000  - and the rating class between 1 and 10, the application is approved  - and the rating class between 11 and 18, the application cannot be decided by the system  - and the rating class above 18, the application is declined  Is the total requested amount above 200,000  - and the rating class between 1 and 16, the application cannot be decided by the system  - and the rating class above 16, the application is declined |
| **REQ1400**  Approved | **REQ1400 View limit application details** |
| The system shall allow to view the details of a limit application. |
| **REQ1401**  Approved | **REQ1401 Only finalized financial statements not older than 12 month are displayed** |
| The system must ensure that only the latest financial statement, which is in a FINAL state and with the date of finalization is not older than 12 months is displayed for each participating client. |
| **REQ1402**  Approved | **REQ1402 Overwrite of decision competence** |
| The user is just allowed to override the decision competence with a competence higher than the one determined by the system. |
| **REQ1309**  Approved | **REQ1403 Next limit review date needs to be in the future** |
| The next limit review date needs to be in the future. The automatically determined review date is one year after the request of the limit application. |
| **REQ1300**  Approved | **REQ1404 Limit request needs to be higher than the drawdown amount** |
| The limit of each participating client is greater than his drawdown amount. |
| **REQ1405**  Approved | **REQ1405 Client data used within limit applications** |
| Each application has a main client. The following information of the main client are used and displayed:  - general data  - client analysis  Other information is used and displayed of all participating clients:  - rating  - financials  - colatterals |
| **REQ1406**  Approved | **REQ1406 Decide application by defined approval process** |
| The system shall provide functionality for executing a decision making process for applications.  The system shall not allow a user to perform two steps of the decision workflow. |
| **REQ1301**  Approved | **REQ1407 Validate and update group information** |
| The system must check if the group information of the limit application is still valid. It must return a warning if the group information is no longer valid. As long as the limit application is in a draft state, the group information is automatically updated, once the system notices, that the group information has been changed. |
| **REQ1408**  Approved | **REQ1408 Search limit application** |
| The system shall provide functionality to search for limit applications based on search criteria defined in the corresponding GUI specification. |
| **REQ1409**  Approved | **REQ1409 Publishing of limit applications** |
| The system shall publish the limit application if the application is saved. |
| **REQ1410**  Proposed | **REQ1410 Determine limit key figures** |
| The system determines the limit key figures, whenever the user changes information about the requested limits:  - Total requested limit (sum of all new limit requests)  - Total limit gap (gap of new limit and current limit)  - Sum of collaterals (sum of all nomin  - Unsecured % (max(0;1-(total requested limit / sum of collaterals))) |
| **REQ1411**  Proposed | **REQ1411 Determine final decision level of application** |
| The final decision level of the application depends upon the automatically determined decision level in [UC1807](#BKM_8841EF37_2EA1_4E74_97AD_8382F2AFD006) and the potential overwrite within [UC1808](#BKM_D5C6E984_C3A6_4A76_AFD2_3132284EF4D1).  If the user has not overwritten the decision level, the automatically determined decision level is used.  The decision level of the application effects the process after the risk vote has been made. There are three paths for the different selection options:   * If the decision level "Single Competence" is chosen by the user or automatically determined by the system, the system will display the section "Single Competence" and allow a single user to approve or decline the application. * If the decision level "Four Eyes" is chosen by the user or automatically determined by the system, the system will display the section "Four Eyes" for a user to recommend approval or recommend declination of the application or return it to risk vote or sales vote. After the first user has provided a recommendation, the system will display the section "Four Eyes" for a second user who is able to approve or decline the application or return it to risk vote or sales vote. * If the decision level "Committee Decision" is chosen by the user or automatically determined by the system, the system will display the section "Committee Decision Recommendation for a user to recommend approval or recommend declination of the application or return it to risk vote or sales vote. After the first user has provided a recommendation the system will display the section "Committee Decision" for a second user who is able to approve or decline the application or return it to risk vote or sales vote. |
| **REQ1412**  Proposed | **REQ1412 Rating to be used for application decision** |
| During the decision of the application a rating must be sourced to determine the decision level (see [REQ1413 Determine the decision level](#BKM_B466E6C9_E852_4262_B2D7_E1B6F8D6FFE7)).  The rating to be used can be determined as followed:   * The weakest rating of all participating clients ([BO0001 Client](#BKM_1B370D5B_B38D_4C8B_AAC4_650204E16EE5).active\_rating.rating\_class) is used |
| **REQ1413**  Proposed | **REQ1413 Determine the decision level** |
| The calculated decision level of the application is determined by the rating linked to the application ([BO2003 Rulemodel Limit Application](#BKM_13150962_1B2F_45BC_94E1_2E1AE24A0D77).rating) and the requested total limit ([BO0031 Limit Key Figures.](#BKM_B7D85925_17EB_4899_92A4_3DDC192EA589)total\_new\_limit) by the following rules:  If the requested limit is:  - below 300.000€ and the rating class  -- is between 1 and 10, the calculated decision level is "Single Competence"  -- is above 10, the calculated decision level is "Four Eyes"  - above 300.000€ but below 1.000.000€ and the rating class  -- is between 1 and 10, the calculated decision level is "Four Eyes"  -- is above 10, the calculated decision level is "Committee"  - above 1.000.000€ the calculated decision level is "Committee" |

## Attachments

Contains functional requirements related to attachments.

|  |  |
| --- | --- |
| **id** | **Item** |
| **REQ1404**  Approved | **REQ1404 Adding attachment to an existing document** |
| The system shall allow adding an attachment to a client, application or rating. |
| **REQ1405**  Approved | **REQ1405 Retrieve attachment from an existing document** |
| The system shall allow retrieving an attachment from an existing client, application or rating. |
| **REQ1406**  Approved | **REQ1406 Delete Attachment from an existing document** |
| The system shall allow deleting an attachment from an existing client, application or rating. |
| **REQ1400**  Approved | **REQ1400 Allowed document states for adding, removing or retrieving document attachments** |
| The system shall allow attaching, removing and retrieving documents in any state of the client, application or rating except final states like approved or declined. |

# Non functional requirements and disclaimer

The following chapter contains all non functional requirements and disclaimer as well as the description of the elements existing in the Identity Management.

## Requirement

The non functional requirements.

### General

The general non functional requirements.

|  |  |
| --- | --- |
| **id** | **Item** |
| **REQ2000**  Approved | **REQ2000 Revision safe storage** |
| Rating and client data need to be stored in a revision safe way (e.g. data must not be overridden and each save action must lead to a new revision in the database) |

### Authentication and Authorization

The non functional requirements related to authentication and authorization.

|  |  |
| --- | --- |
| **id** | **Item** |
| **REQ2100**  Approved | **REQ2100 Authentication against active directory** |
| Authentication of users can be configured to be performed against an Active directory/LDAP. In this case no passwords are stored in Credit Risk Management Platform.  It is assumed that technical user accounts are also created in active directory (and their passwords are stored in the AD). Each interface receiver/sender will use their own technical user. |
| **REQ2101**  Approved | **REQ2101 Authorization against internal identity management** |
| Authorization of users can be configured to be performed against the identity management component integrated in the system (Credit Risk Management Platform) |

## Disclaimer

The non functional disclaimers.

### Data migration

The non functional disclaimers related to data migration.

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC2500**  Approved | **DSC2500 No default data migration configured** |
| The system does not provide a default data migration functionality.  A functionality to migrate data from an external system can be configured, but is something that needs to be done based on the customer specific requirements. |

### Financial Spreading

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC2600**  Approved | **DSC2600 Statement Selection for annualization** |
| The system must support the creation of annualized statements. Therefore it must fulfill the following general requirements:   * It should be possible to produce annualized statements based on interim statements. * If the spreading template contains a sheet with the name "balance-sheet" then the data of this sheet will be taken from the most recent statement (the statement with the highest accounting date). * Values of all other sheets are derived according to business rules defined below, by combining available statements * The system has to prevent the user from selecting statements from another client different from the current one.   To create an annualized statement the system has to check, if the selected statements result in one of the following two approaches. If the selection and therefore the check is ok, the annualized statement has to be calculated by the system as given in the respective approach.  1.) Interim Statement Approach   * Required statements: [Y-1 interim], [Y-1 EOY], [Y interim] where "interim" must be of same period (e.g. YTD, Q2, H1,...) in both years. * Calculated annualized statement = [Y-1 EOY]-[Y-1 interim]+[Y interim]   2.) Continuous Statement Approach   * Required statements: any combination of statements that covers a consecutive non-overlapping period of 12 months. * Calculated annualized statement = summing up the selected statements (e.g. [Y-1 Q3]+[Y-1 Q4] + [Y Q1] + [Y Q2] or [Y Q1] + [Y Q2] + [Y H2])   Legend:  YTD: year-to-date: period starting at the beginning of a year and lasting to a given date  Qn: n-th quarter of a year  Hn: n-th half of a year  Y: year  Y-1: last year  EOY: annual statement of the given year   * For the check the system has to use the period and the accounting date of the statement. Hereby the accounting date marks the end of the period. * The system should show an error if the user has selected statements that are not fulfilling the validation rules regarding the correct statement selection. |

### Security

The non functional disclaimers related to security topics.

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC2400**  Approved | **DSC2400 Search index not encrypted** |
| The data stored in the search index on the filesystem is not encrypted. If it is required to encrypt that data such encryption must be implemented on the operating or file system level transparent to the platform. |
| **DSC2401**  Approved | **DSC2401 Data stored in the database is not encrypted by the system** |
| The data stored in the database is not encrypted by the system on an application level. If it is required then the encryption need to take place on the database management system level (e.g. by using SQL Server Transparent Data Encryption) |
| **DSC2402**  Approved | **DSC2402 HTTP basic authentication for webservice interfaces** |
| Webservices interfaces provided by the CRMP are protected by Basic Authentication. |

### General

The general non functional disclaimers.

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC2001**  Approved | **DSC2001 Optimistic locking for concurrent modifications of clients, ratings, applications and financial statements** |
| If the same rating or financial statement is opened by two users of the system at the same time and both are able to save the document (i.e. have the necessary permissions to do so) the system prevents accidental overwrite of entered data: if both user press the “save” button (or any other button that trigger a safe operation on the document) the system will print an error message after the second user pressed the save button, preventing the second user to overwrite the data of the first user. The second user will only be able to process the document if the user reloads it (e.g. opens the document again from the search or worklist).  The same functionality applies for clients: If two users opened the same client at the same time the second user to save the client will receive an error message and the user has to reload the screen. |
| **DSC2002**  Approved | **DSC2002 Transaction and error handling** |
| Database transactions are used to ensure data consistency. If the system is shutdown or crashes during a running transaction unsaved data is lost. Once the system is up again after e.g. a crash or shutdown user sessions are not continued but the user starts again with the start screen of the platform (e.g. the business process is not automatically continued). |
| **DSC2003**  Approved | **DSC2003 Update of rule model version** |
| The functionality (e.g. business logic, layout logic etc.) of a top level entity (client, rating, financial statement, application) in the Credit Risk Management Platform is defined by a corresponding ACTICO Rules model and its version. The default behavior of the system is that once an entity (e.g. a client) gets created in the system, the system will always process the entity with the ACTICO Rules model version that was used to persist the entity.  That means that e.g. if a new field is added at the client user interface, this field would only appear for clients created with a ACTICO Rules model version that contains the new field. In order to display the field on the UI it would be necessary to delete the client and recreate it from scratch.  In order to prevent this default behavior, the system has been adapted in a way that for ratings in the DRAFT or CALCULATED state and for client entities in the SAVED state the system performs the following check as soon as the entity is opened by the user (e.g. loading a rating or client for displaying it)  - check if the currently valid rule model version is different than the version associated with the entity  - if this is the case, the system performs an automatic rule model update if the user has the required permission for the current rule model (AUTOMATED\_RULE\_MODEL\_UPGRADE\_CLIENT, AUTOMATED\_RULE\_MODEL\_UPGRADE\_RATING, AUTOMATED\_RULE\_MODEL\_UPGRADE\_ORI, AUTOMATED\_RULE\_MODEL\_UPGRADE\_BULK\_APPROVAL)  If the rule model version is updated, the system:  - adds a diary entry  - performs an update of the rule model version of the entity to the currently valid rule model version  - saves the entity  - in case of errors during the update: display a warning message to the user  Displaying an error is necessary as changes between rule model versions could be incompatible (e.g. the datatype of a field could change from an alpha-numeric to a numeric field - and it is impossible for the system to convert a string (e.g. "asdf") to a number (e.g. 42). In this case the system will inform the user that there have been mapping errors. The user can then re-fill data for changed datatypes or e.g. reload client data from external client management system.  The entity is persisted after the upgrade of the rule model version. |
| **DSC2004**  Approved | **DSC2004 File upload** |
| For uploading file elements the system provides the standard browser HTML file upload element. The user only is able to upload files through this HTML file upload elements from the user's local file system. |
| **DSC2005**  Approved | **DSC2005 rating print template** |
| The print template with the name "default\_rating\_report" is used for creating the print view of the rating.  By using this template all elements shown on the user interface (e.g. tabs, sections, input fields, tables) are visible in the generated document.  It is possible to exclude elements by setting the "visibleInReports" flag. This functionality is documented in more details in the Workplace User Guide. |
| **DSC2006**  Approved | **DSC2006 client print template** |
| The print template with the name "default\_client\_report" is used for creating the print view of the client.  By using this template all elements shown on the user interface (e.g. tabs, sections, input fields, tables) are visible in the generated document.  It is possible to exclude elements by setting the "visibleInReports" flag. This functionality is documented in more details in the Workplace User Guide. |
| **DSC2007**  Approved | **DSC2007 Viewing content of PDF document** |
| The system is not responsible for displaying content of provided PDF documents. For displaying the content of a PDF document the Web Browser is responsible (PDF viewer is registered as a browser plugin and can display PDF documents). The system only provides the PDF document. |
| **DSC2008**  Approved | **DSC2008 Bulk Operation Rule Model Update.** |
| Updating the rule model version (see [DSC2003](#BKM_EB178B1C_CC77_455B_9B8F_97BB2494E3E9)) of a bulk operation is possible if the status of the bulk operation in SAVED |
| **DSC2009**  Approved | **DSC2009 Client Rule Model update** |
| Updating the rule model version (see [DSC2003](#BKM_EB178B1C_CC77_455B_9B8F_97BB2494E3E9)) of a client is possible if the status of the client is SAVED |
| **DSC2010**  Approved | **DSC2010 Rating Rule Model update** |
| Updating the rule model version (see [DSC2003](#BKM_EB178B1C_CC77_455B_9B8F_97BB2494E3E9)) of a rating is only possible if the rating is in status DRAFT or CALCULATED. |
| **DSC2010**  Approved | **DSC2011 Application Rule Model update** |
| Updating the rule model version (see [DSC2003](#BKM_EB178B1C_CC77_455B_9B8F_97BB2494E3E9)) of an application is only possible if the rating is in status DRAFT. |

### Internationalization

The non functional disclaimers related to internationalization.

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC2200**  Approved | **DSC2200 Internationalization and multi language** |
| The Credit Risk Management Platform provides the functionality to switch between languages. Within the ACTICO Rules models the language is English (i.e. descriptions, comments, field names etc. in ACTICO Rules). Modeled screens (including modeled error messages) can be translated by using key names in the ACTICO Rules rule models and providing property files within the rule models that contain the translation. These property files are text files with keys which are in English and descriptions in the certain language.  The Credit Risk Management Platform that builds the base for the system supports english and german. That means that all non modeled screens and messages (login screens, menu bar, general system error messages, admin screens) are provided in english and german.  All screens and error messages modeled in ACTICO Rules can be displayed in arbitrary additional languages (e.g. german, english, spanish).  The system provides functionality for switching between the following languages:  - english  - german  The default language that is chosen when the user opens the system depends on the language configured in the user’s browser. If the user switches the language within the system this selection is not saved. The selected language will only be valid for the duration of the user’s session. When the user logs out and log in the default language is selected again.  Data received from external systems is saved in the same language as received from other systems. |

### Interfaces

The non functional disclaimers related to interfaces.

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC2201**  Approved | **DSC2201 Default interface implementation based on database** |
| The default implementation of business related interfaces (e.g. to import client or group data) is based on database tables. It is assumed that data that is to be imported into the CRMP is provided in those database tables by external ETL tools.  Other implementations (e.g. based on webservice) can be configured, but are something that needs to be done based on the customer specific requirements. |
| **DSC2202**  Approved | **DSC2202 Lookup data retrieved from database table** |
| Lookup data (e.g. list of countries) is retrieved from relational database tables that are assumed to be maintained with external tools. |

## Identity Management

The Credit Risk Management Platform has various possibilities for controlling the actions that users are allowed to perform in the system.

The following diagram shows the different dimensions that are available for assignment to a user within the Credit Risk Management Platform. The listed entities are described in more detail afterwards.



Figure Diagram Sequence: Identity Management

|  |  |
| --- | --- |
| **id** | **Item** |
| **im\_group**  Approved | **group** |
| While user roles define more or less “what” a user is allowed to do with the system (e.g. User A can only create a rating while User B can approve a rating) the group defines for “which” set of data the user can perform certain functionalities. E.g. the system could define a group for "normal" ratings and a second group for "special" ratings that should be accessible only by a certain set of users. |
| **im\_permission**  Approved | **permission** |
| The most fine-grained way of dealing with authorization requirements are permissions. From a business point of view authorization is most of the time given to a certain role. In order to allow maximum flexibility such checks are in fact performed against permissions which allow changing the assignment of permissions to groups or roles at a later point of time. Permissions are indirectly given to a user by assigning groups or roles to the user with each containing one or multiple permissions. Theoretically it is also possible to directly assign permissions to a user but in terms of maintainability permissions should always be consolidated in groups or roles. |
| **im\_role**  Approved | **role** |
| A role represents a container that bundles multiple permissions (e.g. permission to create ratings, permission to create a financial statement) into a logical entity.  A role can be assigned to multiple users, enabling the users to perform the actions defined by the permissions contained in the role.  Certain roles will be checked by the platform (e.g. only users of the role "user administrator" have access to the screens for the user administration). Other roles will be checked in the ACTICO Rules models (e.g. checks if a certain user has the role "risk analyst") |
| **im\_rule\_model**  Approved | **rule model** |
| Another level to restrict the functionality that is available to a user is the assignment of ACTICO Rules models. E.g. the search for ratings is implemented by a certain ACTICO Rules model. A user will only be able to perform the search if the corresponding rule model is assigned to the user.  Instead of having to assign a rule model to each user it is also possible to assign the rule model to a certain role or group - so that the administrator only have to assign a role to a user - and not a role and a rulemodel.  Please note that technically rule models are not directly assigned to users. Instead each rule model has a one to one relationship to a permission which is assigned to the user. |
| **im\_user**  Approved | **user** |
| A user of the system (e.g. a risk analyst, administrator etc.) |

# Assumptions and Constraints

The section "Assumptions and Constraints" is a collection of statements intended to delimit or specify the scope or design of the Credit Risk Management Platform system.

## Rating

This section contains the assumptions and constraints related to ratings.

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1300**  Approved | **DSC1300 No automatic rescoring for clients** |
| The system will not provide functionality for an automatic scoring or rating of clients. All scoring functionality must be triggered either by a user or an external system |
| **DSC1301**  Approved | **DSC1301 Rating is based on finalized financial statements only** |
| Only finalized financial statements will be taken into consideration for the rating of a client |
| **DSC1302**  Approved | **DSC1302 Only one non-final rating per client** |
| There will be only one rating per rating model in a non-final state for the client (PD) |
| **DSC1304**  Approved | **DSC1304 User role same for all assigned rating models** |
| Via the role that is assigned to the user, the user gets certain permissions. These permissions define what action the user is allowed to perform on ratings. But it is not possible to assign permissions just for certain rating models, e.g. user has the roles [ACT0103 Rating Analyst](#BKM_F74A9AD4_89E8_41BF_A967_19B667F32E97) and [ACT0107 Rating Approver](#BKM_F65F1B81_0C73_4871_B626_BFBA6A8CA393). Rating model a and b are assigned to the user as well. For both rating models the user is allowed to work on the ratings as analyst or approver. But it is not possible to restrict that the user is just analyst for rating model a and just approver for rating model b. |
| **DSC1306**  Approved | **DSC1306 Display older rating revisions** |
| When displaying an older revision of the rating the system displays a historic snapshot of the rating data. |
| **DSC1307**  Approved | **DSC1307 Display of discarded ratings** |
| It is not possible to view or search a rating in status "Discarded". |

## Client Management

This section contains the assumptions and constraints related to the client management.

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1105**  Approved | **DSC1105 Group member data update of external clients** |
| At a refresh of the client data from an external system, the details of the related clients that exist already in the system are not updated. |
| **DSC1106**  Approved | **DSC1106 Remove client from group does only remove relation** |
| If a client is removed from a group assignment, only the relation to the group is deleted. The client is still available in the system. |
| **DSC2501**  Approved | **DSC2501 Client Publishing** |
| When publishing the Client the following information is not included in the publishing  - the list of financial statements  - the list of ratings  - the list of applications |
| **DSC1100**  Approved | **DSC1100 No default analyst for client** |
| The system does not provide a default credit analyst for a client |
| **DSC1101**  Approved | **DSC1101 Financial Spreading via ACTICO Financial Spreading Module (SPR)** |
| All requirements related to the Financial Spreading will be realized via the ACTICO Financial Spreading Module (SPR). See the Financial Spreading User Guide for a documentation of the functionality and features of the Financial Spreading Module. |
| **DSC1102**  Approved | **DSC1102 Display older client revisions** |
| When displaying an older revision of the client the system displays a historic snapshot of the client data.  The following information is not shown when displaying an older revision of the client  - list of client financial statements  - list of client ratings  - group member information |
| **DSC1103**  Approved | **DSC1103 Country code based on ISO-3166-1 ALPHA 2** |
| External systems will deliver the country code using ISO-3166-1 ALPHA 2 |
| **DSC1104**  Approved | **DSC1104 Synch of manually created and imported clients not supported** |
| The system does not support to synch, merge or replace manually created clients (clients not imported from external system) with external clients |
| **DSC1107**  Approved | **DSC1107 One limit per client** |
| Each client can only have one granted limit. If a client is part of multiple groups, each group with it's limit information is displayed on client level, but the specific client limit is the same in all groups. |

## Limit Application

This section contains the assumptions and constraints related to limit applications.

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1401**  Approved | **DSC1401 Display of discarded limit applications** |
| It is not possible to view or search a limit application in status "Discarded". |
| **DSC1403**  Approved | **DSC1403 Only one non-final limit application per client** |
| There will be only one limit application in a non-final state where a client participates. |
| **DSC1404**  Approved | **DSC1404 Display older limit application revisions** |
| When displaying an older revision of the limit application the system displays a historic snapshot of the rating data. |
| **DSC1405**  Approved | **DSC1405 Limit applications are created for the group of a client** |
| When creating a limit application, the application is created for a specific group of the client. All clients within the selected group are participating within the application and their limit can be modified. If the client is not part of a group, the client itself will be the main client and treated as its own group. |

## General

This section contains general assumptions and constraints.

### Business objects

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1000**  Approved | **DSC1000 Business object implemented as its own Workplace document** |
| The following business objects are implemented as Workplace documents:  - Client  - Rating (e.g. PD Rating)  - Bulk Operation (e.g. Bulk Approval) |

### Worklist

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1001**  Approved | **DSC1001 Filter criteria for worklist** |
| The parameters for setting a filter or search criteria for searching Worklist items are defined in the corresponding GUI-Template |

### Backtesting

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1002**  Approved | **DSC1002 Backtesting will be performed with the help of DWH** |
| Backtesting including KPI calculation is performed using data of the data warehouse and is not performed in the system. The data warehouse will import the data that is necessary for backtesting. As it is not possible for the DWH to directly import data from the operational database tables of the system the data that is necessary for backtesting is provided in relational database tables. Those tables are filled up by the so called publishing process described in more detail in the respective detailed specification.  In order to ensure that data from the different data sources can be linked together in the DWH each system must ensure to provide the relevant unique keys |

### Printing

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1003**  Approved | **DSC1003 PDF View installation on client** |
| The client computer is expected to have Adobe Acrobat Viewer installed and optionally integrated with the Web Browser used for the system (PDF viewer is registered as a browser plugin and can display PDF documents) |

### Multi currencies

|  |  |
| --- | --- |
| **id** | **Item** |
| **DSC1004**  Approved | **DSC1004 Limited support of multi currencies** |
| With the exception of the Financial Spreading module the system does not provide any features related to exchange rates. For this reason no conversion of amounts is supported. Currencies can only be used as an indicator of a values unit when displayed or exposed on any system interface.  When a currency value is persisted (see application entity) the value is persisted alongside with a currency ([BO0028 Currency Amount](#BKM_3771021A_DFBA_4A71_8960_F2655E12049B) - set to EUR per default).  Within interfaces a currency can be provided for currency values, in order to prepare the implementation of multi-currency support.  The currency values must be set to "EUR" when providing data to the interface.  If any other currency than "EUR" is provided, an error message is created and blocks further execution. |
| **DSC1005**  Approved | **DSC1005 Default currency must not be changed** |
| The default currency of the system is configurable but must not be changed after go live as all exchange rates are based on the default currency. |
| **DSC1006**  Approved | **DSC1006 Changing currency units** |
| Changing the currency unit of any input field does not trigger a change of the corresponding input field's value (no conversion and no wiping) |
| **DSC1007**  Approved | **DSC1007 Available currencies in the system** |
| The Rule Model Administrator is able to maintain the list of available currencies |

# Interfaces

The detailed interface specification on an interface and field level can be found in separate documents (e.g. excel or wsdl interface contracts). The following chapter contains an overview about the interfaces and general requirements.



Figure Diagram Sequence: Interfaces

## Exchange Rates (provided by Financial Spreading)

## Provided

The following section contains descriptions of all interfaces provided by the CRMP

### IFC005 Receive client information

This interface call is used to receiving client details for a single client including its direct children, parent tree, collaterals and limit information.

This interface is a synchronous webservice interface.

If an error occurs while the interface is being triggered, the error is logged and an error message is returned to the caller of the interface.

See the crmp-interface-mapping.xlsx for the interface description on a field level.

### IFC006 Create financial statements

This interface call is used to create one or multiple financial statements for an existing client.

This interface is a synchronous webservice interface.

If an error occurs while the interface is being triggered, the error is logged and an error message is returned to the caller of the interface.

See the crmp-interface-mapping.xlsx for the interface description on a field level.

### IFC007 Schedule Batch Job

This interface call is used to schedule batch jobs providing a rule model name, start date and optional batch parameter. It can be used to use an external scheduler for triggering batch jobs which are executed within the CRMP.

This interface is a synchronous webservice interface.

If an error occurs while the interface is being triggered, the error is logged and an error message is returned to the caller of the interface.

See the crmp-interface-mapping.xlsx for the interface description on a field level.

### IFC008 Retrieve Statement Details

This interface allows you to receive all financial statements with data and the meta information for the provided list of statement IDs.

This interface is a synchronous webservice interface.

If an error occurs while the interface is being triggered, the error is logged and an error message is returned to the caller of the interface.

See the crmp-interface-mapping.xlsx for the interface description on a field level.

### IFC009 Create limit application

This interface call is used to create a limit application for a list of existing client and their group, if existend.

This interface is a synchronous webservice interface.

If an error occurs while the interface is being triggered, the error is logged and an error message is returned to the caller of the interface.

See the crmp-interface-mapping.xlsx for the interface description on a field level.

### IFC012 Import statement via XBRL XML

This interface call is used to create a statement from a XBRL or XML file via SPR IFS019 for a specific client.

This interface is a synchronous webservice interface.

If an error occurs while the interface is being triggered, the error is logged and an error message is returned to the caller of the interface.

See the crmp-interface-mapping.xlsx for the interface description on a field level.

## External

The following section contains descriptions of all external interfaces.

### IFC001 Load client data

This interface call is used to retrieving client details for a single or multiple clients incl. their collateral and client limit information.

This interface is a synchronous interface.

If the interface returns an error, the error is logged and the error message is displayed and the current process is interrupted (e.g. it is not possible to create a client in the system if this interface returns an error).

### IFC002 Retrieve group types for client

This interface call is used for retrieving all group types (relations types to other clients) of a client. Examples for group types are Borrower Unit or Risk Unit.

This interface is a synchronous interface.

If the interface returns an error, the error is logged and the error message is displayed and the current process is interrupted (e.g. it is not possible to create a client in the system if this interface returns an error).

### IFC003 Retrieve child/parent clients

This interface call is used for retrieving all child or all parent client which are related to a given client.

The client information of the group members are not updated automatically.

This interface is a synchronous interface.

If the interface returns an error the error is logged and the error message is displayed and the current process is interrupted (e.g. it is not possible to create a client in the system if the interface returns an error.

### IFC011 Update client limit information

This interface call is used to update client limit information for a single or multiple clients.

This interface is a synchronous interface.

If the interface returns an error, the error is logged and the error message is displayed and the current process is interrupted (e.g. it is not possible to create a client in the system if this interface returns an error).

## Lookup Data

The following section contains descriptions of all interfaces related to lookup data.

### IFC004 Lookup

This interface call is used for retrieving the lookup data (e.g. list of countries, list of industry codes)

This interface is a synchronous database interface.

If the interface returns an error (e.g. because the table is not available in the database) , the error is logged and the error message is displayed and the current process is interrupted (e.g. it is not possible to create a client in the system if this interface returns an error).

## User authentication

The following section contains descriptions of all interfaces related to user authorization.

### IFC010 Authenticate user

This interface represents the interface for authenticating the users of the system. A LDAP integration is used to connect to the active directory of the customer to authenticate the user.

This interface is a synchronous interface.

If the interface returns an error the error is logged and the error message is displayed to the user. In case of an error (e.g. session timed out) the user is not able to login to the system.

# Deployment View

This chapter contains information about the deployment of the system. For information about the system requirements please see the "Workplace System Requirements" external document.

It is assumed that the datasources for connecting with the database are configured in the application server and are using standard JDBC drivers for the used database system.



Figure Diagram Sequence: Deployment View

## Client

|  |  |
| --- | --- |
| **id** | **Item** |
| **DEP01**  Approved | **ACTICO Rules Modeler** |
| The ACTICO Rules Modeler is required for developing and maintaining the business rules. It is not required for actual usage of the system (e.g. by Sales or Risk Analysts). |

## Teamserver

|  |  |
| --- | --- |
| **id** | **Item** |
| **DEP02**  Approved | **Teamserver** |
| Environment where the ACTICO Rules Teamserver is deployed.  System requirements:  2 CPU, 4 GB RAM  The applications on this environment is not accessed by "normal" end users of the system (e.g. Sales or Risk analyst) - it's only used by administrative users for administrating ACTICO Rules models and their corresponding permissions. |
| **id** | **Item** |
| **DEP03**  Approved | **CRMP\_TS\_CORE** |
| Database schema with 10-20 GB size, about 1 GB growth per year expected |
| **DEP04**  Approved | **CRMP\_TS\_IM** |
| Database schema with 1 GB size. Almost no yearly growth expected. |
| **DEP05**  Approved | **jee container** |
| Application server. |
| **id** | **Item** |
| **DEP06**  Approved | **identity management** |
| Java .war file containing the Bosch Identity Management system that is used for administrating authorization of the teamserver. |
| **DEP07**  Approved | **teamserver** |
| Java .war file containing the ACTICO Teamserver core functionality. This is also the webapplication to which the ACTICO Rules modeler (installed on the client PCs of the users of ACTICO Rules) connects to (e.g. for retrieving changes). |
| **DEP08**  Approved | **teamserver-webconsole** |
| Java .war file containing the Bosch Teamserver web application that is used for administration of the ACTICO Rules rule models (e.g. creating a new Tag or Branch). |

## Development / Certification

|  |  |
| --- | --- |
| **id** | **Item** |
| **DEP10**  Approved | **Development** |
| The development environment is used for performing testing of the rule models itself and basic integration testing (depending on the availability of the integrated systems).  It contains the same components as the Production / Preproduction environments.  System requirements are: 2 CPU, 8 GB RAM available for the application server, 50 GB hard disk available for the application, yearly growth of about 10 GB per year expected. |
| **id** | **Item** |
| **DEP11**  Approved | **CRMP\_DEV** |
| Database schema with 10-20 GB size, about 10 GB growth per year expected. |

## Preproduction

|  |  |
| --- | --- |
| **id** | **Item** |
| **DEP16**  Approved | **Preproduction** |
| The pre-production environment is used for complete integration & UAT testing of the rule models and the system.  System requirements are: 6 CPU, 10 GB RAM available for the application server, 50 GB hard disk available for the application, with an expected yearly growth of about 10 GB. |
| **id** | **Item** |
| **DEP18**  Approved | **CRMP\_PREPROD** |
| Database schema with 20-30 GB size, about 20 GB growth per year expected. |

## Production

|  |  |
| --- | --- |
| **id** | **Item** |
| **DEP21**  Approved | **Production** |
| This system represents the production environment of the application.  System requirements are: 6 CPU, 10 GB RAM available for the application server, 50 GB hard disk available for the application, with an expected yearly growth of about 10 GB. |
| **id** | **Item** |
| **DEP31**  Approved | **search index batch** |
| Directory on the filesystem where the search index for the batch application is stored. |
| **DEP29**  Approved | **Workplace Batch Application** |
| Standalone Java Application for executing batch jobs |
| **id** | **Item** |
| **DEP30**  Approved | **configuration files batch** |
| Configuration files for the batch application. |
| **DEP23**  Approved | **jee container** |
| Application server. |
| **id** | **Item** |
| **DEP25**  Approved | **configuration files** |
| Configuration files for the .war files deployed on the application server. |
| **DEP24**  Approved | **crmp-webapp** |
| Java .war file representing the CRMP Solution web application - this is the application that is used by the actual users of the system (e.g. risk analyst, approver etc.) |
| **DEP26**  Approved | **search index webapp** |
| Directory on the filesystem where the search index for the web application is stored. |
| **DEP22**  Approved | **CRMP\_PROD** |
| Database schema with 20-30 GB size, about 20 GB growth per year expected. |