SAP Treasury and Risk Management (TRM)

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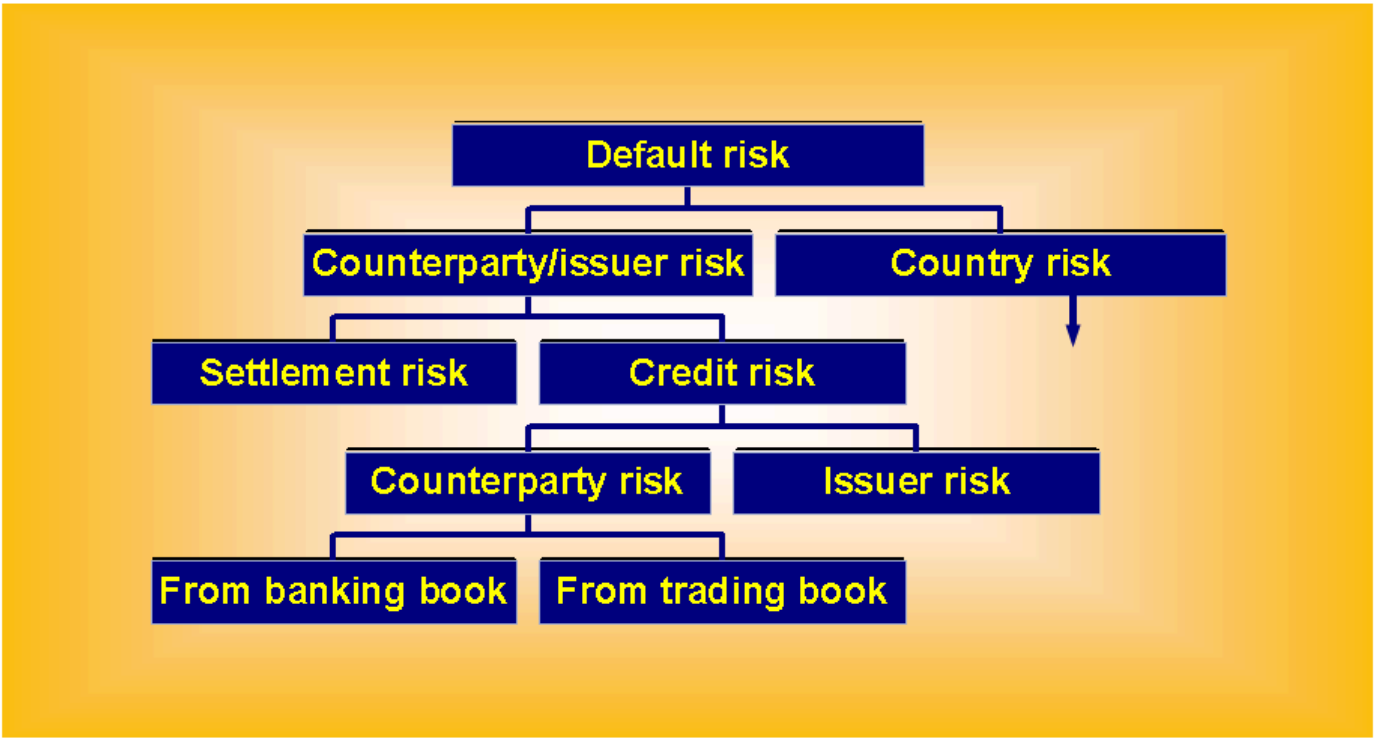
Credit Risk Analyzer

Purpose

This TRM component enables you to measure, analyze, and control **default risks** . Default risk refers to the potential loss arising from a financial transaction should the business partner not fulfill his contractual obligations either due to specific, economic or political reasons. Default risks are classified as follows:



Counterparty/issuer risk describes the danger of a loss in the value of a receivable due to a worsening of the creditworthiness of the business partner. Country risks arise when either the country of the business partner or the country of the transaction currency becomes insolvent. Counterparty/issuer risks are subdivided into credit risk and settlement risk. The existence of both these risks depends on the timing of the analysis of the transactions. Credit risks exist over the whole term of the transactions. Settlement risks exist only during the settlement period. Credit risk can consist in a pure counterparty risk or an issuer risk, depending on the transaction category (for example, securities transactions).

ⓘ Note

The functions for country risk were developed only as part of a **project solution** and have not been released for the market. The relevant functions are referred to in the documentation.

Implementation Considerations

The tightening of regulations on risk controlling endorses the increasing significance of analyzing and limiting insolvency risks. Out of commercial considerations too it is essential to have a system that supports the measurement, analysis, control and limitation of counterparty/issuer risks.

Features

Attributable Amount Determination - Market-Based Quantification of Various Exposures

The system calculates attributable amounts for each single transaction entered, showing the risk content of the respective transaction. Credit and settlement risks from classic credit transactions and trading book transactions are taken into account when quantifying default risk. Default risk is calculated based on counterparties and issuers.

The level of the default risk arising from classic credit transactions is determined by the amount of the capital commitment of the contract and the current drawings.

In the case of trading transactions, the level of the default risk is governed by the potential replacement cost that would arise in the case of default by a business partner. The potential additional loss from a potential positive market value change of an existing transaction can be covered by transaction-specific markup rates.

The calculated risks are assigned to all affected portfolio segments, for example, the counterparty, the industry sector, the product, or a combination of these.

Limit Management – Controlling Risk by Setting up and Monitoring Limits

Different limits are stored in central limit management. These can relate to one or more criteria (Limit Characteristics). Limits reflect the organization's allocations.

Updating Limits and Comparing Attributable Amounts with Limits

The integrated default risk limit check assesses the risk of each single transaction at the time the transaction is created in TRM Transaction Manager. Each transaction is checked against the relevant limits and updated. You can also let the system update limit utilizations by revaluing all items in end-of-day processing. For risk control purposes, the relevant limit utilizations are shown in aggregated form.

Additional Notes

You can find the functions of Credit Risk Analyzer in the application by choosing **Accounting** > **Financial Supply Chain Management** > **Treasury and Risk Management** > **Credit Risk Analyzer** .

All subsequent menu paths contained in the documentation for Credit Risk Analyzer start from this point.

You can find the relevant settings in Customizing under **Financial Supply Chain Management** > **Treasury and Risk Management** > **Credit Risk Analyzer.**

Note

The integrated default risk limit check is to be understood as an integrated single transaction check. Therefore, information provided for the single transaction check in sections of the documentation not specifically referring to the single transaction check (for example updating limit utilizations), applies also for the integrated default risk limit check.

Exposure versus the Attributable Amount

Exposure basically refers to the amount subject to default risk. No further analysis takes place. Hence the exposure corresponds to the credit equivalent amount. The system can determine the **attributable amount** on the basis of the exposure. The attributable amount shows how high the risk is that arises from the transaction. If default was a certainty, then the exact amount of the exposure could be taken as the attributable amount (volume-oriented attributable amount). In reality, default is subject to certain laws of probability. These uncertainties are therefore reflected in the calculation of attributable amount by taking into account default quotas and repayment quotas, for example. This results in risk-oriented attributable amounts.

Depending upon the nature of the transaction itself, the system differentiates between the terms primary and secondary exposure, and primary and secondary attributable amounts. The **primary transaction** is the original transaction with the business partner. **Secondary transactions** are made only in the context of a particular primary transaction. Examples include collateral and facilities.

Depending on whether the risk-reducing effects of collateral are considered, a distinction can be made between **net** and **gross** for all concepts. Gross shows the maximum possible amount per partial transaction. For example, the net attributable amount of a transaction results from the gross attributable amount of the transaction minus the attributable amounts for the collateral that can be allocated to the transaction.

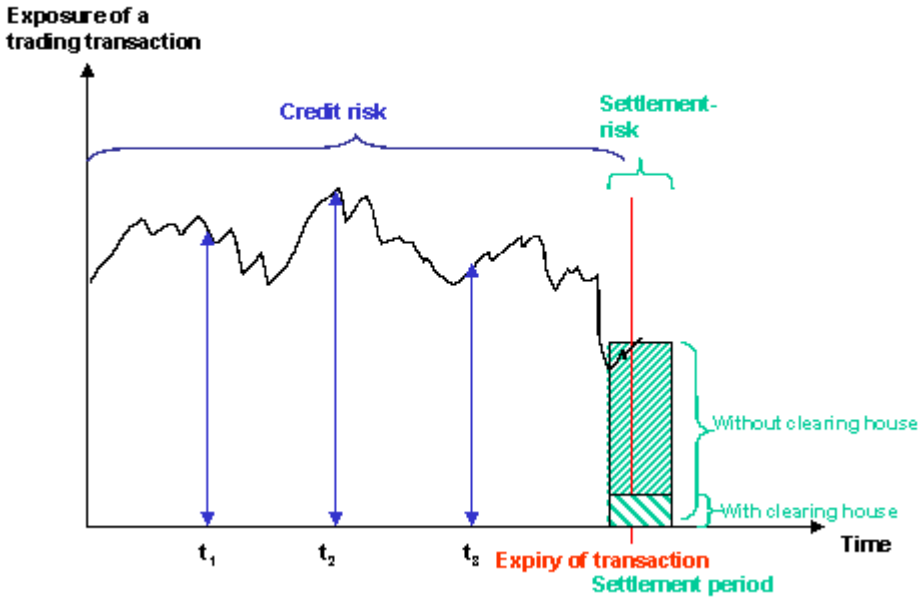
The system calculates attributable amounts for each individual transaction, irrespective of whether it is a primary or secondary transaction. **Utilizations,** or drawn amounts, are referred to at the level of the limits, which are defined by characteristics.

Attributable Amount Determination

The attributable amount is a measure of the default risk that arises when a transaction is concluded. The attributable amount should depict both the **expected loss** and the **unexpected loss** arising from a financial transaction. The system determines an attributable amount for every expected incoming cash flow or asset.

The credit risk of a trading transaction exists for the entire term of the transaction, and reflects the counterparty risk from the trading book plus any term-related and risk-related add-on for covering potential positive market value changes. In the case of classic credit transactions, the credit risk is influenced by the committed contract capital and the actual drawings in accordance with their amounts.

only exists at certain points in time during the "life" of the transaction. It exists during the period from the triggering of the advance payment until receipt of the return payment. Whether the settlement takes place via a clearing house or directly also influences the level of settlement risk.



Use

Depending on the type of financial transaction, the system determines amounts that quantify the risk involved in the transaction. If a transaction contains more than one risk at one point in time (counterparty credit risk, issuer credit risk, settlement risk) then the system generates several attributable amounts at the same time. At single transaction level, the unit of measure is the currency in which the transaction was concluded. The system displays totals records in the currency of the company code.

The provides you with an overview of the possible risk categories for each transaction. In the case of an OTC option (long call) on a stock, for example, the system determines the credit risk of the counterparty of the option and the credit risk of the issuer of the stock. In the case of swaps with principal swaps, in addition to the counterparty credit risk the system also shows the settlement risk toward the counterparty from the time the advance payment is triggered until receipt of the return payment.

Prerequisites

You need to have already made the settings necessary in Customizing for the **determination procedures** for all transactions. You need to ensure that for all transactions existing in the system there is a financial object with the corresponding default risk data and a **default risk rule** .

Features

The system calculates attributable amounts for each transaction type and risk type using a particular combination of determination procedure and default risk rule.

In order to calculate the attributable amounts, the system accesses **formulas** that link particular **variables** (base key figures) containing additional parameters (for example, add-on factors, default probabilities) to the final attributable amounts. The NPV and nominal amount are used as the base key figures for credit risk, and the return payment amount is the usual key figure for settlement risk (depending on whether a clearing house is involved). You can either let the SAP system determine the base key figures, or you can import them.

ℹ Note

To display attributable amounts for settlement risk after the expiry date of the transaction, you need to maintain the validity end date of the transaction in the financial object.

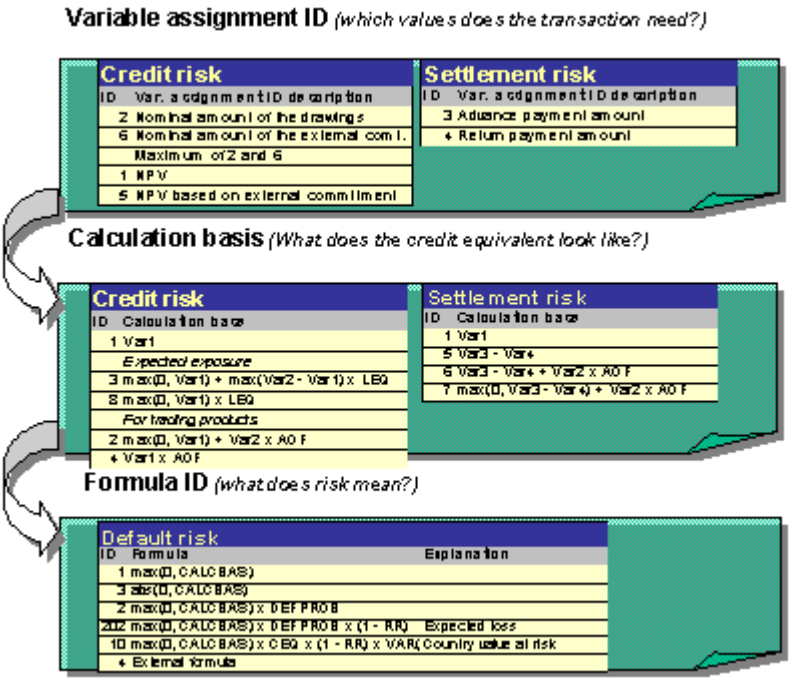
Note that for country-risk-relevant financial objects, the end date has to be entered in the field **Transaction End CPR** because there is no field called **Transaction End Country Risk** .

Setting Up of Formulas

Use

In Customizing, you set up formulas for each combination of determination procedure and default risk rule. These formulas are then used in the calculation of attributable amounts.

So that the system can calculate both volume-based and risk-based attributable amounts, the final formulas consist of **variables** , **formula IDs** , and **calculation bases** .



Prerequisites

1. In Customizing, you can store any number of combinations of 4 **variables** **by choosing** **Attributable Amount Determination** **Define Variable Assignment ID** . You can use the following basic key figures as values for these 4 variables. The basic key figures are either calculated by the system, or you can import them:
    - Net present value
    - Nominal amount
    - Return payment amount
    - Advance payment amount
    - Net present value based on external commitment
    - Nominal amount based on external commitment
    - Book value in transaction currency (you have to import this)

- Or other external key figures

2. You assign a combination of **formula ID** , **calculation base** and **variable ID** to each combination of determination procedure and default risk rule. The 6 formula IDs and 8 calculation bases are predefined in the system, and are in turn based on the assignment of the variables. This enables you to depict any number of formulas.

   In addition to the four variables, the following abbreviations are used in the formula IDs and calculation bases:

   - CALCBAS: Calculation base
   - DEFPROB: Default probability
   - ABS: Absolute amount
   - CEQ: Credit equivalent (used only if the country risk functions have been activated)
   - RR: Recovery rate
   - VAR%: Value-at-risk weighting factor (used only if the country risk functions have been activated)
   - AOF: Add-on factor
   - LEQ: Loss equivalent (used only if the country risk functions have been activated)

Features

The system uses the formulas defined, the determination procedure, and the default risk rule to calculate attributable amounts for each transaction.

The following overviews show how the system uses the settings (formulas and calculation bases) in the determination procedure to meet the requirements for calculating counterparty/issuer risk and country risk.

Formulas	Counterparty/Issuer Risk	Country Risk
Max(0,CALCBAS)	Yes	Yes
Max(0,CALCBAS) x DEFPROB	Yes	No (1)
ABS(CALCBAS)	Yes (from TRM)	No
Max(0,CACLBAS) x CEQ x (1 - RR) x VAR%	No	Yes
Max(0,CALCBAS) x (1 - RR)	Yes	No (2)
Max(0,CALCBAS) x weighting factor	Yes, settlement risk	No
Max(0,CALCBAS) x DEFPROB x (1 - RR)	Yes	No

Is possible, depending on the customer's own requirements. Note here that in the secondary risk display, collateral is multiplied by the country default probability of both the collateral provider and the transaction.

Is possible, depending on the customer's own requirements.

CALCBAS	Counterparty/Issuer Risk	Country Risk
Var1	Yes	Yes
Max(0, Var1) + Var2 x AOF	Yes	No
Max(0, Var1) + Max(0, Var2 – Var1) x LEQ	No	Yes, CVAR only in formula 010

CALCBAS	Counterparty/Issuer Risk	Country Risk
Var1 x AOF	Yes	No
Var3 - Var4	Yes, settlement risk	No
Var3 - Var4 + Var2 x AOF	Yes, settlement risk	No
Max(0, Var1) x LEQ	No	Yes, CVAR only in formula 010

Negative attributable amounts are considered in the netting procedure only.

Basic Key Figures Calculated by the SAP System

The system calculates the **NPV** of a transaction in the following way:

Transaction Form	Net Present Value
Loans, money market transactions	Net present value of incoming cash flows
Generic transactions	Net present value according to the selected transaction
All other transactions	Current net present value

The system calculates the **nominal amount** of a transaction in the following way:

Transaction Form	Nominal Amount
Stocks	Net present value of the stock item
Index-based transactions	Value of the index item
Forward exchange transactions	Nominal amount of incoming cash flows in transaction currency
Interest instruments, loans	The amount outstanding on the evaluation date
Swaps with principal swap	Amount of the highest occurring nominal amount after the evaluation date in transaction currency
Swaps without principal swap	Current, decisive nominal amount of the swap
FRA	Nominal volume
Caps/floors	Nominal volumes of the current caplets/floorlets
Stock options	Net present value of the stock item
Index options	Value of the index item
Options on forward exchange transactions	Nominal amount of incoming cash flows in transaction currency
Options on interest instruments	Nominal amount of the interest instruments
Options on swaps	Current nominal amount of the swap
Warrants	Same as for options (subscription ratio is also taken into account)
Generic transactions	Net present value according to the selected transaction

The system calculates the **advance payment amount** of a transaction in the following way:

Transaction Form	Advance Payment Amount
Foreign exchange spot and forward transactions	Nominal amount of outgoing cash flows in transaction currency
Securities forward transactions	Purchases – agreed purchase price, sales – NPV of the security item that is to be delivered
Swaps	The amount of the outgoing cash flow due after the current evaluation date

The system calculates the **return payment amount** of a transaction in the following way:

Transaction Form	Return Payment Amount
Foreign exchange spot and forward transactions	Nominal amount of incoming cash flows in transaction currency
Securities forward transactions	Sales – agreed purchase price, purchases – NPV of the security item that is to be delivered
Swaps	The amount of the incoming cash flow due after the current evaluation date
Money market transactions	Nominal amount + last incoming cash flow
Loans	Nominal amount

The **net present value and the nominal amount based on the external commitments** of a transaction are calculated as follows:

Transaction Form	Net Present Value and Nominal Amount Based on External Commitment
Loans	Commitment capital
Variable transactions (not relevant in the TRM component), BCA accounts	External commitment

⚠ Caution

This setting cannot be used for any other transactions.

If you set the **Maximum Commitment/Utilization** indicator when you define the variable assignment ID, you can have even greater control over how basic key figures are assigned for loans, variable transactions, and BCA accounts. This function is only effective if you use the basic key figures **net present value** (0001), **nominal amount** (0002), **net present value based on external commitment** (0005) or **nominal amount based on external commitment** (0006) in the variable assignment.

If you do **not** set the indicator, then the system calculates basic key figures as follows:

Key Figure	Loan	Variable Transaction	BCA Account
0001 NPV	NPV of incoming cash flows	Current balance	Current balance
0002 Nominal amount	Residual capital	Current balance	Current balance

Key Figure	Loan	Variable Transaction	BCA Account
0005 NPV based on external commitment	External commitment	External credit line	External account limit
0006 Nominal amount based on external commitment	Commitment capital	External credit line	External account limit

If you have set the indicator, then the system calculates the maximum amount of the key figures **net present value** and **net present value based on the external commitment** , or **nominal amount** and **nominal amount based on the external commitment** .

Example

Variable 1: Net present value

Variable 2: Nominal amount

Max. Commitment/Utilization indicator is set.

If this setting is made, then for loans, variable transactions and BCA accounts the system checks the following:

Variable 1: Maximum of variable 0001 net present value and 0005 net present value of the external commitment

Variable 2: Maximum of variable 0002 nominal amount and 0006 nominal amount of external commitment.

Add-On

Definition

The add-on is a risk markup that takes into account the default risk arising from transactions, the market value of which can increase over a particular period. The add-on is calculated by multiplying the assessment basis by an add-on factor. You define the add-on factor in Customizing under **Attributable Amount Determination** > **Edit Add-on Factors** and entering the add-on factor as a percentage rate depending on the **risk sensitivity** and the **market value change period**.

Example

		Risk Sensitivity				
Function **Add-On Factor**		Interest-related transactions	Interest and currency-related transactions	Currency-related transactions	Stock and currency-related transactions	Stock-price-related transactions
Market Value Change Period	Up to 1 year	0,0%	1,0%	1,0%	6,0%	6,0%
	Over 1 to 5 years	0,5%	5,0%	5,0%	8,0%	8,0%
	Over 5 to 10 years	1,5%	7,5%	7,5%	10,0%	10,0%
	Over 10 Years	2,5%	10,0%	10,0%	12,0%	12,0%

Structure

Risk factors, such as interest rate risk, exchange rate risk, stock price risk, are assigned to individual transactions by means of the **risk sensitivity**.

The **market value change period** describes the period of time that is significant for valuing trading transactions when determining potential market value changes. In Customizing, you store how the market value change period is to be determined in the definition of the default risk rule. You can use the data from the transaction or fixed values in the calculation basis. The following values are available for the determination of the market value change period:

- End of the term of the transaction

  The end of the term of the underlying is used in the case of options whose underlying has a definite term (for example, bonds, FRAs, swaps). In the case of options on indexes, shares and foreign exchange, the term is calculated from the end of term of the option.
- Interest commitment
- Capital commitment
- If the calculation basis is to use **fixed values**, then you must also specify the market value change period in months.
- If the market value change period is not relevant, then select the value **to be ignored**.

Integration

The system can find the respective add-on factor for a single transaction in the way described in the table above. This is because the risk sensitivity is assigned to the default risk rule in Customizing (under Basic Settings > Assignments > Assignments to Default Risk Rule > Assign Risk Sensitivities; or under Basic Settings > Assignments > Assign Risk Sensitivities) and the market value change period is determined by means of the default risk rule.

Probability of Default

Definition

The default probability is a percentage rate that specifies the probability of a loss on receivables in a given time period.

Integration

The default probability is stored in Customizing under Attributable Amount Determination > Edit Counterparty Default Probabilities or Edit Country Default Probabilities. It is stored as a percentage depending on the **rating** of the business partner stored in the business partner master data (or from the financial object) and the **risk commitment period**. Additionally, you can adapt the default probability by assigning different valuation factors for different valuation procedures (for example, internal procedure, German Banking Act procedure).

Example

		Risk Commitment Period			
Probability of Default		Up to 1 year	Over 1 year to 5 years	Over 5 years to 10 years	Over 10 Years
Rating	AAA	0,02%	0,05%	0,1%	0,2%

		Risk Commitment Period			
	AA	0,05%	0,15%	0,3%	0,5%
	BBB	0,15%	0,3%	0,6%	1,0%
	BB	0,3%	0,6%	1,0%	2,0%

Risk Commitment Period

Definition

The risk commitment period describes the period during which termination of the commitment is not possible, or possible only with extreme difficulty. You can generate risk cost-term grids by defining default risk probabilities that are based on the risk commitment period. This reflects the fact that in reality the default risk increases with the length of the term of the transaction.

Use

In Customizing: Basic Settings Definitions Define Default Risk Rule you define how the system is to calculate the risk commitment period. You can use dates from the transaction or fixed values in the calculation basis. The following values can be used to calculate the risk commitment period:

- End of the term of the transaction

  Note

  For FRAs, the day of settlement is chosen as the end of the term.

- Interest commitment
- Capital commitment
- Fixed values (the value of the risk commitment period is entered in months)
- Ignore.

Interpolation of the Default Probability

Use

Basically, the value of the stored risk commitment period nearest to the one that is to be determined is taken as the default probability. If no larger risk commitment period exists, then the system takes the next smallest value. To use a more exact default probability value for determining the attributable amount, you can allow the system to calculate the default probability by linear interpolation between two risk commitment values.

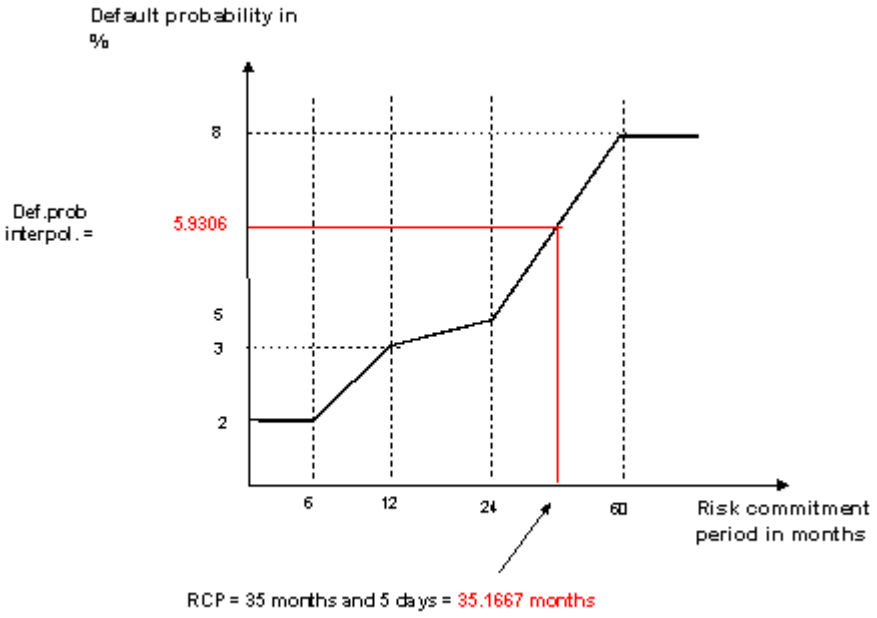
Prerequisites

To be able to carry out interpolation you need to have made the following settings in Customizing: In Basic Settings Definitions Define Determination Procedures, you need to have set the interpolation of default probability indicator. Interpolation of the default probability is only meaningful if formulas that take the default probabilities into account are assigned to the determination procedure.

Features

The system performs interpolation if the determined risk commitment period falls between two values. This gives an accuracy of 1/30 month to four decimal places. If there is only one value, precisely this monthly value applies for the determination of the default probability.

Example



Interpolation of the Default Probability

Recovery Rates

The recovery rate is an estimate in percentage for the part of a receivable for which there is no collateral but which can still be recovered in the event of a default. This part of the assets of the bankrupt, which can be used to cover the receivables, reduces the attributable amount.

Prerequisites

1. In Customizing under Attributable Amount Determination > Edit Determination-Procedure-Specific Settings, you have to assign formulas, which take recovery rates into account, to the respective combination of determination procedure and default risk rule.
2. In Customizing under Basic Settings > Definitions > Define Recovery Rate Class, you need to have created a recovery rate class.

   Note

   It is helpful to the user if you choose descriptions that allow the percentage rate of the recovery rate to be inferred (for example, R0010 for 10%).

3. In Customizing under Attributable Amount Determination > Edit Recovery Rates, you need to have stored the relevant percentages.

   You do so for each valuation factor determination, recovery rate class, and date.

Features

The system calculates the relevant recovery rate on the basis of the financial object. You need to have either stored a recovery rate class in the financial object or assigned a default risk rule by means of which the system can then find a default recovery rate. You define how the system uses the default risk rule to determine the recovery rate class. You do this in Customizing under Basic Settings > Definitions > Define Default Risk Rule.

- No default setting ⇒ You need to store the recovery rate directly in the financial object.
- From default risk rule ⇒ The default recovery rate is also stored in the Recovery Rate Class field.
- •From valuation factor determination ⇒ The system checks the recovery rate basis stored in Customizing under Basic Settings > Definitions > Define Valuation Factor Determination.

  If the business partner rating is defined as the recovery rate basis, then the system calculates the recovery rate using the rating of the business partner. The rating is either determined from the business partner master data or entered in the financial object of an individual transaction. If it is entered in the financial object, then this value overrides the rating from the business partner data.

  You assign the rating to the recovery rate class in Customizing under SAP Banking > SEM Banking > Default Risk and Limit System > Basic Settings > Assignments > Assign Credit Rating or Assignments to the Country. For CFM, this activity is found under Corporate Finance Management > Credit Risk Analyzer > Basic Settings > Assignments > Assignments to Recovery Rate > Assign Credit Rating.

  i Note

  If no recovery rates are defined in the system, even though they are required for attributable amount determination, the recovery rate is set to 0.

Netting

Use

If netting agreements exist between two business partners, then if it is legally permissible (for example, the German Banking Act I §12) payments and receivables between partners can be netted off. This has the effect of reducing the counterparty/issuer risk of a bank's transactions with a particular counterparty.

In the Default Risk and Limit System, netting refers to bilateral liquidation netting, which means an agreement is made with the contract partner that in the case of the termination of the entire contract (in the case of bankruptcy, for example) all mutual claims and receivables are terminated, fall due, are valued at market conditions, and the resulting balance is calculated (balancing by netting). This has the effect of reducing the attributable amount for the credit risk. Settlement risk is unaffected.

Prerequisites

The determination procedure must permit netting.

When you define the determination procedure in Customizing by choosing... → Basic Settings → Definitions → Define Determination Procedures you need to set the Netting Active indicator.

In addition you need to make an entry in the Add-On Weighting field. The weighting factor shows to what extent the total add-on affects the calculation of the netting add-on. The total add-on is derived from the total of all open transactions that can be netted, and that involve the same counterparty.

Definition of a netting group

In Customizing choose: → **Basic Settings** → **Definitions** → **Define Netting Group** . You need to set up a netting group that defines for which business partner the transactions are to be balanced.

When you define the netting group, you also store the default risk rule, which the system uses to calculate the netting attributable amount. Any transactions in the netting group that are in a different currency are converted to the currency of the netting group, and then netted.

The financial object of the transactions that are to be netted contains either the **netting ID** or the **collateral ID.** This is stored in the data for the default risk limit part in the data group **Transaction assignment** .

The system permits a two-level netting procedure. Within a netting group, collateral can be provided in the form of a collateral agreement . When you create collateral agreements, you need to assign them to the relevant netting group.

Features

If netting is active, the system calculates the attributable amount as follows:

Determination of all open (still valid, not yet due) single transactions concluded with the business partner in a certain company code.

From the selected open transactions, the system then finds all the transactions that assigned to one netting group (can be netted), and all unassigned (cannot be netted) transactions.

Then, it calculates the attributable amounts of all transactions that cannot be netted. The total of the attributable amounts of these single transactions is calculated and then displayed.

For the transactions that can be netted, the system first finds all the single transactions that belong to a netting group. The following figures are then calculated for the transactions of this netting group:

Total of all net present values (total (net present values))

Total of all positive net present values (total (net present values_pos))

Total of all add-ons (total (add-ons))

Net/gross ratio (NGR)

NGR = max (0, total (NPV) / total (NPV_pos)) if the total of the NPVs (pos) is equal to or greater than zero; otherwise zero.

Add-on netting

Add onNetting = total (add-on)single transaction x (a + b x NGR) where b = 1 - a

a = weighting factor for the entire add-on

b = weighting factor for the net/gross ratio (NGR)

Average probability factor

Calculating Attributable Amounts for Netting Groups

Use

You can use report RKLNT to calculate attributable amounts for netting groups without having to run end-of-day processing. This evaluation also generates detailed logs of the calculation of the attributable amount.

Procedure

1. Choose: Information System > Reporting > Counterparty Risk of Netting Group

   The system displays the screen Counterparty Risk of Netting Group .

2. Enter the selection criteria you require. These include:

   Netting group

   Determination procedure (this must be a determination procedure that is relevant for netting)

   Valuation date

3. To start the attributable amount determination for the netting groups choose Execute .

Result

The system displays an **overview list** . On this screen, you see the netting attributable amount for each netting group and determination procedure you selected. Additional data is shown that was required for calculating the attributable amount (for example, the netting add-on, net/gross ratio, total of the NPVs, average default probability).

By choosing Group Details, or by double clicking on a row, you can display the **detail log** for each netting group and each determination procedure. The detail log contains additional data about the transactions assigned to the respective netting group. This data is displayed in several blocks, which are sorted by the type of attribution.

- **Key figures before the inclusion of collateral**

  All the transactions in the netting group are listed.

- **Key figures after inclusion of single transaction-related collateral for netting transactions**

  This block contains all the transaction data that results from the inclusion of the single-transaction-related collateral. The single-transaction-related collateral first reduces the positive net present value, and then the add-on.

- **Key figures after inclusion of collateral agreements**

  If the transactions in this netting group have also been assigned to a collateral agreement, they are listed in this section along with the collateral agreement data.

- **Key figures for the collateral agreements of the netting group**

- **Results for the netting group**

  The results contain the individual results required for the calculation of the netting attributable amount.

The detail log also contains the following functions:

Pushbutton	Function
Transaction Details	The system displays the screen showing the transaction master data
NPV Determination	The log showing the cash flow discounting is displayed

Pushbutton	Function
Collateral Agreement Details	This takes you to the transaction in which collateral agreements are displayed.
Key Figures for Collateral Agreements	The system displays information about how the attributable amounts for the collateral agreement were calculated.

User Exit for Attributable Amount Determination

Use

To achieve greater flexibility in the area of attributable amount determination, you have the option of defining your own calculation procedure for the determination of the attributable amount.

Prerequisites

In Customizing under Attributable Amount Determination Edit Determination Procedure Settings you need to have stored formula ID 999.

Activities

Create a project as per the enhancement concept and activate it. You need enhancement FKLR0001. For more information, refer to the documentation on function module EXIT_SAPLKLEX_001.

You need knowledge of the Enhancement Concept .

Limit Management

Use

Due to risk controlling regulations, and for purely business reasons, banks need to measure, analyze, and control counterparty/issuer risks and country risks.

By setting different maximum risk amounts it should be possible to limit the potential harm caused by the insolvency of a business partner. It is also possible to control the actions of traders by using a system of limits.

This function helps you control counterparty/issuer risks and country risk by means of limits and online monitoring. It also enables you to create comprehensive reports that can be used for internal and external purposes.

Integration

If you link Limit Management to the drilldown reporting function, then you can use all functions available in drilldown to obtain detailed analyses of limit utilizations.

Features

Central Limit Management contains the functions for risk controlling by means of limits, which you set up, and for monitoring those limits to ensure that they are not exceeded.You can combine the characteristics available in any way, which gives you a

highly flexible means of managing limits.

Limit Characteristics

Definition

There are four types of limit characteristics:

- Direct limit characteristics
- Derived characteristics
- Free (or custom) limit characteristics
- Generated characteristics

Use

You need to assign at least one limit characteristic to each limit type . In the application, you can then in turn store a limit for any combination of limit characteristic values.

Structure

You can differentiate between direct and derived limit characteristics. Direct limit characteristics are those derived directly from the data of a transaction. Derived limit characteristics are those derived from direct characteristics, such as the business partner.

Direct characteristics:

- Company code
- Business partner
- Limit product group
- Portfolio
- Trader
- Currency as a limit characteristic
- Monitoring unit
- Internal organizational unit
- Country risk country

Derived characteristics:

- Country (from business partner)
- Industry (from business partner)
- Rating (from business partner)
- Country rating (from country risk country)

ℹ Note

The limit characteristics **internal organizational unit** , **country risk country** and **country rating** are dependent on the use of the country risk functions that are only available in Banking.

Free (custom) characteristics:

You also have the option of creating 15 free characteristics as limit characteristics. You can derive these from the characteristics provided by SAP with the help of the SAP enhancement concept. One example of a free limit characteristic could be a geographical group of countries with the characteristic values **Asia, Latin America, North America** and **Western Europe** . In this case, the values would be derived from the characteristic **country of the business partner** .

Generated characteristics:

You are also able to take characteristics from the active analysis structure in the **Market Risk** component, generate them in Limit Management, and use them there as limit characteristics. If you are using generated characteristics , you are able to use them in all Limit Management functions in the same way as direct characteristics.

Creating Free Characteristics and Characteristic Values

Use

To achieve greater flexibility with regard to the selection of the limit characteristics, you can also derive free characteristics from existing limit characteristics. When you do this, limit characteristic values are grouped together to create a new free characteristic value.

Prerequisites

If you want to use free characteristics and set up values for these free characteristics, particular customer exits have to be activated in SAP enhancement management. This involves some additional steps, which are described below.

Procedure

To assign descriptions to the free characteristics, you first need to do the following:

Create a project by using transaction code CMOD.

The system displays the **Project Management of SAP Enhancements** screen.

Choose to display a description of customer exits for SAP transactions. You can find a detailed description in the documentation about the Enhancement Concept .

Create a project as per the enhancement concept.

Assign enhancementLTBLX001to the project.

Save the project by choosing and activate it with **Activate Project** .

The exit is not performed unless it is activated.

Changing the description of free characteristics

Choose **Goto** → **Text Enhancements** → **Keywords** → **Change,** and then specify one of the data elements described below, for which you wish to change the text.

In the Customizing for the definition of free characteristics and their characteristic values you can find free characteristics 01-15, to which are assigned data elements TB_RCID01 to TB_RCID15.

The system displays the **Change Key Word** screen.

Enter the required descriptions for the selected free characteristic.

You can define multiple free characteristic texts simultaneously.

Choose **Save** to save your entries.

You can group together the characteristic values for free characteristic values by using customer exit EXIT_SAPLTBLX_001.

You can use the sample coding in INCLUDE LXTBL1F01 to help you.

Now, using the customer exit, you derive the free characteristics you defined from the characteristics provided by SAP, and activate the exit.

To assign the defined characteristic values to the free characteristics, do the following:

In Customizing choose ... → **Limit Management** → **Define Free Characteristics and Characteristic Values.**

The system displays the screen **Display View "Selection of Characteristic IDs": Overview.**

Select a free characteristic and choose **Assignment of Values** .

Choose **New Entries** , assign the characteristic values to the selected free characteristic and save your entries with .

In transaction CMOD you can also display the SAP documentation about SAP enhancements. To do so, on the screen display **Project Management of SAP Enhancements** , choose the project and then choose **Display** to display the SAP enhancements. Select an enhancement and choose **Enhancements.**

Result

You have now:

Entered descriptions for free characteristics

Grouped characteristic values into free characteristic values, and activated exit EXIT_SAPLTBLX_001.

Assigned free characteristic values to free characteristics.

Generated Characteristics

Definition

Generated characteristics are the characteristics that are generated from the active analysis structure of the **Market Risk** component, and that are used there as limit characteristics.

Use

By using generated characteristics, you are able to define you own additional characteristics (compared to customer-defined characteristics, which are derived from existing limit characteristics).

Generated characteristics are transferred from Market Risk to Limit Management in Customizing under **Limit Management** **Generated Characteristics** . To do this, you first need to make some settings in the Customizing for Market Risk. You find the settings under the path given above. You can still use the generated characteristics even if you are not using the **Market Risk** component.

Provided you have transferred the generated characteristics, you are able to use these in all Limit Management functions in the same way as direct characteristics. Note, however, that in financial object maintenance, you do not maintain the values of analysis characteristics in the default risk limit part. Instead, you maintain these values in the screen **Maintain Financial Object: General Part** , which you access by clicking on the button **Analysis (RM)** in the application toolbar.

ℹ Note

You can use service report RFTBLT05 to check the consistency of the generated analysis characteristics, and service report RFTBLT04 for their reorganization. For more information see the relevant report documentation.

Example

If you want to break down and limit the default risk by profit center, you can generate the characteristic **Profit Center** in Limit Management.

Limit Types

Definition

The limit type comprises limits and limit utilizations. When you define a limit type, you can assign individual limit characteristics or combinations of the various limit characteristics that are available in the system settings.

ℹ Note

When you create a limit type filter, you use limit characteristics to restrict the respective limit type by freely definable ranges. Use of the limit type filter is optional. You can use it to create additional criteria to the limit characteristics of a limit type to help you make decisions, such as whether transactions are to be attributed to a particular limit type. You create limit type filters in the same place in Customizing in which you create limit types.

Use

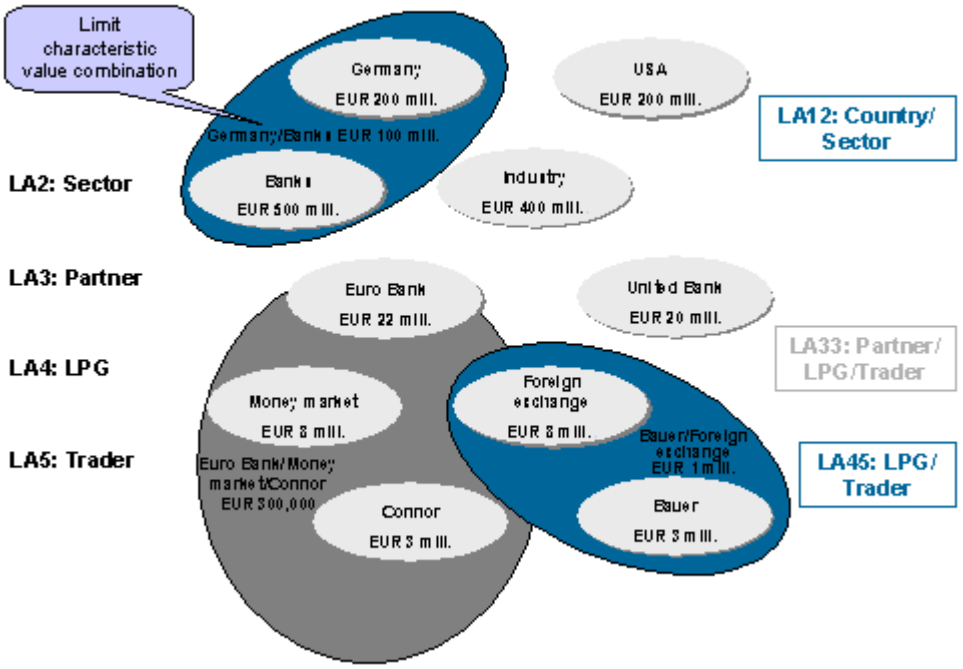
Using the combination of the characteristic values of the limit type, the system selects the risks of the respective transactions and compares the total of these with the limits. You create limit types in Customizing by choosing Limit Management Define Limit Types.

Example

The following limit types were created in Customizing:

One-dimensional limit types	Multi-dimensional limit types
Country	Country/industry
Industry	Partner/limit product group/trader
Partner	Limit product group/trader
Limit product group (LGP)	
Trader	

In the example, the limit type partner/limit product group/trader is a combination of the limit characteristics business partner number , limit product group and trader .



The limit of EUR300,000 can, for example, be assigned to the values of the limit characteristics **Euro Bank** , **money market** and **trader Connor** . This means that trader Connor is allowed to conclude money market transactions with the Euro Bank up to a limit of EUR300,000.

Display Filters

Definition

The display filter allows you to display the data relevant to you. As it is stored centrally, you can use the filter in all Limit Management applications.

Use

You can maintain any number of characteristics for each user according to his/her area of responsibility.

You can use the display filter in the following areas:

Limit maintenance

All the reporting tools (ALV, drilldown, query)

Activities

You can define the display filter in the Customizing for the Limit Management component, or directly in the application:

Customizing: → **Limit Management** → **Define Display Filters for Limit Management** .

Application: → **Environment** → **Current Settings** → **Define Display Filters for Limit Management** .

Defining display filters:

Choose **New Entries** .

Enter a name for the display filter.

Enter a short, medium, and long field label.

Save your entries by clicking on  .

You have now created a display filter to which you can assign limit characteristics in the following steps:

Select the display filter, and then choose **Assign Limit Characteristics to Display Filters** .

Choose **New Entries** .

Enter a limit characteristic.

If required, assign a filter number. You only need to do this if you want to store more than one filter for the same limit type.

Enter the lower limit for the characteristic.

If required, enter an upper limit for the characteristic. Using the field **Incl/excl** . you can define whether the system should calculate everything within the specified range, or everything outside the specified range.

Save your entries by clicking on  .

Limits

Definition

A limit is the maximum amount of limit utilizations, or drawings. It refers to certain values of the limit characteristics of a limit type.

Use

The limit acts as an amount against which checks are made to determine whether the limit has been exceeded. Each limit has a validity period.

If you want to change the value of the limit, then instead of invalidating the limit and creating a new one, you can simply split the validity period of the limit. You can define whether you want to change the future part of the limit only, or change the history of the limit as well. The new part of the limit is different from the old part of the limit only in terms of its amount and its validity period. The validity period of the new limit is the remaining validity period of the original limit. If the split limit contains one or more interim limits, then the system adjusts these appropriately.

Structure

A limit, which applies for certain limit characteristic values, is comprised of the following:

- A 'valid from' date
- An internal 'valid to' date
- An external 'valid to' date
- A limit currency (you can change the currency even after you have saved the limit)
- An internal limit amount
- An external limit amount
- A critical limit utilization
- A maximum risk commitment period
- Administration data (origin of the limit, release status and review date).
- Data about the interim limit
- Data about the limit transfer

Editing Limits

Use

You can create characteristic values for each combination of limit characteristics defined in a limit type.

Prerequisites

Before you can create limits, you need to have already created at least one limit type .

Note

You create limit types in Customizing by choosing Limit Management Define Limit Types.

Procedure

1. Choose ... Master Data Limits Maintain or Edit . The system displays the view Limits: Choose Limit Types.
2. Select one or more limit types.
3. Select one of the following functions:
   - Create Limits (CTRL + F3)
   - Change Limits (shift + F4); ...with Selection Change Limits Using Preselection (shift + F5)
   - Display Limits (shift + F6); ...with Selection Display Limits Using Preselection (shift + F7)

Creating Limits

1. To create a limit choose Create Limits . The system displays a dialog box in which you enter the characteristics relevant for the limit type.
2. Choose Continue .

   The system then displays the screen Edit Limits for Limit Type xxx: Create New Limit .

Enter the following data:

Limits	Explanation
Valid From Date	Default value: Today's date
Valid To (Internal)	Default value: 12/31/9999

Limits	Explanation
Valid To (External)	The external valid to date and the internal valid to date (which is not dependent on the external valid to date) together form a time range. The traffic light display in the overview of limit utilizations is yellow (warning) if today's date falls within this range. Default value: Blank  Since the l **imit amount** and **validity date** parameters are independent, the traffic light is set to yellow in the following cases: • If the external validity of the limit has expired and the external limit amount has not been exceeded; if the external limit amount has been exceeded, but the external validity period has not expired. • If the external validity period has expired (validity period has passed) but the external limit amount has been exceeded
Limit - Check/No Check	This field prompts the system to check the limit in reporting or in the single transaction check against the existing utilizations. If the field is set to **Check** , a red traffic light is displayed in reporting if the limit is exceeded. If it is set to **Do not check** , then in reporting and in the single transaction check no red traffic light is displayed for exceeded limits.
Limit Currency	You can enter a default currency in the **Limit Currency** field in the Customizing for the limit type. If no such setting was made in Customizing, the default value is the currency of the company code. You can change the currency even after you have saved the limit. The system converts the currency of all transactions attributed to this credit line to the limit currency.
Internal Limit Amount	The internal limit amount is always greater than the external limit amount and critical limit usage.
External Limit Amount	The external limit amount is always less than the internal limit amount. It triggers a warning (yellow traffic light) once a certain amount has been exceeded.  In Customizing, you define whether the early warning is triggered by an external limit amount or by a percentage of the internal limit amount.
Critical Limit Utilization in %	This triggers a warning (yellow traffic light) once a particular percentage of the internal limit amount has been exceeded.  In Customizing, you define whether the early warning is triggered by an external limit amount or by a percentage of the internal limit amount.

Limits	Explanation
Maximum Risk Commitment Period in Months	The maximum risk commitment period specifies with which risk commitment period a transaction may still be attributed to the limit.

ℹ Note

When entering limits, use the input help: **T** for thousand and **M** for million.

Administrative Data	Explanation
Origin of Limit	The entry in this field specifies whether a limit was created manually, automatically during generation of the limit utilizations, or by a limit transfer. The system enters this information automatically.
Release Status	In Customizing, you can activate the release procedure for each limit type.
Automatic Review	The settings made in Customizing determine whether this indicator is displayed. You can also review limits manually.
Review Recipient	The review recipient is set by default to the user who entered the limit. You can change this in any way you like.
Review Date	

Interim Limits	Explanation
Start	Start date of the interim limit
End	End date of the interim limit
Internal Delta	See **Internal Limit Amount**
External Delta	See **External Limit Amount**
Currency	The currency of the interim limit can differ from that of the limit itself or of other interim limits. You can also change it even after you have saved the interim limit.
Release Status	• Not subject to release • Not released • Flagged • Released
Released By	The user name of the person who created the limit is the default setting.
Name	Free entry

→ Recommendation

For more information about interim limits see Interim Limits .

Limit Transfer	Explanation
Start	Start of the validity of the limit transfer
End	End of the validity of the limit transfer
+/- Sign	The plus/minus sign specifies whether the respective amount of the limit transfer is to be added to or deducted from the limit.
Internal Delta	See **Internal Limit Amount**
External Delta	See **External Limit Amount**
Currency	The currency of the limit transfer can differ from that of the limit to or from which it is to be transferred.
Name	Free entry
Display , **Change** and **Delete**	If a limit transfer already exists, you can use these icons to branch to the display or change screen, or to delete the limit transfer.

→ Recommendation

For more detailed information about limit transfers, see Limit Transfers .

ⓘ Note

Limit maintenance has its own authorization object: F_T_VTBLV.

Automatic Creation of Limits

You can create limits automatically by using a report. This takes place by either direct input or batch input.

Direct Input:

1. You access the main menu for the direct input system by choosing **System** > **Services** > **Direct Input** .
2. Choose the program TB_LIMITS_INSERT_DI.
3. For more information about the procedure and the function module, choose **Help** > **Application Help.**

   Batch Input:
4. You access the main menu for the batch input system by choosing **System** > **Services** > **Batch Input** > **Sessions** .
5. Call the program RFTBLBI1.
6. You can view the report documentation that contains information on the next steps by choosing **Help** > **Application help** .

Changing Limits

1. To edit a limit choose **Change** .

   ### ⓘ Note

   ...with Selection enables you first to restrict the selection to particular characteristic values. In addition, you can use a predefined display filter here.

2. The system displays the screen **Edit Limits for Limit Types: Overview** . All limits are listed there that exist for the selected limit type and, if applicable, the selection criteria.

    a. You can display the documents for changes made to these limits by choosing **Change Documents** .

    b. You can enter notes by choosing **Notes** . For more detailed information see .

    c. You can branch to the display mode of the definition of limit types in Customizing by choosing **Customizing.**

3. To change a limit double click the relevant limit. The system displays the screen **Overview of Utilizations – Selection Using Direct Characteristics** .

   Select the relevant limit utilization, and then choose **Maintain Limit** .

   The system displays the screen **Edit Limits for Limit Type xxx: Detail** .

4. Change the limits as required and in the same as you would for creating a limit. To save your changes choose **Save** .

> **Note**
>
> When you have changed an internal or external limit amount, the system asks you whether the change to the limit amount should apply retrospectively, or whether you want to split the limit.
>
> If the limit amount should apply retrospectively, choose **Change** . If you want to split the limit, choose **Split** .

Displaying Limits

1. You can display a limit by choosing **Display** .

> **Note**
>
> **... ...with Selection** enables you first to restrict the selection to particular characteristic values. In addition, you can use a predefined display filter here.

   You can also display limits by using the report Overview of Limits .

2. The system displays the screen **Display Limits for Limit Types: Overview** . Here all the limits are listed that exist for the selected limit type.

    a. You can display the documents for changes made to these limits by choosing **Change Documents** .

    b. You can enter notes by choosing **Notes** . For more detailed information see .

    c. You can branch to the display mode of the definition of limit types in Customizing by choosing **Customizing.**

3. Select the limit you require. Choose **Choose Limit** . The system displays the screen **Display Limits for Limit Type xxx: Detail** , where you can view all the details for a limit.

Additional Information

> **Note**
>
> The system contains customer exit EXIT_SAPLTBL_002 for the administration of limits and for the overview of limit utilizations . You use this customer exit to prevent users displaying certain limits or utilizations. You might want to do this for loans to employees, for example. The authorization check is triggered again when the user branches to single record level.
>
> INCLUDE LXTBL1F02 contains sample coding. You can find a detailed description of the SAP enhancements in the documentation about the Enhancement Concept .

Editing Interim Limits

Use

The interim limit is a temporary increase in the limit, which can be converted into a new limit. Interim limits have their own release and approval procedure that you can use for a simplified organizational process.

You can generate more than one interim limit for a limit. They can have overlapping time periods. You can also assign these interim limits different currencies.

Prerequisites

As the interim limit is closely linked to the limit, the processing of interim limits takes place within the limit processing . Only the mass release of interim limits takes place in a different part of the menu (see below). The following prerequisite applies:

The system displays one of the following screens:

- **Edit Limits for Limit Type xxx: Create New Limit**
- **Edit Limits for Limit Type xxx: Detail**
- **Display Limits for Limit Type xxx: Detail**
- **Report for Mass Release of Interim Limits**

Procedure

You can edit an interim limit as follows:

- Create
- Change
- Display
- Release
- Transfer

Creating interim limits

1. The system displays one of the following screens:
    a. Edit Limits for Limit Type xxx: Create New Limit
    b. Edit Limits for Limit Type xxx: Detail
2. Maintain the following fields in the **Interim Limits** table:

Start	Date on which the interim limit for a limit becomes valid
End	Date on which the interim limit for a limit becomes invalid
Internal limit amount	Temporary increase of the internal limit
External limit amount	Temporary increase of the external limit

Currency	The currency of the interim limit can be different from the currency of the limit itself, and can be changed at any time.
Release status	◦ Not subject to release: The release procedure has not been activated for the limit type. ◦ Not released: The interim limit has not been released yet. ◦ Flagged for release: This release status is set automatically after the interim limit has been created if the release procedure is activated. It is the first step in the release procedure, as per the principle of dual control. ◦ Released: The interim limit was released, and is therefore effective.
Released by	The name of the user who created the limit appears here automatically after the limit has been created.
Name	Free entry

3. Choose to save your entries.

Changing and deleting interim limits

1. The system displays the screen **Edit Limits for Limit Type xxx: Detail** .
2. Proceed in the same way as for creating an interim limit.
3. To make the changes you require, overwrite the exiting entries. To delete an interim limit, select it and then choose **Delete** .
4. Choose to save your changes.
   - If the release procedure is active, the release status of the interim limit is set back one step by the change(flagged). The interim limit needs to be released again.
   - If the release procedure is not active, the change is active immediately after you have saved the data.

Displaying interim limits

1. The system displays the screen **Display Limits for Limit Type xxx: Detail** .
2. You can view the existing entries for the interim limit in the **Interim Limits** table.

Releasing interim limits

You can release interim limits either individually, or you can use a report to release them all together in a mass release.

ⓘ Note

You need to use the release procedure for interim limits only if the release procedure is active in Limit Management. Note that you use the release procedure in accordance with the principle of dual control.

Releasing individual interim limits

1. Call up the screen **Edit Limits for Limit Type xxx : Detail** in the same way as for changing interim limits.
2. Select the interim limits you want to release.
3. Choose **Interim** and to save your entries.

Releasing multiple interim limits (mass release using report TBIR)

1. **Choose ... > Master Data > Limits > Release > Interim Limits.**
2. The system displays the selection screen **Report for Mass Release of Interim Limits** .
3. Here you can select your interim limits by entering the following selection criteria:
    - Limit type (you can enter a range of values)
    - Valid from date of the limit (you can enter a range of value)
    - Valid to date of the limit (range of values)
    - Release status of the interim limit
        - Interim limits not subject to release (depending on the settings in Customizing)
        - Interim limits not released
        - Flagged interim limits
        - Released interim limits
    - Last released by
4. Start the report with **Execute** .
5. Select the interim limits you want to release.
6. Choose **Release** and to save your entries.

Transferring interim limits

1. Call up the maintenance screen **Edit Limits for Limit Type xxx : Detail** in the same way as for changing interim limits
2. Select your interim limit and choose **Transfer** (to limit amount). Transferring the interim limit to a new limit represents a permanent increase in the limit. The transfer sets back the release status of the limit.

> **Note**
> The interim limit must already be released.

3. The system then displays the dialog box **Limit Split: Date** . Here you enter the date as of when the new limit with the increased limit amount is valid. The original limit becomes invalid on the day before the date of the split. The validity end date of the new limit is transferred from the old limit.
4. Choose to save your entries.

Processing Limit Transfers

Use

You can reduce the free amount of one limit by a fixed amount and for a specified time period in order to increase the free amount of another limit. Transferring limits enables you to allocate risk capital efficiently.

During their period of validity, limit transfers are included in the overview of utilizations and in the single transaction check.

By choosing **Notes** , you are able to create notes, and display existing notes in various places when you are processing limits. You define notes in Customizing under → **Limit Management** → **Note IDs** → **Define Note IDs for Limit Transfers.**

Creating Limit Transfers

You can create limit transfers in various ways:

From the overview screen of limit maintenance

From the overview screen of utilizations

By copying an existing limit transfer in collective processing (see the documentation about the Collective Processing of Limit Transfers)

From the overview screen of limit maintenance/utilizations, you create limit transfers in the following way:

Select both limits.

Choose **Limit Transfer.**

The system displays the screen **Create Limit Transfer** : **Data**

Enter a name for the transfer.

Enter the start date and the end date.

Specify the currency, the internal, and, if appropriate, the external delta.

Using the selection button, define to which limit the amount is to be added.

Choose **Save** to save your entries.

Displaying Limit Transfers

You can display limit transfers in various ways:

From collective processing

In the maintenance screen for individual limits by choosing the tab page **Limit Transfer** (you can display the information in detail by choosing **Display**)

By double-clicking on the limit amount in the overview of limit utilizations or in limit maintenance.

The values are displayed in a dialog box. Note, however, that in this view it is not possible to distinguish between interim limits and limit transfers. To look at them more closely you need to compare the tab pages **Interim Limit** and **Limit Transfer** in the individual

maintenance of the limit.

Changing Limit Transfers

You can change limit transfers in various ways:

In collective processing

By branching to the maintenance screen for individual limits from

the overview screen of limit maintenance (by clicking **Choose Limit**) or

the overview screen for utilizations (by clicking **Maintain Limit**)

To change a limit transfer from the screen for maintaining limits individually, you select the **Limit Transfer** tab page.

Select the limit transfers you require and choose **Change** .

The system displays the screen **Change Limit Transfer: Data.**

Make the changes you require and choose **Save** to save the data.

Deleting Limit Transfers

You can delete limit transfers in various ways:

In the maintenance screen for individual limits by choosing the tab page **Limit Transfers** and then **Delete** .

In collective processing

To be able to create limit transfers you need authorization object F_T_VTBLL. When you assign authorizations, note that limit transfers are not subject to a release procedure.

The maximum amount that can be transferred is the total amount of the limit and any existing interim limits. The amount of the interim limit can be transferred only for the period in which it is valid. When you create a limit transfer, the system checks this.

Collective Processing of Limit Transfers

Use

The collective processing function gives you an overview of all limit transfers and enables you to process transfers centrally. You find this function in the **SAP Easy Access** menu under **...Master Data** > **Limits** > **Collective Processing of Limit Transfers** .

You can enter the following criteria in the initial screen for the collective processing of limit transfers:

- Limit type
- Limit transfer number
- Valid to date
- User who created the limit transfer
- User who last changed the limit transfer

> **Note**
>
> By choosing Notes, you are able to create notes, and display existing notes in various places when you are processing limits. You define notes in Customizing for SEM Banking under Limit Management Note IDs Define Note IDs for Limit Transfers, and in Customizing for CFM under ... Limit Management Define Note IDs Define Note IDs for Limit Transfers .

Displaying Limit Transfers

1. In the overview, select the limit transfer for which you want to view more detailed information.
2. In the application toolbar choose Display .
3. The system displays the screen Display Limit Transfer: Data. Here you can see which limits are affected by this limit transfer.

Creating Limit Transfers

It is possible to create a limit transfer in collective processing only if a limit transfer already exists for this particular limit. Only existing limit transfers can be copied in collective processing.

1. Select the existing limit transfer, which affects the same limits as those for which you want to create an additional limit transfer.
2. In the application toolbar choose Copy .
3. The system displays the screen Create Limit Transfer : Data
4. Enter a name for the transfer and make the required changes.
5. Choose Save to save your entries.

Changing Limit Transfers

1. In the overview screen, select the limit transfer you want to change.
2. In the application toolbar choose Edit .
3. The system displays the screen Change Limit Transfer: Data.
4. Make the changes you require and choose Save to save the data.

Deleting Limit Transfers

Limit transfers that have been deleted still appear in the overview screen. However, they are shown with a deletion flag. Once limit transfers are marked with a deletion flag, they are no longer included in the overview of utilizations or in the single transaction check.

1. In the overview screen, select the limit transfer you want to delete.
2. In the application toolbar choose Deletion Flag .
3. The limit transfer is marked with a deletion flag (X in a red background).

> ⚠ **Caution**
>
> You cannot display, change or copy any limit transfer marked with a deletion flag. Note, also, that you **cannot revoke** the deletion flag.

4. You do not need to save the data once you have set the deletion flag.

> ℹ **Note**
>
> By choosing Limit Transfer > Display Changes you can display the change documents.

Locking and Unlocking Limits

Use

You can identify changes to business conditions (such as a worsening credit rating of the partner) by setting a lock flag in the limits for utilizations from new transactions.

Prerequisites

You can apply the lock when a limit has been created for a limit type . This limit can also be created automatically.

Procedure

You can lock and unlock each limit individually. You can also use a report to lock and unlock multiple limit types simultaneously according to their characteristic values.

Locking and Unlocking Individual Limits

You use this procedure to set or remove the lock.

1. Choose ... > Master Data > Limits > Edit.
2. Select the limit type for which you want to lock or unlock the limit. Then choose Change Limits.
3. Position your cursor on any line of this characteristic combination, and choose Lock/Unlock .

Locking Multiple Limits by Selected Limit Characteristics

1. Choose ... > Master Data > Limits > Lock/Unlock. The system displays the screen Lock/Unlock Limits According to Limit Characteristics .
2. The default limit characteristic is the business partner. If you want to add other limit characteristics as lock criteria choose New Field Selection. On the left side of the screen the system displays an overview of all limit characteristics. Select the limit characteristics you require and add them by choosing Copy selected . By choosing Delete Selections you can in the same way delete any limit characteristics that have already been selected.
3. By choosing Lock you can lock the limits referred to by the combination of all the limit characteristics you specified. Similarly, Unlock unlocks the limits.

Result

If you set the lock, the system shows this in the header row of the locked limit by inserting the symbol  . If you choose this symbol, the system displays the following dialog box:

Lock set by user XY, date: dd.mm.yyyy

In the single transaction check, the system displays a message saying that the limit is locked. Setting a lock does not effect how () of an exceeded limits are displayed.

i Note

on the database (technical locks) are not to be confused with the lock flags mentioned above (business locks).

Displaying an Overview of Limits

Use

You can use the overview of the limits to obtain an overview of the limit structure. From the overview, you can branch to the individual utilizations of each limit, display business partner information, and display change documents. You can also branch to the Customizing for limit types.

Prerequisites

You need to have already created limits (see Creating Limits).

Procedure

1. **Choose ... > Information System > Reporting > Limits > Overview of Limits.**

   The system displays the screen **Overview of Limits** .

2. Enter the required selection criteria. The various selection criteria are described in the following table.

Area	Selection Options
General Access Options	Limit type Currency Make sure you specify the currency in which limits are managed in the system.
Selection	If you choose **Selection of Limits by Key Date** , the system selects the limits that have a validity period that includes the specified key date. If you choose **Selection of Limits by Validity Interval** , you then need to specify the **valid from** and **valid to** dates.
Review	**Recipient** : Recipient of the limit under review. The name of the recipient is stored in limit maintenance. **Review Date**

	Display Review Data : Set this indicator if you want the system to display the review data. You need to set this indicator if you want to send the limit for review manually.
Selection using Limit Characteristics	**Direct characteristics:** **Company code, business partner, portfolio, trader, currency, monitoring unit, limit product group** (if you are using the country risk functions, you can also use **internal organizational unit** and **country for country risk**). **Derived characteristics:** Characteristics derived from the business partner: **Country, sector, rating** . (If you are using the country risk functions, the **country rating from the country risk country** is also available.) **Free characteristics:** Free characteristics 01 – 15. **Generated characteristics:** Free characteristics that were generated from the active analysis structure in the **Market Risk** component and transferred to Limit Management.

i Note

Make use of the option for saving the parameters you entered as a variant. To do this, choose **Goto** > **Variants** > **Save as Variant** .You can call up the saved selections at any time by choosing .

3. Choose **Execute** to start the function.

   The system displays the **Overview** screen, where you can see the list of the limits selected. They are sorted by limit type.

Result

You receive the required overview of all the limits for the limit types you selected.

i Note

You have various options for formatting the overview of the data. For information on editing these lists, see the Documentation on the List Viewer .

i Note

As an alternative, you can display the overview of limits using SAP Query .

Displaying Changes to Limits

Use

You can create one limit per characteristic value combination for each combination of limit characteristics defined in a limit type. You can use a report to display any changes made to limits.

Procedure

1. **Choose ...** > **Information System** > **Reporting** > **Limits** > **Display Changes to Limits.** The system displays the **Changes to Limits** screen.

2. Enter the following ranges as selection criteria for the changes to the limits:

Selection Ranges	What you need to know
Limit type	
Date	The date describes the point in time for which the change documents are to be displayed.
User	The user is the user-name for whom the change documents are to be displayed.

> **Note**
>
> Make use of the option for saving the parameters you entered as a variant. To do this, choose Goto > Variants > Save as Variant .You can display and reuse the selection criteria you saved as variant at any time by choosing .

3. Choose Execute .

   The system displays a list of changes to the limits, sorted by change document objects, and in ascending date order. This list provides you with details about old and new entries for the limits, who changed the limit, the change document, and other information.

> **Note**
>
> Use the Edit > Find... function to search in extensive lists for any text you want.

Result

The system displays the required list of changes to the limits.

Reviewing Limits

Use

You use the review function to forward information about limits to any recipient. You can either specify the timing of the review manually, or you can let the system determine the dates. The same applies for the actual sending of the limit for review.

Integration

The review information is sent to the review's office inbox. This means that every user logged on to the system can send and receive information about limits. When the limit reviewer logs on to the SAP system, a dialog box appears informing him or her that there is an item in his/her inbox.

Prerequisites

Before you can use the review function, limit types must already have been defined.

Procedure

You can either enter the timing of the review manually, or let the system determine it.

In SEM Banking choose ... → **Master Data** → **Limits** → **Edit** ; in CFM choose ... → **Master Data** → **Limits** → **Maintain.**

The system displays the screen **Limits** : **Choose Limit Types.**

Select the limit types you require and choose **Change Limits.**

Position the cursor on a limit line, and then choose **Choose Limit.**

The system displays the screen **Edit Limits for Limit Type xxx** : **Detail** .

Choose the tab page **Administrative Data,** and enter the name of the recipient in field **Review Recipient** .

A user can also enter him/herself as the recipient.

Determining the timing of the review:

You can store a factory calendar to check the date entry. In this way the system checks for public holidays and weekends in a specific country. The factory calendar is stored in Customizing under →**Limit Management**→**EnterBasic Settings for Limit Management** .

Manually: Maintain the **Review Date** field

Automatically: Set the **Automatic Review** indicator.

In order to be able to use the automatic review, you need to have made the following settings in Customizing:

In Customizing choose ... → **Limit Management** → **Define Limit Types.**

The system displays the screen **Change View "Define Limit Types": Overview**

Select a limit type, and then choose **Details** to access the detail view. Enter data in the following fields:

Review Period : The period after which a review recipient receives limit information.

Review deadline before validity period end : On this date, the limit is presented for the last time before it expires.

The system takes the earlier of the two dates below as the review date:

(Day's date) + (number of days in the review period)

(End of the validity of the limit) - (number of days of the review deadline before the end of the validity period)

The day's date corresponds in this case to the date on which the limit was created or changed.

Features

You can use the following functions:

Displaying the Data Relevant for the Review

Choose ... → **Information System** → **Reporting** → **Limits** → **Overview of Limits.**

The system displays the screen **Overview of Limits** .

First enter the general access options required.

Set the **Display Review Data** indicator.

You can also select the limits by review **Recipient** or **Review Date** .

Start the report with **Execute** . You can see who the review recipient of the limit is, and the date the limit is next due to be reviewed.

Sending Limits for Review

Sending Limits for Review Manually

In the overview of limits (as in point 1. **Display the data relevant for the review**) choose the limits you wish to send. Choose **Execute** to start the evaluation.

By choosing **Choose Limits** you can transfer the relevant limits to a batch of items that are to be sent for review. By positioning your cursor

on the header line (this means all limits for this combination of characteristics)

on the item line (this means just one limit)

or by not positioning it at all, you can copy all the displayed limits to the batch of items that are to be sent for review.

Send the limits by choosing **Send List to Specified Review Recipients** .

Sending Limits for Review Automatically

To do this, you need to schedule a variant of report RFTBLRSM as batch job, and let the report run daily. The program selects all limits with a certain review date and sends them to the recipients. At the same time, if automatic determination is used, the review date is recalculated.

Change of Personnel

You use this function to select limits by using a selection screen, and then either changing, creating or deleting the recipients.

You access the selection screen by choosing ...→ **Master Data** → **Limits** → **Change Review Recipient**

You have the following options:

Change	Old review recipient <name>; new review recipient <name>
Create	Old review recipient <space>; new review recipient <name>
Delete	Old review recipient <space>; new review recipient <space>

You can also change a review recipient manually in each limit.

Releasing Limits

Use

A release procedure, which works in accordance with the principle of dual control, can be activated for the creation and changing of limits, and for each limit type.

Prerequisites

You need to have set the Release Active indicator in the Customizing for the limit types that you have already created. In Customizing choose Limit Management Define Limit Types.

Procedure

You can release limits individually, or collectively by using report TBLR.

Releasing individual limits:

1. Choose ... Master Data Limits Edit.
2. Select the limit types of the limits that you want to release and choose Change Limits.
3. The system displays the current release status of the limit in column Release .

Without release (w/o release)	The limit is not subject to a release procedure (meaning that the release procedure is not set to active in Customizing).
Not released	The limit has not yet been released.
Flagged	Either one (of the two required) releases has occurred, or the initial status of the release has been set to 1 (limit is flagged for release).
Released	Both releases have been made, the limit is released.

4. Two users are required to release a limit (principle of dual control). The first user can create the limit and set the status to Flagged . This is the first release. The release made by the second user actually releases the limit (status is Released). This is the second release.

5. To release the limit, position your cursor on the line of the limit and choose Choose Limit . In the next screen, choose Limit and save your change with Save , so that the database is updated.

Releasing Multiple Limits (Mass Release)

1. Choose ... > Master Data > Limits > Release > Limits.
2. The system displays the screen Mass Release of Limits .
3. In the general selections you can enter just one limit type or a range of limit types.

   In the mass release function, you can select limits by release status. You do this by setting the following indicators:

   - Limits not Released
   - Limits Flagged for Release
   - Released Limits
4. You can also select limits by specifying the user who last changed the release status.
5. When you have started the program, the system selects the limits and displays them in a list. You have to select the limits you want to release.
6. Choose Release. The release status is increased by one level, and shown accordingly in the limit.
7. Choose Save to save the entries and to update the database.

Result

The release status is increased by one level respectively:

Level 1: not released > level 2: flagged > level 3: released

Note

If the initial value of the release status is 1 (flagged), only **one** further release is necessary.

The system displays the current release status in the limit. If you click on the release status of a limit, the system displays the user who last changed the release status.

Editing Custom Fields

Use

You can use the SAP enhancement LTBLX003 to create and maintain additional fields (known as customer subscreens). In these fields you can store additional information about the limit.

The enhancement consists of:

Menu enhancement and pushbutton for limit maintenance

Entry for a subscreen to be defined by the customer

Customer exit 003 for transporting limit fields to the subscreen

Customer exit 004 for transporting limit fields back from the subscreen

Prerequisites

Knowledge of the SAP Enhancement Concept and ABAP.

Procedure

Entering Custom Fields

Using transaction SE11, create a structure containing the additional fields you require.

Using transaction SE11, create an append for table VTBLV (limits) and enter a name for the append in the above structure.

Using transaction CMOD, create an enhancement project for this SAP enhancement LTBLX003.

Create your own maintenance screen SAPLXTBL1, no. 9000 for the maintenance of your own fields (in the attributes, select "Subscreen").

Activate your project.

Populating Custom Fields with Data

Choose ... → **Master Data** → **Limits** → **Maintain** or **Edit**.

Select your required limit type and choose .

If you have created several individual time-based limits, you access the limit maintenance screen by selecting the respective individual limit and choosing **Choose Limit**.

Now select **Additional Fields** to maintain the fields of the customer subscreen.

Choose to save your limit.

Making entries in these fields resets the release status.

For the additional fields to be output in reporting (limit utilization overview), you first need to include the ALV functionality **Define display variants**.

Updating Limit Utilizations

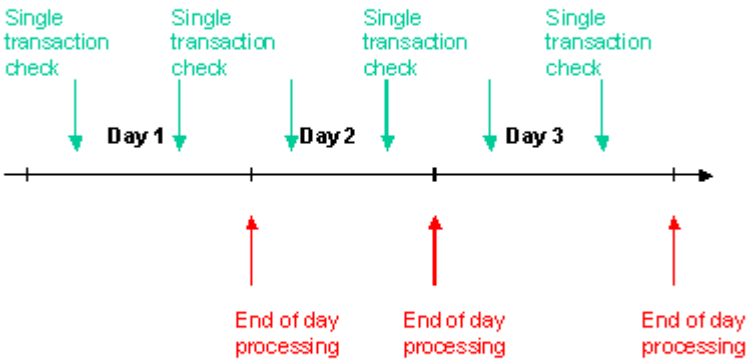
The limit utilization of the single record or transaction is the risk amount calculated for a single transaction by the attributable amount determination function.

Using the limit characteristics and their values, the system combines the utilizations of the single records with the limit utilizations of the totals records or the limit.

The limit utilization of a certain limit is, therefore, the total of the attributable amounts of all transactions attributed to the limit on the basis of their characteristic values. The system compares this amount with the corresponding internal or external limit amount as part of the single transaction check, reporting , the query or the drilldown .

Use

Up-to-the-minute monitoring of compliance with the existing limits requires regular updating of all limit utilizations. For this purpose, you can use the single transaction check to update limits during the day, and make a final update at the end of the day by using end of day processing .



When the single transaction check is applied to a transaction, the system updates it in Limit Management in status 2. If an additional STC is applied to this transaction on the same day, then the status 2 is updated with the current data. If a transaction is included in end-of-day processing, then the system updates it in Limit Management in statuses 1 and 2.

Which key figures are determined and updated depends on the combination of default risk rule and determination procedure. The default risk rule is stored in the financial object. For transactions that do not yet exist in the data pool, or those have not yet been included in end-of-day processing, the default risk rule is determined by the STC product .

Integrated Single Transaction Check

Use

You can use this function when you create trading or credit transactions to check them against the relevant limits . You can define that the integrated single transaction check generates a workflow if limits are exceeded, and that a message is sent automatically to the treasury manager, for example. This enables you to monitor risks as they occur.

In the integrated default risk limit check, the system calculates the relevant attributable amounts for the data entered and for all risk categories. It checks the maximum risk commitment period that was defined, and the internal and external limits, or the

critical limit utilization. You can also define limits for each product type and transaction type, and check whether they are exceeded.

> **Note**
> For more information, see the documentation for the general single transaction check (for example, the section about updating limit utilizations).

Prerequisites

- **Default risk limit check has been activated**

  In the Customizing for Credit Risk Analyzer , you have activated the integrated single transaction check. You do this under Basic Settings > Activate Integrated Default Risk Limit Check.

- **Optional: Limit check for each product type and transaction type has been activated**

  You have activated the integrated single transaction check in the Customizing for Credit Risk Analyzer under Attributable Amount Determination > Edit Settings for Determination Procedures.

- **Automatic financial object integration has been activated**

  You have activated the automatic financial object integration for the relevant product types and company codes. You do this in the Customizing for Credit Risk Analyzer under Basic Settings > Automatic Integration of Financial Objects in Transaction Master Data for the product types in question.

  The tab page Default Risk Limitation is available in Transaction Manager only if you have activated automatic financial object integration. You use this tab page to store the relevant information for counterparty/issuer risk.

- **The update category has been defined**

  You have stored the update category Update when limit utilizations are generated and online in the Customizing for Credit Risk Analyzer under Limit Management > Define Limit Types. The update category specifies for which limit type an update of the limit utilization is to be carried out in the course of the day. The system uses this information to calculate the current utilization of the individual limits.

- **Limits have been defined**

  The integrated default risk and limit check gives correct results only if the utilization of the limits is defined, or limits are defined for each product type and transaction type:

  - You have run end-of-day processing for the previous day in order to calculate the utilization of the limits affected by the limit characteristics of existing transactions.
  - You have created limits for each product type and transaction type. To do so, in the SAP Easy Access screen choose Credit Risk Analyzer > Master Data > Limits > Edit Limits for Each Product Type and Transaction Type.

- **Optional: Workflow has been switched on**

  You have activated the connection to the workflow function in the Customizing for Credit Risk Analyzer under Basic Settings > Global Settings. To define the recipient of the workflow, you have either defined an HR organigram in the Customizing for SAP NetWeaver under SAP Web Application Server > Business Management > SAP Business Workflow > Edit Organizational Plan; or you have assigned the sender and recipient directly in the Customizing for Credit Risk Analyzer under Basic Settings > Assignments > Assignment of Senders to Recipients > Assign Senders of Workflows to Recipients.

Features

When entering or editing transactions, you can trigger the integrated default risk limit check in the following ways:

- **By using the Check pushbutton**

  The system only checks the transaction against the relevant limits. It does not update the limits.

- **When saving the transaction**

  The system checks the transaction against the relevant limits, and updates them. If you activated the workflow function, and the limits were exceeded, the system also generates a workflow.

In the integrated default risk limit check, the system does the following:

1. It checks for compliance with the limits

   When the system checks the limits for each product type and transaction type, it compares the limits defined for the respective product type and transaction type.

   When the system checks the credit lines, it does the following:

   a. It determines which limits are relevant for the integrated default risk limit check.

   b. It calculates the attributable amounts of the transaction.

   c. It calculates the current limit utilizations of the limits relevant for the check.

2. It reports the results of the check to the user processing the transaction.
3. It generates a log containing the results of the check for documentation purposes in Limit Management.
4. It updates the limit utilizations (see Updating of Limit Utilizations) when the transaction is saved.
5. If limits were exceeded, and the workflow function is active, it generates a workflow.

Activities

1. Enter a financial transaction in Transaction Manager.
2. Choose the **Default Risk Limitation** tab page, and enter the information about counterparty/issuer risk for the financial object of the transaction.

   To be able to use the integrated default risk limit check, in the financial object you have set the **Counterparty/Issuer Risk** indicator to active, and store a default risk rule. You still have to do this if you have created limits for limit product groups. You can enter this data manually when you create or change the transaction. If you have defined that the control parameters are to be derived for the product type in question, the system stores the information automatically.

3. Choose  **Check** .

   The system checks whether the transactions exceed the limits, and it displays the result of the check in a dialog box.

4. Choose **Limit utilization details** in order to see which attributable amount the system calculated for the transaction and to which limit type this amount was assigned. Once you have saved the transaction, you can branch from here to the logs of the single transaction check.
5. Choose **Save** .

   The system updates the transaction in Limit Management. If you activated the workflow function, and the limits were exceeded, the system also generates a workflow.

Result

You have checked whether a new or a changed transaction is within the limit or exceeds the limit, and by saving you have triggered the updating of the transaction. If the limits were exceeded, you have generated a workflow. The system reports the limit usage by displaying a warning light under **Transaction check** .

ℹ Note

Note that limit types that have a determination procedure that takes netting into account are not subject to the integrated default risk limit check, and are not displayed in the detail log.

If you created a transaction in Transaction Manager, and want to edit it using the single transaction check, before you created the transaction, you need to have defined a default STC product for the product type in question in the Customizing for **Credit Risk Analyzer** under **Basic Settings** > **Definitions** > **Define Single Transaction Check Product.**

Single Transaction Check

Use

The term **single transaction check** (STC) refers to all check activities relating to the relevant limits that can be applied to a single trading or credit transaction when you enter or edit it. You can trigger the single transaction check in the following ways:

In the application menu (STC transaction)

By using an RFC module

By using the integrated default risk limit check (the integrated default risk limit check is available in SAP Treasury and Risk Management only)

The relevant attributable amounts are determined for the data supplied and for all the risk categories that are released for a single transaction check. The system checks the maximum risk commitment period that was defined, the internal and external limits, and the critical limit utilization.

The single transaction check is a tool you can use for up-to-date risk monitoring. This is controlled by determination procedures.

Depending on the settings in Customizing, you can activate 24-hour capability for the single transaction check. This means that you can trigger the single transaction check at any time, even when end-of-day processing is running.

Prerequisites

When you define the limit type, you need to enter **Update category 2** if you want the system to determine the current limit usage for the individual limits. The update category of a limit type specifies whether limit utilization is updated during the day. In Customizing choose... → **Limit Management** → **Define Limit Types** .

You also need an STC product, which you define in Customizing. In Customizing choose... → **Basic Settings** → **Definitions** → **Define Single Transaction Check Product** .

The results of the single transaction check are valid only if the utilization of the limits was calculated in an end-of-day processing run, the key date of which is in the past. The limits referred to here are the ones affected by the limit characteristics of the transaction that is to be checked.

To be able to use all the functions of the single transaction check, authorization profile F_T_FTLM_ALL with authorization object J_B_KLSDC1 must be stored in your user master record. Depending on the extent of your authorization, you can obtain further information by branching from the functions of the STC.

Features

You have the following options for triggering the single transaction check:

Manually in the application menu

Your options include

Checking new transactions

Checking existing transactions

Deactivating external transactions

Displaying an overview of transactions

Automatically by using the RFC module KL_EXT_CALCULATE_AROBJ_RFC

Using this interface you can create a direct connection between the bank's own front-end system and the limit system. Refer to the technical documentation on the function module in the ABAP Workbench.

When you enter or edit transactions in an external system (upstream with regard to Limit Management), the single transaction check involves the following steps:

Call-up of the interface for the single transaction check

Determination of the limits relevant for the single transaction check

Calculation of the attributable amounts of the transaction

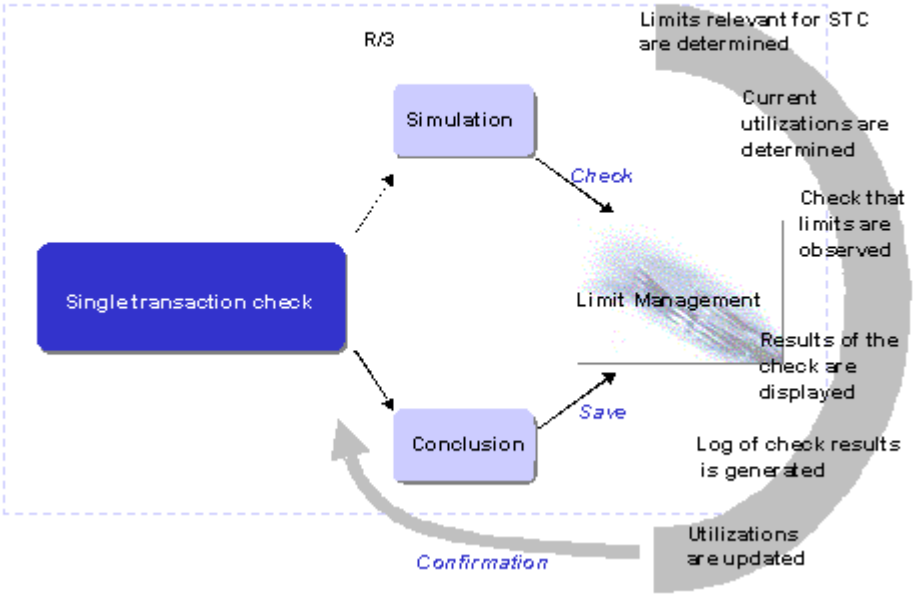
Calculation of the current limit utilizations of the limits relevant for the check

Check for compliance with the limits

Reporting of the results of the check to the user processing the transaction

Generation of a log of the results of the check for the documentation in Limit Management

Updating of limit utilizations



In addition to updating limit utilizations, you have the option of just checking a transaction. During the check, the system determines an attributable amount. This is checked against the limits, and the result is reported back to the user. The limit utilization is not updated.

Integration

All transactions that are created in the SAP system by means of the single transaction check are initially recognized by the system only as external transactions . For the check made in end-of-day processing, the transaction data can still be transferred from the operational system to the SEM data pool (by means of external data transfer or online maintenance). During the next end-of-day processing run, using the transaction key the system compares the external transactions and the new SAP-internal transactions to avoid duplicating any data. If no data pool transaction exists, the external transaction remains in Limit Management even after the end-of-day processing run.

Activities

During the single transaction check, the system checks the transactions without accessing any transaction information that might exist in the data pool. This means that the system needs to be provided with all limit-relevant data. You have to supply the following data:

Indicator for simulation	Indicator showing whether a simulated (check) or valid (save) transaction is involved.
External administration key	This identifies the transaction.
Limit characteristics	
Base date of the fictitious transaction	This date is the value date from which there is a potential settlement risk.
Base date for the calculation of the market value change period	
Base date for the calculation of the risk commitment period	
Default risk rule	

Calendar ID	
Basic key figures	
Validity date	Date on which the data specific to the transaction and to attribution becomes valid

Counterparty risks and issuer risks can be calculated for individual transactions, (for stock options, for example). If both risks are to be taken into account in the single transaction check, you need to supply the key of the position concerned.

24-Hour Capability of the Single Transaction Check

Definition

The purpose of the 24-hour capability is to enable you to carry out a single transaction check (STC) at any time, and in particular when end-of-day processing is running. This also affects the integrated default risk limit check, which is available in TRM Credit Risk Analyzer only. Furthermore, the 24-hour capability enables you to enter reservations at any time.

⚠ Caution

If you use the **non-integrated** single transaction check, as it is used in Banking, in conjunction with the 24-hour capability, the results are consistent only for new transactions and external transactions. Note that changes to data pool transactions can be taken into account only if the transactions are first changed using EDT, and are then additionally changed using the single transaction check. The single transaction check is required in this case for triggering the post-run update.

Use

You activate the 24-hour capability in Customizing by choosing: Limit Management Enter Basic Settings for Limit Management. In addition to activating 24-hour capability, you make other settings here for the single transaction check:

- Waiting time for the single transaction check
- Posting deadline
- Waiting time for the post-run update
- Setting the indicator for 24-hour capability

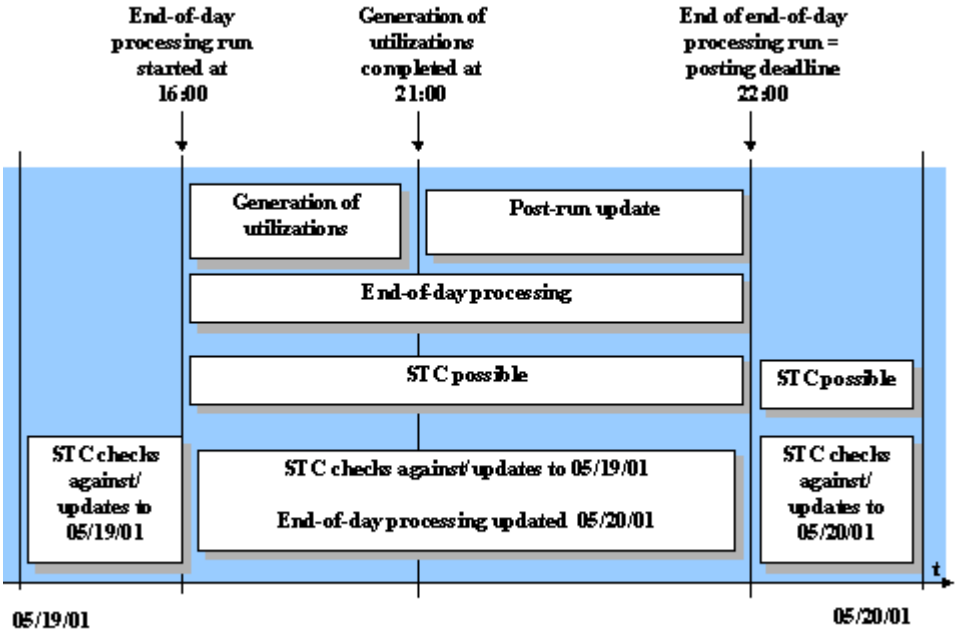
When using the single transaction check, it may sometimes be the case that the limit you are checking is blocked by another user. For this reason, you have to enter a maximum waiting time in the basic settings. As part of the 24-hour capability, by entering a posting deadline you are able to specify a fixed point in time after which risk amounts are to be attributed to the following day. The waiting time for the post-run update specifies the time gap between the post-run update and the posting deadline.

Structure

End-of-day processing comprises the generation of utilizations and the post-run update. (As the post-run update is part of end-of-day processing, updating takes place in status 1 and 2.) All the transactions for the day, which were checked by the single

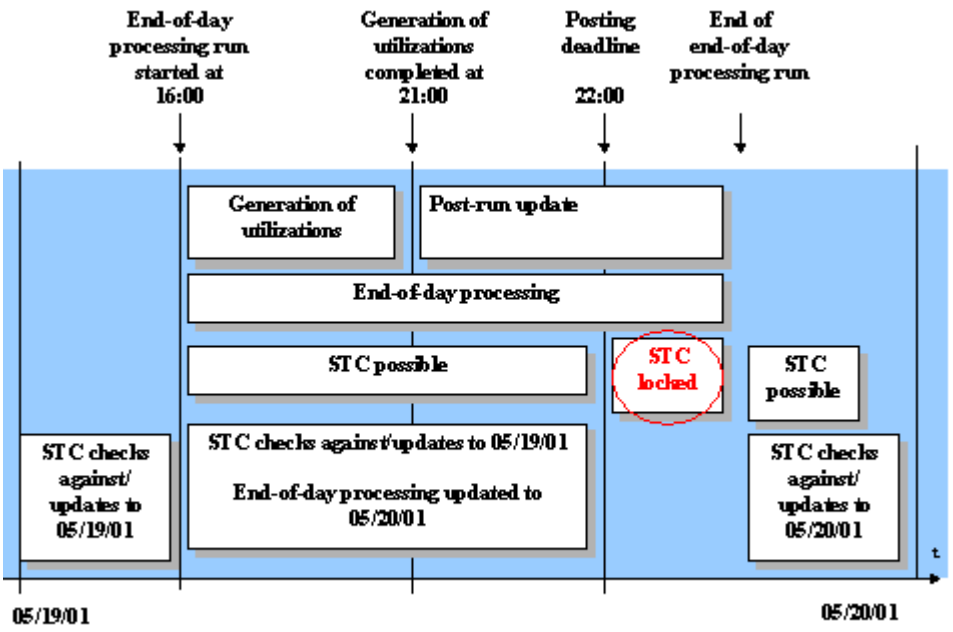
transaction check during the generation of utilizations, are updated in the post-run update. In this way, it is possible to apply the single transaction check even during the end-of-day processing run.

If a single transaction check function is started before the end-of-day processing run has finished, the transactions checked by the single transaction check function are updated to the date of the previous end-of-day processing run. The current end-of-day processing run then updates these transactions to the new date.



Exception

When you enter the settings in Customizing, ensure that there is sufficient time between the end of the generation of utilizations and the posting deadline to allow for the post-run update. If this is not the case, it can cause the post-run update to exceed the posting deadline. In this case, the single transaction check is locked for the period of time between the posting deadline and the final completion of the end-of-day processing run.



Note

To avoid this, in Customizing you can leave the field for the posting deadline blank.

External Transactions

Definition

External transactions are transactions that have the following features:

- They exist as raw transactions in the SAP system but have not yet been saved in the data pool.
- They have already been saved in the data pool and were updated during the day but which have not yet been updated by end-of-day processing.

Structure

All basic key figures and limit characteristics must be provided for these transactions. These can be imported from your bank's own front-end system by means of the RFC interface, or you can use the function for starting the single transaction check manually in the application. In Treasury and Risk Management (TRM), you can use the integrated limit check.

Integration

In the Default Risk and Limit System, you can calculate attributable amounts for these transactions, and update the limit utilizations using the limit characteristics.

STC Product

Definition

The STC product is the central control element for the single transaction check transaction (STC transaction). The following functions of the STC transaction are affected by the Customizing settings you make for the STC product.

- Authorization check
- Control internal / external key assignment
- Inclusion of the issuer risk
- Defaulting of the limit product group

In addition, the following control elements are stored with the

STC product:

- Cash / forward indicator
- Credit risk rule

The credit risk rule stored with the STC product is overridden by that stored with the financial object for those transactions for which end of day processing has already been performed.

Checking New Transactions

Use

This function enables you to check transactions that are as yet unknown to the SAP system (meaning neither as external transactions nor as transactions in the data pool). Using the values entered, the system checks whether a new transaction complies with the limit.

In the single transaction check, you can use the mass data capability to check complex constructions, such as generic transactions.

Procedure

Choose: → Tools → Single Transaction Check → Check New Transaction . The system displays the screen Single Transaction Check: Initial Screen for New Transaction

Specify the business partner, the STC product, the evaluation date (is always today's date) and the company code of the transaction you want to check.

Choose Check to check that your entries are consistent.

Choose Continue.

On the **Transaction** tab page choose:

Check Limit Utilization to determine whether the new transaction will exceed the limit, or

Check and Update Limit Utilization to check the new transaction, and update it in Limit Management.

On the Additional Data tab page you can edit the limit characteristic values for the transaction.

By setting the CP Risk Active or Country Risk Active indicators, you control whether the transaction is relevant for counterparty/issuer risk or country risk. If you set the country risk indicator to active, you need to make some settings in the Country Risk Information area. (The country risk functions are available in Banking only.)

The limit characteristic Trader is set to the name of the user by default.

On the Generated Char . tab page you can edit the values of the generated characteristics of the transaction.

Result

You have checked whether a new transaction complies with or exceeds the limit, and possibly updated the limit. In the data group Limit Check Result the system reports the utilization of the limit by means of a traffic-light display, and the status of the update.

Details about limit utilization

To view detailed information about the limit utilization choose Limit Utilization Details .

The system displays a dialogue box. Choose Single Utilizations to view the individual utilizations.

The system displays another dialogue box. Choose STC Log to display the single transaction check log.

Printing the results of the check

Choose Print Check Results to print a trader's note. This summarizes information about the transaction, the result of the check, and the transaction's key figures.

Checking Existing Transactions

Use

If you want to change basic key figures, you use this function to check transactions that were created externally, and those already in the data pool.

In the single transaction check, you can use the mass data capability to check complex constructions, such as generic transactions.

Procedure

Choose → Tools → Single Transaction Check → Check Existing Transaction .

The system displays the screenSingle Transaction Check: Initial Screen: Change Transaction

2. Enter theEvaluation Date, theSTC Productand theCompany Code. Specify the transaction more clearly by entering a transaction number.

Choose Checkto check that your entries are consistent.

Choose Continue.

On the Transaction tab page choose:

Check Limit Utilization to determine whether the new transaction will exceed the limit.

Check and Update Limit Utilization to check the new transaction, and update it in Limit Management.

On the Additional Data tab page you can edit the limit characteristic values for the transaction.

By setting the CP Risk Active or Country Risk Active indicators, you control whether the transaction is relevant for counterparty/issuer risk or country risk. If you set the country risk indicator to active, you need to make some settings in the Country Risk Information area. (The country risk functions are available in Banking only.)

The limit characteristic trader is set to the name of the user by default.

On the Generated Char . tab page you can edit the values of the generated characteristics of the transaction.

Result

You have checked whether the changed transaction exceeds the limit, and possibly updated the transaction in Limit Management. In the Limit Check Result data group, the system reports the utilization of the limit by means of a traffic light display and the status of the update.

Details about limit utilization

To view detailed information about the limit utilization choose Limit Utilization Details .

The system displays a dialogue box. Choose Single Utilizations to view the individual utilizations.

The system displays another dialogue box. Choose STC Log to display the single transaction check log.

Printing the results of the check

Choose Print Check Results to print a trader's note. This summarizes information about the transaction, the result of the check, and the transaction's key figures.

Deactivating the Update for External Transactions

Use

If you do not want to update limits for external transactions, you need to deactivate the external transaction.

⚠ Caution

This function cannot be used for transactions that have already been saved in the data pool, or for those that have already been updated in end-of-day processing. You can still deactivate a transaction if it has been saved in the data pool but its limit

utilization has not yet been updated by end-of-day processing.

Procedure

1. Choose ▶ > Tools > Single Transaction Check > Deactivate External Transaction

   The system displays the screen Single Transaction Check: Deactivate External Transaction .

2. Enter the required data.

   i Note

   Choose Check to check that your entries are consistent.

3. Choose Deactivate Trans. , to exclude the transaction from limit updating.

Result

Under Result of Deactivation , the system displays the status of the transaction. Choose Display Log to view the log of the deactivation process.

Displaying an Overview of Transactions

Use

You can use this application to obtain a list of the external transactions and data pool transactions for which a single transaction check can be performed.

Procedure

1. Choose ... > Tools > Single Transaction Check > Display Transactions.
2. The system displays the screen Single Transaction Check: Display Transactions .
3. On the left part of the screen you can navigate through the structure containing the STC products.
4. End nodes that are in a different color are the STC products that were defined in Customizing as default values for STC products.
5. On the right part of the screen you can see which transactions exist for the portfolio you selected.

Result

You can display **additional information** about each transaction by using the following functions:

	Details
Counterparty	Limit characteristics of the counterparty
Counterparty	The basic key figures of the transaction that are required for calculating amounts that are to be attributed to the counterparty.
Issuer	Limit characteristics of the issuer

	Details
Issuer	The basic key figures of the transaction that are required for calculating the amounts that are to be attributed to the issuer.

You can also call other functions directly from this screen:

- Choose Postprocess to change the attributable amount of the selected transaction.
- Choose Deactivate to deactivate the selected transaction.

Displaying the Single Transaction Check Log

This list provides you with details of the system message received by the trader or loans employee after entering the transaction data.

A traffic light symbol indicates if a limit has been exceeded:

: Internal limit has been exceeded

: External limit or the critical limit usage has been exceeded

: No limits have been exceeded

You have the option of branching from the log entries to the transaction data of the underlying transaction. Choose Transaction details .

Procedure

Choose ... → Information System → Reporting → Single Transaction Check: Logs.

This brings you to the screen Logs fromSingle Transaction Checks.

Enter the selection criteria you require.

STC user (user who initiated the transaction)

Date of the check

Limit type

Selection by limit characteristics

3. Choose Execute .

You can delete STC logs by using the archiving function .

End-of-Day Processing

Use

In end-of-day processing, the system determines and updates limit utilizations based on the transactions and positions contained in the data pool and also the external transactions that were entered. (See External Transactions).

Integration

End-of-day processing is closely linked with the single transaction check . In Customizing under: Limit Management Enter Basic Settings for Limit Management you can specify whether 24-hour capability is to be used. 24-hour capability enables you to apply the single transaction check at any point in time, even when end-of-day processing is running.

Prerequisites

The calculation is product-type-specific and takes place according to the settings made in Customizing. For a detailed description of the how the system calculates the attributable amount, refer to the documentation about the attributable amount determination function.

Features

In the end-of-day processing run, the system selects the transactions that, on the valuation date, are active and credit-limit-relevant. It determines attributable amounts regarding counterparty risks and issuer risks for these transactions. Attributable amounts are updated in Limit Management . Depending on the settings in Customizing, you can, if required, create new limits .

If, in Customizing, you have not stored a selection filter in the limit type, then in end-of-day processing all transactions flow into the limit type that are defined in the determination procedure as relevant to that particular limit type. If you have stored a selection filter in the limit type, in end-of-day processing only a certain section of the credit portfolio is analyzed in Limit Management. This means that only those transactions are attributed to the limit type that have values matching those of the selection filter. For more detailed information about the selection filter see the Implementation Guide under... Basic Settings Definitions Define Selection Filter .

Activities

To update the limit utilizations you need to trigger a report, which you start in batch mode. Once the system has determined the utilizations in this process, they are updated in the respective limit.

Generating Utilizations

Use

To analyze the drawn amounts (utilizations) for the respective position, you need to generate the utilizations in the end-of-day processing run.

Prerequisites

You can run end-of-day processing only if financial objects have been created for the existing transactions.

Procedure

Choose ... → Tools → End-of-Day Processing → Generate Utilizations.

The system displays the screen **End-of-Day Processing** .

You can use the following selection criteria:

Valuation date	Today's date is the default setting.
Determination procedure	You can specify a range of determination procedures for which end-of-day processing is to be performed. You can specify more than one determination procedure by using the **Multiple Selection** function.
Control	
Log level **Separate Processing** indicator (This indicator is available only if you are using the country risk functions.)	By specifying the log level, you define the level of detail of the results contained in the log for the program. If you set the **Separate Processing** indicator, the system saves the limit utilizations separately by valuation date in the database. The utilizations already determined on this valuation date are retained.

You can save your entries as a variant by choosing **Goto** → **Variants** → **Save as variant** . You can call them up later by choosing .

Once you have entered your selection criteria, choose **Execute** to start the program.

The system runs end-of-day processing. Once the end-of-day processing run is complete, the log is displayed automatically. It contains information about any errors that occurred during the determination of counterparty or issuer risks.

Result

You have run end-of-day processing and generated utilizations.

You can now display the limit utilizations that were updated by end-of-day processing in the overview of limit utilizations . You can manage end-of-day processing logs at any time by choosing... → **Information System** → **Reporting** → **End-of-Day Processing: Logs** .

The error log contains long texts for the error messages. To view the long text, select an error message and choose **Long Text** .

You can also send error logs to other users. To do this choose **Log** → **Save to PC File** . Save the list in the required format.

Then you can send the list by choosing **Office** → **Work Place** → **Outbox** . In your office outbox, choose **Documents** and enter a name for the document. Then choose the function **Import.** Open the saved list. Select the document that was generated for the error log, and send it by choosing **Send** . On the **Create Document and Send** screen enter the user name of the recipient, and then choose **Send** .

The recipients of the error logs can display the documents by choosing **Office** → **Work Place** → **Inbox.**

See also:

Postprocessing of incorrect transactions

Postprocessing

Use

Using the postprocessing function, you can update and correct during the day any erroneous transactions that already exist in the data pool but were not processed, and hence not updated, in end-of-day processing. You can also use postprocessing to re-post transactions for which end-of-day processing was run successfully (meaning there were no errors) but which were changed afterwards.

Postprocessing updates both status 1 and status 2 (see the documentation on updating limit utilizations).

i Note

Complex constructions can be checked in postprocessing using the mass data capability. Complex constructions include the generic transaction, netting groups, and facilities, plus the collateral assigned to them.

If the processing of certain transactions is terminated, the system automatically creates a worklist, which you can use to complete the processing of these transactions.

You can call each worklist separately in the application **Display Worklist** (report RAFO_WORK_STOCK_SHOW), which uses the SAP List Viewer . You can also delete worklists by removing them from them from the list (see also Reorganization Tools).

Procedure

The counterparty risk and the issuer risk are determined for the data pool transaction for both update categories (status 1 and 2).

1. **Choose ... > Tools > End-of-Day Processing > Execute Postprocessing.**

   The system displays the screen **Postprocessing of Data Pool Transactions** .

2. Enter the object number of the transaction you want to process, or enter the ID of the worklist.

   ### i Note

   If you want to postprocess a facility, enter the object number of the facility. If you want to postprocess a netting group, you need to enter just one transaction from the netting group.

   ### i Note

   The system postprocesses the transactions by using an evaluation type that identifies the market and valuation parameters of an evaluation from Market Risk Analysis. The evaluation type is stored in the Customizing for **SEM Banking** under **...Basic Settings > Enter Global Settings** , and for **TRM** under ... **Basic Settings > Global Settings.**

3. To start the attributable amount determination for the facilities choose Execute .

> **Note**
>
> To view detailed information about the limit utilization choose Long Text.

Result

Having successfully calculated the utilizations, the system displays the attributions to the respective limit types in a dialog box.

> **Note**
>
> This function does not take into account any offsetting effect of global collateral.

Logs Generated in End-of-Day Processing

Use

You use this function to display and manage logs generated in end-of-day processing.

Activities

1. Choose ... > Information System > Reporting > End-of-Day Processing: Logs.

   The system displays the screen Edit Logs .

2. Enter the selection criteria you require. These include:

Time Restriction	○ **Date** ○ **Start Time** ○ **End Time**
Activity	○ Display Log ○ Display All Logs ○ Delete Log ○ Delete All Logs

3. Choose Execute .

4. The system displays the screen Log Display , and the logs you selected.

How Data is Selected in End-of-Day Processing

Purpose

In end-of-day processing, the system selects data by taking the start date and end date of the transaction from the financial object, and reading the **counterparty risk active** and **country risk active** indicators. For collateral, it checks the active indicator in the master record.

Maintaining the transaction start/end dates in the financial object is optional. However, if you do maintain these dates you can do the following:

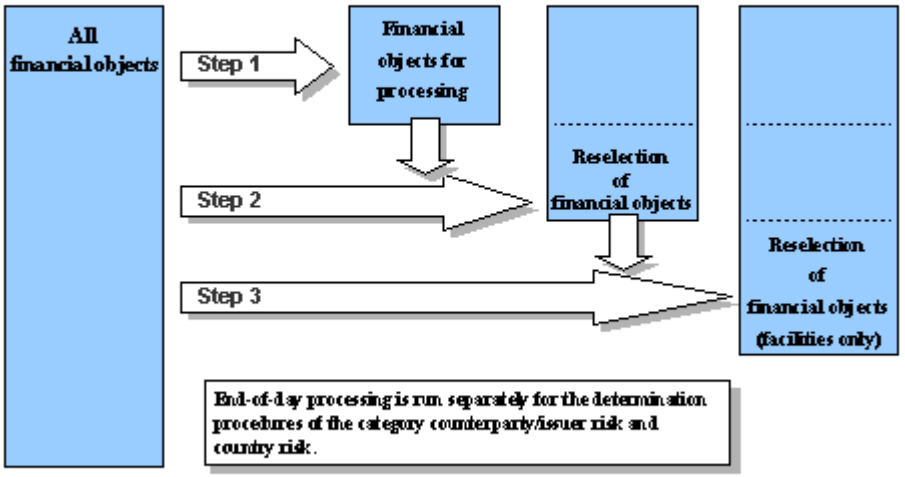
- Run historical evaluations
- Influence the extent of the basic data set, and hence the performance of the system.

The indicators in the collateral are interpreted as follows:

- The **counterparty risk active** and **country risk active** indicators in the financial object control the actual secondary risk display.
- The active indicator in the master record of the collateral forms its primary risk-reducing effect, and its potential secondary risk display.

Process

The process in which financial objects are selected for the generation of utilizations has three steps (sequence in end-of-day processing):



Step 1:	Selection of the basic data set of financial objects
Step 2:	Reselection of transactions (and, if applicable, facilities) when the system reads the data for collateral
Step 3:	Reselection of facilities when the system reads data for the drawings on a facility

ℹ Note

Facilities can currently be used in SEM Banking only. Otherwise, only the first two steps occur in end-of-day processing.

Selection of the Basic Data Set of Financial Objects

Use

When selecting the basic data set, the system takes into account the category of the determination procedure (counterparty/issuer risk or country risk), and the value date you entered.

ℹ Note

The country risk functions are only available in Banking.

Integration

For technical reasons, it is not possible to mix counterparty/issuer risk determination procedures with the country risk determination procedures. Hence the selection follows this pattern:

- Selection criteria for counterparty/issuer risk determination procedures:
    1. a. In the default risk limit part of the financial object, you need to have set the **Counterparty Risk Active** indicator.
    2. b. If the fields **Transaction Start CPR** and **Transaction End CPR** in the financial object are filled, the valuation data must be within this time period (up to and including these dates).
- Selection criteria for country risk determination procedures:
    1. a. In the default risk limit part of the financial object, you need to have set the **Country Risk Active** indicator.
    2. b. If the field **Transaction Start Country Risk** is filled, the valuation date must be the same as, or later than, the date specified in this field. As there is not a **Transaction End Country Risk** field, the system takes the date from the field **Transaction End Counterparty Risk** . You can, for example, enter the end date for the transaction in the country-risk relevant financial object in the field **Transaction End Counterparty Risk** , even though the financial object is not relevant for counterparty/issuer risk. If you specify the transaction end date for counterparty/issuer risk, the system selects the country risk-relevant financial object in the same way as it selects the financial objects relevant for counterparty/issuer risk.

Example

The following table explains the selection criteria:

Valuation date	Transaction start	Transaction end	Counterparty/country risk relevant	Selection
06/30/2001	06/30/2001	10/30/2001	X	Yes
10/31/2001	06/30/2001	10/30/2001	X	No
06/15/2001	06/30/2001	10/30/2001	X	No
10/31/2001	06/30/2001		X	Yes
06/15/2001		10/30/2001	X	Yes

Valuation date	Transaction start	Transaction end	Counterparty/country risk relevant	Selection
10/31/2001			X	Yes
07/01/2001	06/30/2001	10/30/2001		No

Reselection of Transactions

Use

The reselection of transactions is triggered when, during the analysis of collateral items, the basic set of data contains the financial object of a single-transaction-related collateral item but not the financial object of the transaction to which the collateral is assigned. The following conditions apply for the reselection of transactions:

1. The collateral assigned to the transaction must already be in the basic data set.
2. The valuation date must be within the term of the financial object of the transaction. This is because collateral is not effective for a transaction that has already expired.

Only those transactions are reselected that are not in the selected basic set because the field for the counterparty/issuer risk or country risk is inactive.

Example

The following example explains which conditions have to be met in order for the system to be able to reselect a transaction. We assume here that the determination procedure is one relevant for counterparty/issuer risk.

Case	1	2	3	4	5	6	7	8	9

Financial object of the collateral item is activated for counterparty/issuer risk				X	X		X	X	X
Valuation date is within term of financial object					X	X	X	X	X
Collateral is active in the master data						X	X	X	X

Collateral is in the selected basic set							X	X	X

Financial object of the transaction is activated for counterparty/issuer risk	X	X						X	X
Valuation date is within the term of the financial object of the transaction	X		X	X	X	X	X		X

Transaction is in the selected basic set	X								X

Transaction is reselected							X		

As you can see in the table, the reselection of a transaction takes place in case 7 only. This case fulfills all the conditions required for reselection.

Information System

Definition

The information system contains the following functions for displaying and analyzing data:

- Display Drilldown Report
- Display Utilizations
- Extended Reporting for Limits for absolute and relative limits
- SAP Queries

Displaying Drilldown Reports

Use

You can use the drilldown reports predefined in the system to analyze transaction data without needing to have extensive knowledge of drilldown reporting. Reports 0Report01 to 0Report03 are based on the form 0Pattern01; reports 0Report01-T to 0Report03-T are based on the form 0Pattern02.

To view all the information about using drilldown, refer to the General Drilldown Manual.

Prerequisites

The predefined reports analyze the limit utilizations of the limit types 001 (company code) and 002 (business partner). These limit types are part of Sample Customizing, and absolutely vital for reports 02 to 03 and 02-T to 03-T. Reports 0Report01 and 0Report01-T analyze limit utilizations by all limit characteristics.

Procedure

1. Choose ... > Information System > Drilldown Reporting.

   The system displays the screen Execute Limit Report: Initial Screen .

2. Choose a report, and confirm with Execute .

   The system then displays the selection screen for the report .

3. Enter the selection criteria you require, and then choose Execute .

   The system displays the overview of the report parameters.

Result

The report delivers the selected limits and utilizations. Undrawn limits are also displayed. These are shown with an amount of 0.00.

Now you can navigate through the various characteristics. Also use the report-report interface , which enables you to drill down to other reports or transactions.

Displaying Utilizations

Use

The two reports Selection Using All Characteristics and Selection Using Direct Characteristics enable you to monitor existing limits and their utilizations.

Procedure

Choose ... → Information System → Reporting → Utilizations → Overview: Selection Using All Characteristics or Selection Using Direct Characteristics .

The selection using all characteristics also contains derived characteristics and free (customer-defined) characteristics.

The system displays the screenOverview of Utilizations - Selection Using all/Direct Characteristicsin which you can enter the following selection criteria:

General Access Options	(Applies for both reports)
Limit type	

Limit currency	Here you specify that limits in a particular currency only are to be displayed.
Determination procedure	

Selection of Utilizations	(Applies for both reports)
Status of limit utilization	Utilizations are calculated in end-of-day processing, and updated online depending on the settings you have made in Customizing. Utilizations contain a relevant determination status, which you can specify here.
Validity date	The validity date specifies when a limit utilization is valid.
Determination date	The determination date is the date on which limit utilization determination was started. Note that the determination date can be different from the validity date. You can also set theLatest Determination per Limit Typeindicator to view the latest values. In this case, the system overrides the determination date. Utilizations with a determination date in the future are not displayed.

Selection of limits for the reportSelection Using all Limit Characteristics	You can define which limits are selected by specifying the characteristic values of the limit characteristics. The system does not determine derived characteristics. You must therefore enter all the selection criteria you require.
Selection of limits Limits without utilizations Limits valid from	If you set this indicator and enter a date, the system also displays limits that have not been utilized and that have not yet expired.
Display filter	You can select a predefined display filter .
Direct characteristics	Company code, business partner, limit product group, portfolio, trader, currency as limit characteristic, monitoring unit, and, if you have activated the country risk functions, theinternal organizational unitandcountry for country riskare also available.
Derived characteristics	Country, industry, ratingfrom the business partner, and, if you have activated the country risk functions, thecountry ratingfrom the country for country risk are also available.
Free characteristics	Free characteristics 01 -15
Generated characteristics	Free characteristics that were generated from the active analysis structure in the Market Risk component and transferred to Limit Management.

Selection of limits for the reportSelection Using Direct Characteristics	When you enter direct characteristics, the system automatically determines derived characteristics, free characteristics, and any affiliated business partners, based on the direct characteristics you entered, and for the date you specified. It then displays all the relevant limits.

Display filter	You can select a predefined display filter .
Limit characteristics	Direct characteristics:Company code, business partner, limit product group, portfolio, trader, currency as limit characteristic, monitoring unit, and, if you have activated the country risk functions, theinternal organizational unitandcountry for country riskare also available. Generated characteristics: Free characteristics that were generated from the active analysis structure in the Market Risk component and transferred to Limit Management.
Derived characteristics for	This field specifies for which validity date the system is to determine the derived limit characteristics. If you do not enter a date, the system determines utilizations for all validity dates of the relevant limit utilizations.
Selection of limits Limits without utilizations Limits valid from	If you set this indicator and enter a date, the system also displays limits that have not been utilized and that have not yet expired.

Output Control	(Applies for both reports)
Display currency	The system converts amounts to the display currency that would otherwise be shown in the limit currency.
Rounding factor	You choose the rounding factor if you want the system to display all amounts in thousands, for example.
Warning when limit exceeded	Sets the traffic light to red if an internal limit is exceeded.
Warning when RCP exceeded	Sets the traffic light to red if the risk commitment period stored in the limit is exceeded.
Utilization only on workdays	If you set theUtilization only on workdaysindicator, then the system compares the date entries with the factory calendar stored in Customizing.
Display layout	You can use the input help to choose and set the layouts for totals records, single records, grouping levels 1 and 2. Note that you can assign the layouts only to the lists for which they were created.

Exception Reporting Control	(Applies for both reports)
Exceeded limits only Only exceeded characteristic combinations	You can define whether the system is to display only exceeded limits, or only exceeded characteristic combinations.

Make use of the option for saving the parameters you entered as a variant. To do this, choose Goto → Variants → Save as VariantYou can display the saved parameters again at any time by choosingGoto → Variants → Getor by choosing .

Start the report containing your parameters by choosing Execute

The system displays the screenOverview of Utilizations. In accordance with your selections, the system displays as header information the selected limit type, and as line information the validity period, the amounts of the internal and external limit, and the utilizations of these limits. A red traffic light is shown if the internal limit is exceeded. A yellow traffic light is shown if the external limit or critical limit usage is exceeded.

You can branch from reporting to the maintenance screen for limits by choosing Maintain limit . You are able to make changes here.

Drilldown options

Grouping reporting	**Grouping reporting enables you to break down totals records by any limit characteristic. Using grouping level 1, you can, for example, drill down to one or more limit for a country by business partner. By branching to the second level, you are able to view the individual transactions and their attributable amounts per determination procedure.**
Grouping level 1	Grouping level 1 allows you to drill down to the single records by all limit characteristics. Select the entry you want to process and choose Grouping, level 1 . Select the required limit characteristics and choose Copy . The system displays the drilldown.
Grouping level 2	Grouping level 2 allows you to drill down in the single records by single transactions with attributable amounts shown per determination procedure. Select the entry you want to process and choose Grouping, level 2 . The system displays the drilldown. The second level can also be accessed directly from the totals record list.

From the totals records and from the single utilizations, you are able to branch to the STC logs for transactions imported intraday.

Drilldown to	What you need to know
Business partner	Select a limit utilization and choose Partner details .
Single utilizations	Select a limit utilization and choose Individual utilizations . The system displays the single utilization records.

Calling up the STC log	Select a utilization with status 2 and choose STC log
Customizing	Select a utilization and choose Customizing .

You have other drilldown options from the screen displaying the single records:

Drilldown to	What you need to know
Master data	Select a transaction or a position and choose Master data For transactions, the system displays the underlying transaction. For positions in which a total of position-relevant transactions are based, the system first lists the key figures for issuer risk. Select one of the transactions or a position and then chooseGoto → Transaction detailsagain.If you chose a position, the system displays the position object. If you chose a transaction, the system displays the transaction data.
Collateral	Select a transaction or a position and choose Collateral
Calling up the STC log	Select a transaction or a position and choose STC log.
Attributable amount determination	Select a transaction or a position and choose Attributable amount determination.Specify an evaluation type and chooseProgram → Execute.

Result

The system displays an overview of the limit utilizations in accordance with your selection criteria. You can display more detailed information by calling up the detailed logs.

By using user exits you are able to include in the display of utilizations customer-defined fields that can be filled with your own data. This takes place in EXIT-SAPLTBLX-005 and EXIT-SAPLTBLX-006 respectively.

For the limit utilizations overview, and for the administration of the limits, customer exit EXIT_SAPLTBL_002 is included that can prevent a user displaying a particular limit or utilization. You might want to do this for loans to employees, for example. Note that when you use the drill down the system rechecks the authorization.

INCLUDE LXTBL1F02 contains sample coding. You can find a detailed description of the SAP enhancements in the documentation about the Enhancement Concept .

For more information about the formatting of lists, see the documentation about the SAP List View (ALV) .

Extended Reporting for Limits

Use

You use this function to calculate the utilizations of absolute and relative limits , and to display these. In this function, the system analyzes data sets stored in the Results Database, and displays the utilizations of the limits for each data set. It selects all the data sets that contain limits that were exceeded.

You can branch from each row in the report to the single transaction display. This means that you can check the book values and NPVs of the transactions, and the utilizations of the limits and the limit ratio for each key date.

Integration

The system calculates the utilizations based on the analysis that you start in the Portfolio Analyzer component, and the results of these analyses that are stored in the Results Database (RDB).

Prerequisites

You have calculated net present values and book values for selected portfolio hierarchy nodes, and stored the results in the Results Database. For more information, see Evaluations Using the Results Database .

You have created relative and absolute limits. You access the function for doing so by choosing the following path on the **SAP Easy Access** screen: **Accounting** > **Financial Supply Chain Management** > **Treasury and Risk Management** > **Credit Risk Analyzer** > **Master Data** > **Limits** > **Limits** .

Features

The system calculates a utilization indicator, which is defined as follows:

$$Utilization\ Indicator = \max\left(Absolute\ UI;\ Relative\ UI\right)$$

where **absolute UI** and **relative UI** are defined as follows:

$$Absolute\ UI = \begin{cases} \dfrac{Limit\ Utilization}{Upper\ Limit} & ,\ only\ Upper\ Limit\ given \\ \dfrac{Lower\ Limit}{Limit\ Utilization} & ,\ only\ Lower\ Limit\ given \\ \dfrac{\mathrm{abs}\left(Limit\ Utilization - M\right)}{Upper\ Limit - M}\ where\ M = \dfrac{Upper\ Limit + Lower\ Limit}{2} & ,\ Upper\ and\ Lower\ Limit\ given \end{cases}$$

where the key figures are absolute numbers. The relative UI key figure is calculated using the same formula, but the values used are percentages.

The utilization indicator is defined so that it provides values that can be interpreted, regardless of how the limits are defined. If the limits specified for the absolute and relative limits have not been reached, the value of the utilization indicator is between 0 and 100 percent. If a limit has been reached, the value is 100 percent. If the limits have been exceeded, the value is greater than 100 percent.

If you want to define a lower limit as well as an upper limit, the value of the utilization indicator is 0 percent if the limit utilization is exactly in the middle of the range defined by the lower and upper limit.

Activities

1. On the SAP Easy Access screen choose Accounting > Financial Supply Chain Management > Treasury and Risk Management > Credit Risk Analyzer > Information System > Reporting > Limits > Extended Limit Reporting .

   The system displays a selection screen.

2. Specify the limit IDs and the validity period for which you want to display the utilization of the limits. Choose an evaluation type, the display currency, and the layout ID for displaying the data from the RDB.

   You can also specify an ALV layout.

3. Choose Execute .

   The system reads the limit utilizations and limit references from the RDB, converts them to the evaluation currency, and calculates the relative limits and the value of the utilization indicator. It then displays the data sets that were selected in the navigation structure in the left-hand part of the screen.

Action

To display the data choose a row in the navigation structure.

On the right-hand side of the screen the system displays a list that contains the following information:

- Status

  The status is green if no errors occurred during the calculation process. Else the status is red. The system writes a log of all errors and warnings.

- Limit ID and valid-from date
- Limit utilization (portfolio node, key figure, and amount)

  The system displays all currency amounts in the display currency that you specified in the selection screen.

- Amount of the limit reference (portfolio node, key figure, and amount)
- Limit ratio (lower and upper limits for the limit utilization for relative limits)
- Upper and lower limit for absolute limits
- Relative limit in percentage
- Utilization indicator in percentage

To display the results at single transaction level, in the right-hand part of the screen double click a row.

The system branches to the Analyzer Information System and displays the values for the selected portfolio hierarchy node.

Relative Limits

Definition

Relative limits define the minimum or maximum limit utilization as a percentage of a reference limit, such as the book value of a portfolio of transactions.

Use

When you create a premium reserve fund, you may want to restrict the portion of certain product categories in the fund. The portion of each product category in the fund is often restricted in reference to the total investment volume or to certain asset classes. For example, an insurance company can insist that securities comprise a maximum of 30 percent of a portfolio, and that fixed-term deposits represent at least 10 of the portfolio.

In addition to internal limits, there are also legal limits, such as those governing insurance companies' stock investments. Internal limits are usually defined by market values, whereas legal limits are based on book values.

You use relative limits to map these requirements. To create relative limits, on the **SAP Easy Access** screen choose **Accounting** > **Financial Supply Chain Management** > **Treasury and Risk Management** > **Credit Risk Analyzer** > **Master Data** > **Limits** > **Limits** . You can also use this transaction to define absolute limits, and to create absolute limits for relative limits.

To check whether any limits have been exceeded, you use the extended reporting for limits .

Structure

Relative limits are defined as the quotient of the limit utilization and a limit reference. The limit utilization specifies the investments that are to be subject to a limit, and the limit reference is the associated total investment volume. You define both these figures by specifying a portfolio hierarchy node and a key figure.

The nodes in the portfolio hierarchies are the portfolios that are to be compared. You usually define one portfolio hierarchy for the limit utilization, and one for the limit reference. You can use all the NPVs and book values that you assigned to your portfolio hierarchy as key figures. You can compare the same key figures for different portfolios or different key figures for the same portfolio.

You can define a lower limit and an upper limit for the relative limits. You can also define only one of these limits (either the lower limit or the upper limit). You enter these values as percentages.

SAP Query

Definition

You can use the SAP Query to define reports without having to carry out any programming. You can also include your own data.

Use

In this component you can use the following Queries:

- Overview of limits
- Overview of limit utilizations

You should use the Queries offered here as examples. Alternatively, you can use these reports: Displaying an Overview of Limits , Displaying Utilizations . **You can copy these using the standard SAP Query tool by choosing** > **Tools** > **SAP Query** , and you can use them as a template for the queries and infosets you define yourself.

Integration

The SAP Query is a standard tool. You can view the documentation about the general usage of SAP Queries in Query .

Tools

Collateral

Use

In the **Default Risk and Limit System** , certain information about collateral is required to enable the system to calculate attributable amounts correctly, and record secondary risk appropriately. Only collateral data that is relevant for these purposes is entered in the SAP system. Seen from a general business perspective, collateral has far more complex data.

The Default Risk and Limit System distinguishes between the following levels of collateral:

- **Global collateral (not used in TRM Credit Risk Analyzer)**

  Global collateral can secure multiple financial transactions, which are defined by assigning the relevant characteristic values. Global collateral reduces the consumption of the limit for the relevant limit characteristics. This means it affects the utilizations and not the individual attributable amounts.

- **Single-transaction-related collateral**

  You assign single-transaction-related collateral to a particular financial transaction. You can assign more than one collateral item to a single transaction. When appropriate, this reduces the attributable amounts.

- **Collateral agreements**

  A collateral agreement is a contract agreeing the provision of collateral for trading transactions between two business partners. Collateral agreements reduce risk at the level of the attributable amounts.

Prerequisites

You need authorization object J_B_KLTCOD in order to process collateral (regardless of the level of the collateral). This is contained in authorization profiles F_T_FTLM_ALL and J_B_ISB_ALL.

Integration

General administration of collateral should be done by an external data processing system. To ensure consistent datasets, we recommend that you set up an interface between the SAP Limit System and your collateral management system. You can link the systems by using the RFC-enabled module KLSI01_SI_SAVE_RFC.

You are also able to import collateral using external data transfer (EDT) and transfer category 44. You do this by choosing the following path from the **SAP Easy Access** screen: **Accounting** > **Bank Applications** > **SEM Banking** > **Data Pool** > **Tools** > **External Data Transfer (EDT)** . For more information about this, see the Implementation Guide under **SAP Banking** > **SEM Banking** > **Data Pool** > **Tools** > **External Data Transfer** > **General Information** > **Transfer Categories** > **Transfer Category 044: Collateral Provisions.**

Features

The system can calculate attributable amounts (secondary attributable amounts) for collateral. When collateral is taken into account, the system displays a net attributable amount for the primary transaction, and not a gross attributable amount.

Example

The company Meier's Mill has taken a loan of EUR 100,000. There are 2 single-transaction-related collateral items. The Deutsche Bank provides a guarantee of EUR 80,000. Mr. Meier provides a mortgage (tangible collateral) of EUR 40,000.

Business Partner	Meier's Mill	Deutsche Bank	Mr. Meier
Product	Loan	Guarantee	Land charge
Nominal amount	100,000	80,000	40,000
Priority		1	1
Counterparty exposure (gross) per business partner	100,000	80,000	0 (because of tangible collateral)
Adjustment rate		2/3	1/3
Counterparty exposure (net, secondary)		66,666	0
Counterparty exposure (net, primary)	0		

Processing Single-Transaction-Related Collateral

Use

You assign single-transaction-related collateral to a particular financial transaction.

The system distinguishes between the following collateral value categories:

- Percentual collateralization
- Collateralization using a collateral amount
- Collateralization using securities

You can assign more than one collateral provision to a financial object within a collateral value category. The collateral provisions can then be processed in accordance with the collateral priorities. In the case of **collateral using securities** , only one class per collateral provision is permitted.

Prerequisites

So that single-transaction-related collateral is included in the calculation of attributable amounts, you need to have entered the following settings in Customizing:

- You need to have already created a collateral type. You do this in Customizing under **SAP Banking > SEM Banking > Default Risk and Limit System > Basic Settings > Master Data > Define Collateral Type** or **Financial Supply Chain Management > Treasury and Risk Management > Credit Risk Analyzer > Basic Settings > Master Data > Define Collateral Type.**

- You need to have already created a collateral priority. You do this in Customizing under SAP Banking > SEM Banking > Default Risk and Limit System > Basic Settings > Master Data > Define Collateral Priority or Financial Supply Chain Management > Treasury and Risk Management > Credit Risk Analyzer > Basic Settings > Master Data > Define Collateral Priority.
- You need to have already created a collateral valuation rule. You do this in Customizing under SAP Banking > SEM Banking > Default Risk and Limit System > Basic Settings > Definition > Define Collateral Valuation Rule or Financial Supply Chain Management > Treasury and Risk Management > Credit Risk Analyzer > Basic Settings > Definitions > Define Collateral Valuation Rule.

Procedure for Creating Single-Transaction-Related Collateral

1. In the SAP Easy Access screen, choose Accounting > Bank Applications > SEM Banking > Data Pool > Bank Transactions > Collateral Provision > Create or Accounting > Financial Supply Chain Management > Treasury and Risk Management > Credit Risk Analyzer > Tools > Collateral Provision > Create.

   The system displays the screen Create Collateral Provision : Initial Screen .

2. Enter an ExternalCollateral ID, choose the classification Single-Transaction-Related Collateral and Continue .

   Alternatively, you can choose Copy From... to copy an existing collateral item.

   The system displays the screen Create Collateral Provision : Overview .

3. Enter a long name and a short name for the collateral.

4. In the data group Collateral Classification specify the Collateral Value Type and the Collateral Type .

5. You make the connection to the single transaction by specifying the financial object number on the Assignment tab page.

6. On the Administration tab page, the Record active indicator has to be set. This ensures that the collateral provision is included in the determination of attributable amounts. This indicator is set by default. By deselecting this indicator you are then able to delete the collateral provision. Here you can also enter the collateral provider (if the type of collateral is personal) and the priority of the collateral provision.

7. On the tab page Items, the collateral value category you chose earlier determines which data you need to enter.

Collateral Value Category	Fields Requiring Entries
Percentual collateralization	Valid from date, percentage (economic and political)
Collateralization using a collateral amount	Valid from date, collateral amount, currency
Collateralization using securities	Valid from date, security ID number, number of units or amount

8. Choose Save.

9. For the primary or secondary risk-reducing effect of the collateral to be taken into account in the attributable amount determination, a financial object for the single-transaction-related collateral item is required. Once you have saved the collateral, if you then choose Financial Object in the application toolbar, you branch directly to financial object creation.

   ### ⚠ Caution

   Note that in the function for maintaining financial objects for single-transaction-related collateral, the system, when selecting data, does not take into account the validity end date stored in the financial object.

Procedure for Changing Single-Transaction-Related Collateral

1. In the SAP Easy Access screen, choose Accounting > Bank Applications > SEM Banking > Data Pool > Bank Transactions > Collateral Provision > Change or Accounting > Financial Supply Chain Management > Treasury and Risk Management > Credit Risk Analyzer > Tools > Collateral Provision > Change .

   The system displays the screen Change Collateral Provision .

2. Enter the External Collateral ID and choose Continue .

3. Make the changes required and choose .

4. You can branch directly to financial object maintenance by choosing Financial Object . Note that in the function for maintaining financial objects for single-transaction-related collateral, the system, when selecting data, does not take into account the validity end date stored in the financial object.

Result

If a net determination procedure is used, the single-transaction-related collateral is offset against the attributable amount of the transaction. This therefore reduces the amount of limit utilized. You need to note, however, that tangible collateral does not increase the counterparty/issuer risk of the guarantor, but instead reduces the risk of the primary transaction.

In a netting group , a single-transaction-related collateral item first reduces the positive net present value of the single transaction, and then the add-on. (The reduction by the collateral affects the determination of the net/gross ratio and the total of the single transactions' add-on and, therefore, the netting add-on.)

The attributable amount of the collateral is calculated as follows:

Percentual collateralization	Attributable amount (collateral) = CALCBAS (transaction) x % (collateral)
Collateral amount	Attributable amount (collateral) = collateral amount In the case of risk-adjusted attributable amount determination, the collateral amount is also risk-weighted.
Collateralization using securities	Attributable amount (collateral) = [max (0, NPV $_s$) – nominal amount $_s$ x AOF $_s$] x (1 - DEFPROB $_s$)

where:

ABS	absolute amount
CALCBAS	Calculation base
AOF c	Collateral add-on factor
DEFPROBc	Default probability of the collateral

Collateral Agreement

Definition

A collateral agreement is a contract regarding the provision of collateral for trading transactions between two business partners. The agreement involves the transfer of collaterals (usually securities, cash collaterals) as soon as the market value of the trading transactions requiring collateral exceeds a **threshold amount** (ThA). The threshold amount the contract partners grant each other can vary.

Both exposures from open trading transactions and values from collaterals already provided fluctuate, depending on the market. For this reason there must be a comparison of the exposures and the collateral per counterparty or issuer at agreed time intervals (daily, monthly, for example). To restrict transaction costs, additional payment obligations arising from the threshold amount being exceeded do not have to be met immediately on the valuation key date, but rather in phases, each time what is known as the **minimum transfer amount** (**MTA**) is exceeded.

⚠ Caution

The attribution of collateral agreements **only** takes place in end of day processing . The single transaction check does not support collateral agreements.

Processing Collateral Agreements

Prerequisites

So that collateral agreements are included in the determination of attributable amounts, you need to have defined the following settings in Customizing:

You need to have already defined a netting group, to which the collateral ID can be assigned. You create netting groups in Customizing under SAP Banking > SEM Banking > Default Risk and Limit System > Basic Settings > Definitions > Define Netting Group , or under Financial Supply Chain Management > Treasury and Risk Management > Credit Risk Analyzer > Basic Settings > Definitions > Define Netting Group .

In addition, you need to have entered a collateral ID in the default risk data in the financial object.

Procedure for Creating Collateral Agreements

1. In the SAP Easy Access screen, choose Accounting > Bank Applications > SEM Banking > Data Pool > Bank Transactions > Collateral Provision > Create or Accounting > Financial Supply Chain Management > Treasury and Risk Management > Credit Risk Analyzer > Tools > Collateral Provision > Create .

   The system displays the screen Create Collateral Provision : Initial Screen .

2. Enter an ExternalCollateral ID, choose the classification Collateral Agreement as Collateral . Then choose Continue .

   The system displays the screen Create Collateral Provision : Overview .

3. Enter a long name and a short name for the collateral.

   - In the tab page Contract enter the netting group in which the transactions of the collateral agreement are to be netted. Also enter the threshold amount and the minimum transfer amount. The system determines the currency of these amounts from the netting group.
   - On the Administration tab page, you need to set the Record active indicator. This ensures that the collateral is considered when attributable amounts are calculated. This indicator is set by default. By deselecting this indicator you are then able to delete the collateral provision.
   - On the tab page Accumulated payments you can enter the valid from date, amount and currency of the accumulated payments.

4. Choose Save.

Result

If a net determination procedure is used, collateral agreements are offset against the attributable amount, reducing the attributable amounts of all the transactions assigned to a collateral group, and thus reducing the amount of the limit that is

utilized.

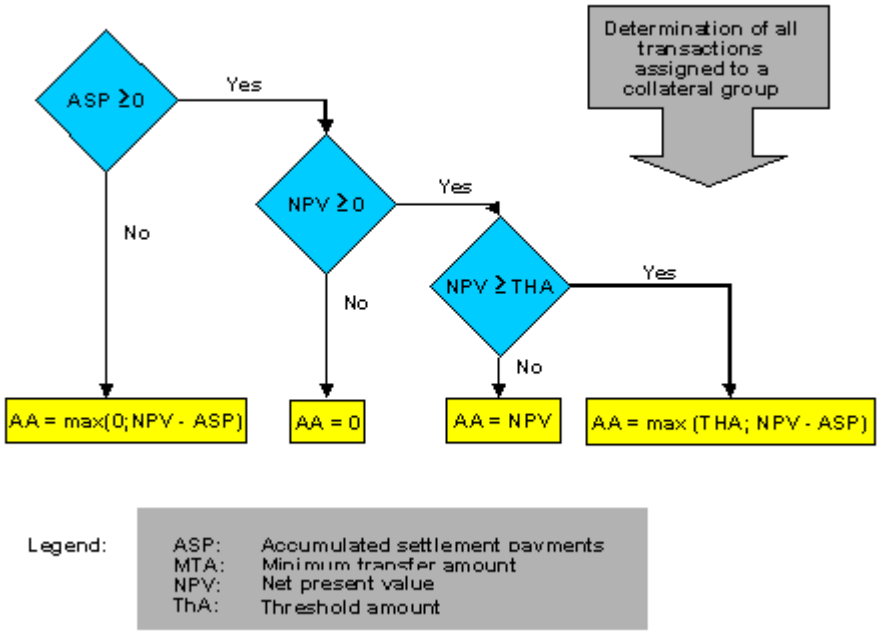
Attributable Amount of a Collateral Group

For single transactions of a netting group that belong to a collateral agreement, the system determines an attributable amount per collateral agreement. The way in which the attributable amount is determined depends on whether risk determination within the netting group takes place in a risk-adjusted or volume-oriented way.

The system determines and shows the attributable amounts individually per collateral group. To obtain the attributable amount for a collateral agreement, in the first step the system calculates the net present value of a collateral group from all the included transactions by totaling all net present values.

Net present value (NPV) $=\sum(PV_i)$

A distinction must be made between the following cases for the determination of the attributable amount of the collateral group. When considering these cases, the threshold amount and the accumulated settlement payments are included:



Depending on the netting group settings, the attributable amount of the collateral group can be additionally weighted with an average default probability.

$$\text{Default probability} = \frac{\sum \max(0; NPV_i) \times DEFPROB_i \times (1 - RR_i)}{\sum NPV_{i(pos)}}$$

i Note

The add-on of the single transactions is not offset, but displayed in reporting.

Displaying an Overview of Collateral

Use

This evaluation provides you with an overview of stored collateral provisions.

Procedure

1. Choose: > Information System > Reporting > Collateral Overview >

The system displays the screen CreditLimit : Display Collateral Provision.

1. Enter the selection criteria you require. Your options include:

Layout of Display	In the overview of collateral, you can define a display layout that you can use when you call up the overview a later point in time.
Selection of Collateral Provision	• External Collateral ID • Key Date
Status of Collateral Provision	• Active Collateral Provision • Inactive Collateral Provision • All Collateral Provision
Level of Collateral Provision	• All • Global Collateral • Single Transaction Collateral • Collateral Agreements
Additional Selection For:	• Global Collateral • Single Transaction Collateral • Collateral Agreements

1. Choose .

Result

You receive a list displaying all the selected collateral provisions. Only those items are shown that are valid on the key date you specified.

By double clicking on a row you can branch to detailed information about the collateral.

Note

You can change the layout by choosing . To select from layouts that already exist choose , and you can save the layout with . If you define and save your own layout, you can use it in the future by entering it as a selection criterion.

Displaying Change Documents for Collateral

Use

The system logs changes made to collateral in what are called **change documents** . A new document with an internal number is created each time the data for collateral is changed. This function provides continuous logging of all changes.

ℹ Note

No change document is generated when the data is initially created.

The following data is recorded in the change documents:

- Document number (internal number assignment)
- Changed by (name of the user)
- Date and time of the change
- Category of the basic key figure
- Key figure valid from: If you change an **item** , the **valid from date** is recorded. For changes to all other data, this field shows its initial value.

Procedure

1. You do this by choosing the following path from the **SAP Easy Access** screen: **Accounting** > **Bank Applications** > **SEM Banking** > **Data Pool** > **Bank Transactions** > **Collateral Provision** > **Change.**

   The system displays the screen **Change Collateral Provision** .

2. Select the collateral item you require and choose **Continue.**

   The system displays the screen **Change Collateral Provision** .

3. Choose **Goto** > **Change Documents** .

Result

The system displays a list of change documents.

By choosing **Line Items** you can view the following information for each change document:

- The technical name of the field whose data was changed
- A description of the changed field
- The old and new values of the field
- The type of change

Reservations

Use

The reservation function enables you to reserve a free limit for a certain period. The attributable amounts can either be calculated by using basic key figures, or entered with the reservation.

You can store a note by choosing  **Edit Note** . For more information about notes see .

Prerequisites

There is an authorization object especially for the maintenance of reservations: F_T_VTBLR.

Integration

Reservations are taken into account both during the single transaction check and in end-of-day processing.

To simplify the creation of reservations, in Customizing you can store default values (in particular the default risk rule) for reservations. In Customizing choose→ **Limit Management** → **EnterBasic Settings for Limit Management.**

If you are using 24-hour capability , you can still use the reservation function whilst end-of-day processing is running, or during a single transaction check.

Activities

Creating Reservations

Choose ...→ **Master Date** → **Reservations** → **Create** .

When you create a reservation, you have to choose between entering the attributable amount directly or letting the system calculate it using the basic key figures.

Entering Attributable Amounts Directly

Reservation ID	The number is assigned automatically
Name	Free text
Search term	Free text
Reservation Data	
Effective from	Today's date
Valid to	Expiry date of the reservation.
Limit Characteristics	The reservation is applied to all limits that correspond to the characteristic values entered here, and to the determination procedures.

Administrative Data	
Deletion Flag	If you set this indicator, the reservation will be ignored the next time utilizations are generated, and it will not be taken into account in the current day balance (status 2).
Attributable Amounts	
Determination Procedure	The determination procedure defines which limit types are affected by a utilization.
Validity Date of Utilization	This field is filled only for determination procedures that take account of settlement risks. Leave the field blank for credit risks, as the most recent determination date is used as the default value.
Reservation Amount	Attributable amount of the reservation
Reservation Currency	Currency of the reservation amount

Choose Save to save your entries. Before you save, you can choose Check to check the reservation against the relevant limit.

Using Basic Key Figures to Calculate Attributable Amounts

Reservation ID	The number is assigned automatically
Name	Free text
Search term	Free text
Reservation Data	
Counterparty risk active (CP Risk Active) or Country Risk Active	By setting the CP Risk Active or Country Risk Active indicators, you define whether the transaction is relevant for counterparty/issuer risk or country risk. (The country risk functions are available in Banking only.)
Default Risk Rule	Default value for the default risk rule. This can be overwritten.
Validity Period	Effective from : Today's date Valid to : Expiry date of the reservation.
Date Fields	Start of Original Term : Enables the reservation to be applied to the correct maturity band, and is based on the underlying transaction. End of Original Term : Enables the system to derive the remaining term and the original term. Is based on the underlying transaction, and ensures that the reservation is applied to the correct maturity band. Date for Market Value Change Period : The market value change period is the time period applied in the valuation of trading transactions to calculate the potential change in the market value of the transaction. The market value change period is the difference between the base date and the valuation key date.
Limit Characteristics	The reservation is applied to all limits that correspond to the characteristic values entered here, and to the derived determination procedures.

Basic key figures	Using your entries (default risk rule, limit characteristics) the limit system checks which basic key figures are needed to calculate the various attributable amounts. These entries are required entries.
Country risk information	If you set the country risk indicator, you need to make some settings in the **Country Risk Information** area.
Generated characteristics	You can edit the values for the generated characteristics here.
Administrative data	
Deletion flag	If you set this indicator, the reservation will be ignored the next time utilizations are generated, and it will not be taken into account in the current day balance (status 2).
Attributable amounts	The system automatically fills the fields for the attributable amounts.
Determination procedure	The determination procedure defines which limit types are affected by a utilization.
Validity date of utilization	This field is filled only for determination procedures that take account of settlement risks. The field remains blank for credit risks, as the most recent determination date is used as the default value.
Reservation amount	Attributable amount of the reservation
Reservation currency	Currency of the reservation amount

Choose **Save** to save your entries. Before you save, you can choose **Check** to check the reservation against the relevant limit.

Changing Reservations

Choose ... → **Master Date** → **Reservations** → **Change.**

Enter the reservation ID and choose **Enter** .

Overwrite the existing entries, and then choose **Save** to save your changes.

You need to set the deletion flag so that the reservation is ignored the next time the system generates the utilizations. To do this, set the flag in the **Administrative data** area. If the flag is set, you can delete the reservation in Customizing by choosing... → **Limit Management** → **Reorganization** → **DeleteReservations**

Displaying Reservations

Choose ... → **Master Data** → **Reservations** → **Display.**

Enter the reservation ID and choose **Enter** .

You can display the existing entries.

Collective Processing

To ensure efficient processing of more than one limit, you can use collective processing for the functions described above. Choose ... → Master Data → Reservations → Collective Processing .

Once you have created/changed/displayed the reservations as required, you can use the following additional functions:

Copy reservations by choosing Copy .

Extend reservations using Extend .

Enter notes using Notes .

Change Documents

The system keeps a record, in the form of a change document, of all changes made to reservations.

You can view change documents either for each reservation ID in display/change mode, or by using a report:

In change/display mode: Reservations → Change Documents.

Report: Information System → Reporting → Reservations → Display Changes. In this report, you can select your reservations by the reservation ID (range), the date on which the last change was made, and the user who last changed the reservation. You display the reservations by choosing Execute .

Field Selection Control

Use

The field selection control allows you to control fields in certain applications in Limit Management and Reporting according to the field status.

Before you can stipulate the field status of a certain field, you first need to make an entry in the maintenance table in Customizing for each application, limit type, and mode.

Activities

In Customizing choose →Limit Management→Field Selection Control .

The system displays the screen: Change View " Maintenance View for Field Selection Control for Limit Types".

To enter the following data, choose New entries:

Limit type (LT)	An entry in the field selection control table applies to a certain limit type.
Program name	The settings apply to a particular application. For the following programs, you can control fields by their status: RFTBLE01 Report: Overview of Utilizations – Selection Using Direct Characteristics RFTBLE02 Report: Overview of Utilizations – Selection Using All Characteristics RFTBLL01 Report: Overview of Limits SAPLTBL1 Limit Maintenance: Overview SAPLTBL1 Limit Maintenance: Details (screen 1010) SAPLTBL10 Report: Utilizations - Single Records SAPLTBL10 Report: Utilizations - Grouping Level 1l SAPLTBL10 Report: Utilizations - Grouping Level 2

Table name	Name of the table containing the field you want to control
Field name	Name of the field you want to control. (The field is entered automatically when you select the table/field)
Mode description	The mode specifies whether the field is set up for 1 = Display mode 2 = Maintenance mode. If you want to control the field status for both modes, you need to define them both separately.
Possible field modes	Undefined = Default setting Optional entry = Field is ready for data entry Required entry = Field is ready for data entry and must be filled Hide = Field is hidden in the application

If you define the field selection control for a report by specifying a program name, then the settings you make here apply only if the report is run just for this particular limit type.

Choose to save your settings.

Parallel Processing Control

Use

This function allows you, as you require, to distribute to several different servers the evaluations in Market Risk Analysis, the simulations of the Strategic Analyzer, and all reports on utilizations (in end-of-day processing) in the Default Risk and Limit System. This increases the efficiency of your system.

Note

When parallel processing control is active, no detail log is generated for those single value analyses that generate logs.

Prerequisites

You need to have already activated one or more servers for your SAP system. You can display a list of servers under **Tools** > **Administration** > **Administration** > **Network** > **RFC Destinationsunder Internal connections** Choose **RFC** > **RFC groups** to be able to bundle the servers into groups.

Activities

1. Enter your user name and the evaluation type (field ET).
2. Set the indicator **Multi-tasking** to active.
3. Specify the **Package size.**
4. In the field **Max no. tasks** , you can restrict the burden for each server group.
5. In the **Server group** field, enter a group of servers that you want to use to process the tasks of the evaluation in parallel.
6. Choose **Save** .

ℹ Note

You can display the active servers of your SAP system and the tasks that are currently running on them under **Tools** > **Administration** > **Monitor** > **System Monitoring** > **Servers.** For further information see also: Displaying the Status of the Application Server .

→ Recommendation

If you use the Default Risk and Limit System, read the section .

Archiving Limits and Limit Utilizations

Use

When Limit Management is used in your productive system, over time a great deal of data is saved. To avoid evaluations from being slowed down by excessively large volumes of data, you have the option of deleting limits and utilizations from the system.

However, you can delete this data from the system only if it has been archived, meaning it has been copied to an external memory.

It is possible to reload archived and deleted data in another step.

Prerequisites

Data to be archived already exists in the system:

Limits

Limit utilizations

Procedure

Archiving is a standard application that is used for numerous SAP applications.

Choose .. → **Tools** → **Reorganization Tools** → **Limit Management: Archiving** .

The system displays the screen **Archive Administration: Initial Screen** .

ℹ

The relevant object name for this component **TRTM_LM** (TR Limit Management: Limits, Utilizations) is already entered.

Archiving

In the **Actions** area, choose **Write** (**Schedule Writing**).

The system displays the **Archive Administration** : **Create Archive Files** screen.

Enter a name for your variant and choose **Maintain** .

You have to maintain separate variants for test runs and update runs. Using the input help, you can reuse or change variants that have already been created.

Go to the next input screen by choosing Continue .

In the selection screen Maintain Variant: Report RFTBARC1, Variant xy, you have several options for selecting the data that is to be archived: For more information see the report documentation.

If you want to carry out an update run, remove the indicator from the Test Run field. Enter an additional comment for the archive.

Choose to save your variant. Then choose to return to the Archive Administration: Generate Archive Files screen.

If you create a new variant, you have to enter and save an additional description of the variant.

Enter the start date. Here you have the following options:

Start archiving immediately

Start archiving on/at a certain date/time

Start archiving directly after another job

Start archiving after a specified event

You also have the option of archiving data periodically.

Then choose to save your entries.

Enter the spool parameters.

Here you specify the printer for the data that is to be printed. Then confirm your entries with Continue .

Start the archiving run with Execute .

Once you have started the archiving run, by choosing the pushbuttons Job Overview and Refresh , you can monitor the status of the job and also review the Job Log.

You can also call up the log of archived objects by choosing Spool and then Display . You can display the data in the following formats:

Graphical

Raw

Hexadecimal

In the same way you can view message texts by choosing Job log .

Managing Archiving Runs

Choose the **Administration** pushbutton to display all the archiving runs created so far. The individual runs are sorted by their status:

Incomplete: Objects have been archived

Complete: Objects have been archived and deleted

Incorrect: Errors occurred during archiving - postprocessing is necessary

You cannot use the **Delete** and **Reload** functions until all the data has been archived.

Deleting Archived Data

For information about deleting archived data see the report documentation for report RFTBARC2.

Reloading Archived Data

For information about reloading archived data see the report documentation for report RFTBARC3.

Result

The archiving process copies the selected data to an external memory. However, the data still exists in the limit system.

In the deletion process, the data that is already archived is deleted from the limit system.

In the reloading process, the selected data is restored to the limit system.

For more information about archiving, refer to the documentation CA - Archiving and Deleting of Application Data . For viewing archived data you can use the archived information system . The system contains the following archived information structures: SAP_TRTM_LM_EXP and SAP_TRTM_LM_LIM.

Financial Objects

Use

Once you have saved the master data for a bank transaction, further information must also be saved in order to use the SEM components of SAP Banking . You enter this data in the **financial object.** The financial object acts as a link between the respective bank transaction and the valuation routines required for SAP Banking .

Structure

A bank transaction's financial object contains all of the information necessary for the implemented SEM components. The following entry screens exist:

- **General Part**

  On this screen, you enter the general information for a financial object. This information is relevant to **all** SEM components.

- **Profitability Analysis**

  On this screen, you enter the financial object information that relates to the Profitability Analysis component.

- **Analysis (RM)**

  On this screen you enter financial object data that are relevant for the components Market Risk Analysis and Asset Liability Management.

- **Default Risk and Limit System**

  On this screen, you enter the financial object information that relates to Default Risk and Limitation .

- **External Key Figures**

  External key figures are items of information that you can store in the SAP system for further calculations. They take the form of amounts, quantities, or percentages. The key figures themselves are not calculated in the SAP system.

  External key figures are currently only used in the components Default Risk and Limit System (for determining the settlement amount) and Asse t Liability Management .

  As a prerequisite for this, you must have stored the customer-specific key figure categories (customer name space Y or Z) needed to store the customer-specific key figures. You can do this in Customizing under SAP Banking > SEM Banking > Data Pool > Define External Key Figures.

- **Additional Data**

  The object number for financial transactions is displayed as additional data.

Prerequisite

Before you can create a financial object for a bank transaction, you must have created the master data for that bank transaction.

Editing Financial Objects

1. In the SAP Easy Access menu choose Accounting > Bank Applications > SEM Banking > Data Pool > Edit Financial Object.
2. **Use the selection options on the initial screen to identify the bank transaction (single transaction or single position) upon which the financial object is based.**
3. Enter the Company Code for which the bank transaction was created.
4. Select the contract type of the bank transaction and enter a key in the corresponding field that will uniquely identify the master data of the bank transaction. The key can be one of the following:

- Account number for account transactions
- Contract number for loan transactions
- Order number for security transactions
- Financial transaction number for derivative, money market and forex transactions
- Position number for positions (such as securities positions, forex positions, and listed derivative positions)
- Balance sheet item number for non-interest-bearing positions
- Service number for services
- Account number for a BCA account
- Transaction number of a variable transaction
- Transaction number of a generic transaction
- Position number of a fictitious/simulated transaction position
- Externalfacility ID for a facility
- Externalsecurity ID for a security
- ID number and securities account of a securities account class position
- ID number and securities account of a class position in a futures account
- ID number of non-interest profit and loss item

5. Choose **Financial Object** > **Create** .

> **Note**
> When you create a financial object in the system, it is automatically assigned a financial object number.

6. **Enter general details about the master data (represented by the original key) on the General Part screen .**
   a. Enter the source system.
   b. For securities transactions, forex transactions, and transactions with listed derivatives (single transactions only), choose **Additional Data to enter the reference price required for calculating the trading terms contribution within the Single Transaction Costing component.**
7. Create a Profitability Analysis part, analysis parameters and/or default risk and limit data for the financial object depending on how you want to use it.
8. Save your entries.

> **Note**
> When you create financial objects for loan transactions, cash flows are generated (commitment cash flow and possibly rollover cash flows). Cash flow generation is triggered when you save the financial object. Before saving, make sure that you have entered all the information for the loan transaction.

> **Note**
> You can delete financial objects for variable transactions, loans and accounts using particular programs. For more information, see the following units:

Creating Data for Default Risk and Limit

Choose **Default Risk Limit.**

Set the indicator **Counterparty/Issuer Risk Active (CP Risk Active)** or **Country Risk Active** , so that an attributable amount is calculated for the transaction.

Enter the following limit characteristics:

Limit Product Group (the limit product group you enter here overwrites the default limit product group.)

Monitoring Unit (freely definable reporting characteristic)

Rating (the rating you enter here overwrites the rating for the business partner, but this is not the case for the integrated external business partner).

Enter the following evaluation parameters:

Default Risk Rule (the default risk rule you enter here will override the one set in Customizing).

Recovery Rate

Enter the following netting information:

Netting ID or

Collateral ID

Transaction Start CPR: Start of validity of transaction for Counterparty/Issuer Risk

Transaction End CPR/CR: End of validity of transaction for Counterparty/Issuer Risk and Country Risk

Transaction Start CR: Start of validity of transaction for country risk

As there is no separate field for the transaction end date for country risk, the system takes the date from the field **Transaction End CPR/CR** as the end date for the country risk as well. Therefore, when you create financial objects that are relevant for country risk, ensure that you enter the end date in field **Transaction End CPR/CR** , even if the financial object is not relevant for counterparty/issuer risk.

If you are using generated characteristics, you must maintain them in the analysis (RM) part of the financial object. To do this, return to the screen **Process Financial Object: General Part** and choose **Analysis (RM)** .

Result

In the next end-of-day processing run, the system calculates an attributable amount for the transaction to which you assigned this financial object.

External transactions do not have to be assigned a financial object in order for them to be taken into account when the attributable amount is calculated.

Automatic Integration of Financial Objects

Use

In the automatic financial object integration (FO Integration) function, you can enter financial object data manually when you create the master data, or let the system derive the financial object data. You can use this function when you create the data for the transactions given below. The following rules apply:

- **Group 1**
  - BCA account
  - Variable transactions (applies for the SAP Banking application component only)
  - Generic transactions
  - Facilities in SAP Banking

    You can generate the relevant parts of the financial object (analysis parameters, profitability analysis, default risk and limit, external key figures) as tab pages. You can fill these in when you create transactions. You cannot create the Profitability Analysis tab page for facilities.
- **Group 2**
  - Loan transactions
  - Money market transactions
  - Foreign exchange transactions
  - OTC derivatives
  - Securities and listed derivatives
    - Securities account class position
    - Futures account class position
    - Security transactions

The tab pages Analysis Parameters , Default Risk Limit (not for futures account class position) and Profitability Analysis (not for securities account class position and futures account class position) are created for each company code.

Prerequisites

Group 1:

To be able to use financial object integration, you must have set the FO Integration Active/Component Active indicator for each transaction type (BCA account, variable transaction, generic transaction, facility) in Customizing under Activate/Deactivate Automatic Financial Object Integration . In Customizing, choose:

SAP Banking > SEM Banking > Profitability Analysis > Single Transaction Costing > Automatic Integration of Financial Objects in Transaction Master Data or

SAP Banking > SEM Banking > Common Settings for Market Risk and Asset/Liability Management > Automatic Integration of Financial Objects in Transaction Master Data > or

SAP Banking > SEM Banking > Default Risk and Limit System > Basic Settings > Automatic Integration of Financial Objects in Transaction Master Data > or

Financial Supply Chain Management > Treasury and Risk Management > Basic Analyzer Settings > Automatic Integration of Financial Objects in Transaction Master Data > Other Transactions > or

Financial Supply Chain Management > Treasury and Risk Management > Credit Risk Analyzer > Basic Settings > Automatic Integration of Financial Objects in Transaction Master Data > Other Transactions >

and then

BCA Account > Activate/Deactivate Automatic Financial Object Integration >

Variable Transaction > Activate/Deactivate Automatic Financial Object Integration >

Generic Transaction > Activate/Deactivate Automatic Financial Object Integration >

Facilities > Activate/Deactivate Automatic Financial Object Integration >

The system generates the relevant parts of the financial object (analysis parameters, profitability analysis, default risk and limit, external key figures) as tab pages for the activated components. If at least one component is active, the system automatically sets the general part of the financial object and the tab page for the external key figures to **active** .

Note

For BCA accounts, you can activate automatic financial object integration separately for each bank area and product type.

Group 2:

To be able to use financial object integration, the **Component Active** indicator must have been set in Customizing for the individual transactions and the selected components. In Customizing, choose:

SAP Banking > SEM Banking > Profitability Analysis > Single Transaction Costing > Automatic Integration of Financial Objects in Transaction Master Data > or

SAP Banking > SEM Banking > Common Settings for Market Risk and Asset/Liability Management > Automatic Integration of Financial Objects in Transaction Master Data > or

SAP Banking > SEM Banking > Default Risk and Limit System > Basic Settings > Automatic Integration of Financial Objects in Transaction Master Data > or

Financial Supply Chain Management > Treasury and Risk Management > Basic Analyzer Settings > Automatic Integration of Financial Objects in Transaction Master Data > or

Financial Supply Chain Management > Treasury and Risk Management > Credit Risk Analyzer > Basic Settings > Automatic Integration of Financial Objects in Transaction Master Data > Other Transactions >

and then

Loans > Activate/Deactivate Automatic Financial Object Integration >

ForeignExchange > Activate/Deactivate Automatic Financial Object Integration >

OTC Derivatives > Activate/Deactivate Automatic Financial Object Integration .

MoneyMarket > Activate/DeactivateAutomaticFinancialObjectIntegration

Securities and Listed Derivatives > Activate/Deactivate Automatic Financial Object Integration (not for profitability analysis)

Note

You can activate automatic financial object integration separately for each company code and product type for the following transactions:

Loan transactions

Money market transactions

Foreign exchange transactions

OTC derivatives

The company code can also be used for class positions in securities accounts and class position in futures accounts.

Groups 1 and 2:

If you want the system to derive the financial object data, instead of the user entering the data manually, you have to define derivation strategies . Derivation strategies describe what information needs to be derived from the transaction master data.

Features

If you have activated automatic financial object integration for a particular component, when you maintain the transaction data for that component, the system provides online entry screens in which the financial object data can be entered or derived using the relevant derivation steps from Customizing.

Note

The following information applies to the transaction forms 'option spread' and 'currency option.' You must generate two financial objects for these transactions. There is therefore no interface for these transactions, and the system does not check the data before it is saved.

When you save the transaction, the system checks the information in the various parts of the financial object. If one of the financial object parts **contains errors** , the system reacts in one of the following ways, depending on the Customizing setting:

- The master data cannot be saved, so neither the transaction itself nor the financial object with the components activated for automatic FO integration are saved on the database. This is the case if the function for the automatic integration of financial objects is **fully active** .
- The master data can be saved, but the financial object part that contains errors is not saved. If all the components activated for automatic FO integration contain invalid data, the general part of the financial object is not saved on the database either. This is the case if the function for the automatic integration of financial objects is **partially active** .

The following table shows the system's responses by taking the transaction category Generic Transaction as an example:

Case 1: Automatic FO integration is active only for component X

Customizing Settings			Is the data saved on the database?		
Automatic FO integration active	**System reaction when there are errors**	**Status of data**	**Generic transaction**	**General part of FO**	**Part for component X in FO**
Component X	Data cannot be saved(completely active)	X data correct	Yes	Yes	Yes
Component X	Data can be saved without the data of the part for component X (partially active)	X data correct	Yes	Yes	Yes
Component X	Data cannot be saved(completely active)	X data contains errors	No	No	No
Component X	Data can be saved without the data of the part for component X (partially active)	X data contains errors	Yes	No	No

Case 2: Automatic FO integration is active for component Y as well

Customizing Settings			Saved to Database:			
Automatic FO integration active	**System reaction when there are errors**	**Status of data**	**Generic transaction**	**General part of FO**	**Part for component X in FO**	**Part for component Y in FO**
Component X	Data cannot be saved(completely active)	Y data contains errors	No	No	No	No
Component X	Data can be saved but without the data of the part for component Y (partially active)	Y data contains errors	Yes	Yes	Yes	No
Component X	Data cannot be saved(completely active)	X data contains errors	No	No	No	No
Component X	Data can be saved without the data of the part for component X (partially active)	X data contains errors	Yes	Yes	No	Yes

Consequences

If financial object integration is active for a transaction category, this changes the way in which the system derives characteristics for the Market Risk Analysis and Default Risk and Limit System components. See Editing Characteristic Derivations .

Control Parameters

Use

In the Default Risk and Limit System, the default risk rule and the limit product group are derived. If you use integrated financial object maintenance, the system also derives the setting for the “Counterparty/issuer risk active” (SARAKT) indicator. If you are using the country risk functions, the system is also able to derive the CEQ class, LEQ class and the transaction start date for CL country risk (DLRBFG).

ℹ Note

The country risk functions are available in Banking only.

You define derivation strategies in Customizing. In the Default Risk and Limit System, a distinction is made between the following derivation strategies:

Types	Customizing (strategy maintenance)
Type 1	... ▶ Basic Settings ▶ Derive Default Risk Control Parameters ◀
Type 2	... ▶ Basic Settings ▶ Automatic Integration of Financial Objects in Transaction Master Data ◀

The system applies the following derivation types depending on the context:

- **Non-Integrated Financial Object Maintenance**

  Type 1 derivation is used. If financial object integration is set to active, no derivation occurs for the active object categories.

- **External Data Transfer**

  ▶ Type 1 derivation is used if financial objects are transferred. However, instead of transferring financial objects by EDT, you can generate them by using a generation report. In this case Type 2 derivation is used. You can use generation reports for loans, class positions in securities accounts, and money market, foreign exchange, and derivative transactions. You find generation reports by choosing... ▶ Tools ▶ Reorganization Tools ▶ Financial Object ▶ Financial Object Integration. In the same way... ▶ Tools ▶ Reorganization Tools ◀ you can also find reports for changing financial object data.

- Automatic Financial Object Integration

  Type 2 derivation is used.

- **Mass Processing of Financial Objects**

  - Type 1 derivation is used.

    ▶ You access mass processing of financial objects using Type 1 derivation in SEM Banking by choosing ▶ Tools ▶ Reorganization Tools ▶ Financial Object ▶ Non-Integrated Processing of Financial Objects ▶ Process Financial Objects (Counterparty/Issuer Risk) ◀ or Process Financial Object (Country Risk) ; and in CFM by choosing ▶ Tools ▶ Reorganization Tools ▶ Financial Object ▶ Maintain Financial Objects ▶ Edit Financial Objects ◀ .In the selection screen, those transactions are hidden for which financial object integration is set to active. By choosing Selection using FO Numbers, you can use Type 1 derivation for all transactions.

- Type 2 derivation is used.

  You access mass processing of financial objects using Type 2 derivation by choosing Tools Reorganization Tools Financial Object Financial Object Integration .

Prerequisites

To be able to define derivation strategies you need authorization object J_B_KLCUS1. This is contained in authorization profile F_T_FTLM_ALL, which in turn belongs to profile J_B_ISB_ALL.

Integration

If the derivation strategy is activated, the control parameters for TR-TM transactions, BCA accounts and variable transactions are derived by means of the strategy only. Derivation using the derivation strategy takes place in external data transfer (Type 1), manual creation of the financial object (Type 1) and integrated financial object maintenance (Type 2).

ⓘ Note

For a detailed description of the derivation tool, refer to the documentation of the CO-PA (Profitability Analysis) component: Derivation Types .

Reorganization Tools

Use

The reports described below as reorganization tools are used to ensure that data in the data pool for the risk analysis evaluations is consistent. You can find all the reorganization tools in the menu for the Default Risk and Limit System by choosing Tools Reorganization Tools Financial Object .

Features

The following functions are available:

Menu Path	Function and tips for using the function
Non-Integrated Processing of Financial Objects Process Financial Objects (Counterparty/Issuer Risks) and Process Financial Object (Country Risk)	You use this report to process a large number of **non-integrated** financial objects. It contains the programs for processing financial objects relevant for counterparty/issuer risk (report KLMASSUPD) and those relevant for country risk (report KLGPUPDLR). **ⓘ Note** For more information about the transactions, see Additional Notes on the Mass Processing of Financial Objects . A type 1 derivation takes place. The following functions are provided: • **Save:** The system reads the financial objects from the database and saves them again. In doing so, derivations are re-run if appropriate. • **Activate limit part:** The same as when saving, but the limit part is activated in addition.

Menu Path	Function and tips for using the function
	• **Deactivate limit part:** The same as when saving, but the limit part is deactivated in addition. • **Check:** The system checks the consistency of the selected limit parts. No changes are made on the database.
Non-Integrated Processing of Financial Objects > Display Logs	Overview of the logs for the non-integrated generation of financial objects.
Financial Object Integration > Generate Financial Objects for Loans, Class Positions in Securities Accounts and Financial Transactions	You use this report to generate financial objects for transactions that already exist in the system. A type 2 derivation takes place.
Financial Object Integration > Edit Financial Objects for Loans, Class Positions in Securities Accounts and Financial Transactions	Using this report you can save the generated financial objects of more than one transaction, and activate, deactivate or check the financial objects. A type 2 derivation takes place.
Financial Object Integration > Financial Object Integration: Postprocessing	You can branch directly from postprocessing to the transaction (loans, financial transactions) or to financial object maintenance (class positions in securities accounts) in order to make the relevant corrections.
Financial Object Integration > Financial Object Integration :Logs	Overview of all logs that were created during the integrated generation of financial objects.
Financial Object Integration > Update Financial Objects for Generic Transactions	You use this report to update the financial objects for multiple generic transactions. For example, you use this function to modify the financial objects of generic transactions in a mass run after you have changed the derivation strategies that you use in the automatic integration of financial objects. You can use this transaction to select generic transactions by their internal and external numbers, change date, and the name of the user who last changed them. You can use the test run to check whether the financial objects would be updated correctly. The system creates an application log that contains the financial objects that are incorrect.

Archiving

Purpose

You can use this process to archive data of implemented archiving objects in which the structure and composition of the data to be archived is specified. In doing so, the data is replicated, after various checks, to archived data external to the SAP System. Finally, a test read of the archived data is made and, if successful, the data is removed from the database in the working system. Data archiving is required to meet the following objectives:

- Reduction of the system load on the server
- Minimization of the total amount of data
- Minimization of index trees

- Minimization of amounts selected in queries
- Optimization of buffer load
- Minimization of number of hits
- Avoidance of override mechanisms
- Minimization of network load

In the context of SEM Banking, data archiving is enabled for the following **archiving objects**:

Archiving objects in SEM Banking

Technical Name	Archiving Object	Parallel Processing
JB_COLL	SEM Banking: Global Collateral	X
JB_FCTY	SEM Banking: Facilities	X
JB_FOBJ	SEM Banking: Financial Object	X
JB_FOCF	SEM Banking: Financial Object - Cash Flows	X
JB_GETR	SEM Banking: Generic Transaction	X
JB_GPAN	SEM Banking: GAP Analysis	X
JB_GPTP	SEM Banking: Opportunity Interest Rates from GAP Analysis	X
JB_GTVS	SEM Banking: Generic Transaction - Versions	X
JB_LOAN	SEM Banking: Loans Data Pool	X
JB_VTBA	SEM Banking: Generic Transaction - Balances	X
JB_VTMD	SEM Banking: Generic Transaction - Master Data	X
JB_VTTO	SEM Banking: Generic Transaction - Turnover	X
COPA1_*	Costing-Based CO-PA, Operating concern*	
RDBRA_REC	SEM Banking+TRM: RDB Risk Analyzer Individual Records	
RM_SVSTATE	SEM Banking+TRM: Risk Management Data Pool Statuses	
RM_BDS	SEM Banking+TRM: RM Report Data Memory	
TRTM_LM	SEM Banking+TRM: TR Limit Management - Limits, Utilizations	

Prerequisites

In Customizing, under SAP Banking > SEM Banking > Data Pool > Tools > Archiving or Parallel Processing you have made the necessary settings:

- Archiving > Maintain File Names and Paths Across All Clients:

  You must have maintained the path and the convention for forming archive file names for each archiving object using the FILE basic settings (logical file path and file names).

- Archiving > Edit Basic Settings for Archiving Objects:

  You must have maintained the archiving objects fully in the AOBJ basic settings.

- Archiving > Archiving with Parallel Processing > Create Number Range for Activity Log

- Archiving > Archiving with Parallel Processing > Use Global Archiving Control

- Archiving > Archiving with Parallel Processing > Use Global Archiving Control:

  You have maintained the global control of archiving and the check table for the global control for all implemented archiving objects.

- Archiving > Archiving with Parallel Processing > Define Residence Time for... :

  You have maintained the residence periods for the archiving objects in the object-specific Customizing settings.

- Parallel Processing > Maintain Job Distribution:

  You have maintained the job distribution for parallel processing for the application types assigned to the archiving objects.

You are authorized to perform the archiving process. The system checks authorization object S_ARCHIVE for all activities

Process Flow

Note

Not that the following process applies only to **archiving objects with parallel processing**.

The archiving process is scheduled via the normal SAP job control. This can be executed by using SM36 or archive administration SARA. The archiving process is designed in such a way that it can run in parallel with the productive operations. The archiving process basically consists of three subprocesses: Analysis, Write, and Delete. These are linked together in the standard setup. Both the Analysis and Write subprocesses are processed in parallel using the parallel processing tool. This is done by forming suitable data packages that are then processed in parallel by different package administrators (jobs).

All subprocesses flag their activities in the archiving activity log, which can be displayed using the monitoring program. The monitoring program is the central tool for monitoring and logging archiving runs.

1. Analysis

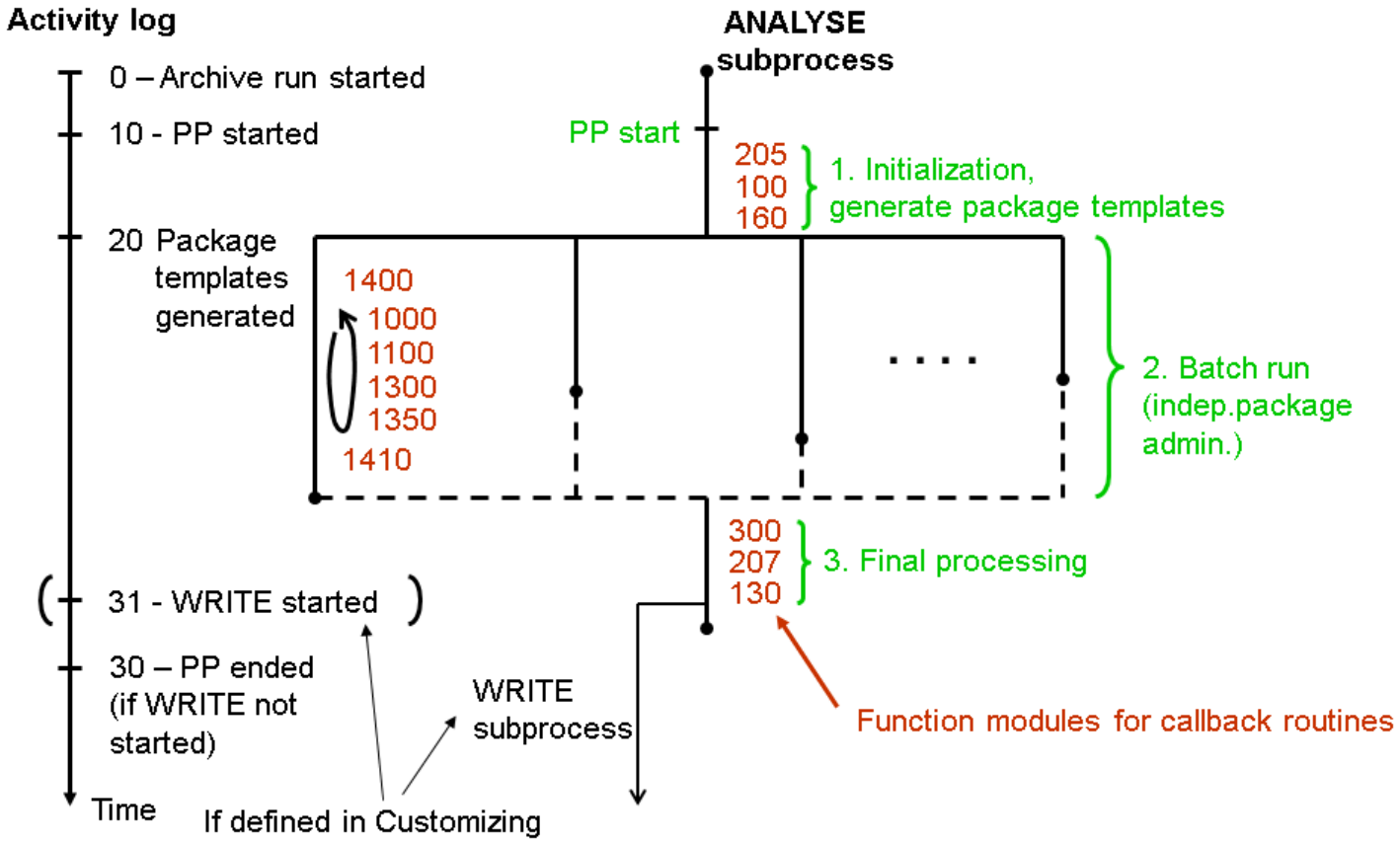
The analysis subprocess examines the data of an archiving object and determines the archiving status and resubmission date, if applicable. Two checks are always made for this:

- Has the data completed the retention periods defined in the Customizing settings (minimum storage period for data in the operational database)?
- Have all the business-related requirements been met for the data to be archived? This test is implemented using a check module of the application.

If both checks are successful, the archiving status is set to **Can Be Archived**. If not, the status is set to **Cannot Be Archived** and the resubmission date to **Today's Date + Resubmission Period**. resubmission period specifies the time periods for resubmission after the retention period has been completed and is defined in the global Customizing settings for each archiving object. ensures that the data is not analyzed again until after the resubmission period, thereby reducing the amount of data that has to be processed and saving time in the analysis.

To increase efficiency, the data is divided into separate packages that are analyzed by package administrators (mutually independent jobs). Packages contain a partial amount of the data to be processed; this amount is precisely defined by key limits.

The following figure depicts parallel processing. parallel processing starts, the parallel processing tool takes control. This calls up callback routines to execute the individual substeps of the process. Archiving provides these routines for each application type (cross-product of archiving object and subprocess to be executed in parallel [in other words, Analysis and Write]). You make settings in Customizing for parallel processing to determine the number of package administrators that you want to be used for each application type. Package administrators process different subpackages that they take from a worklist shared with all the other package administrators.



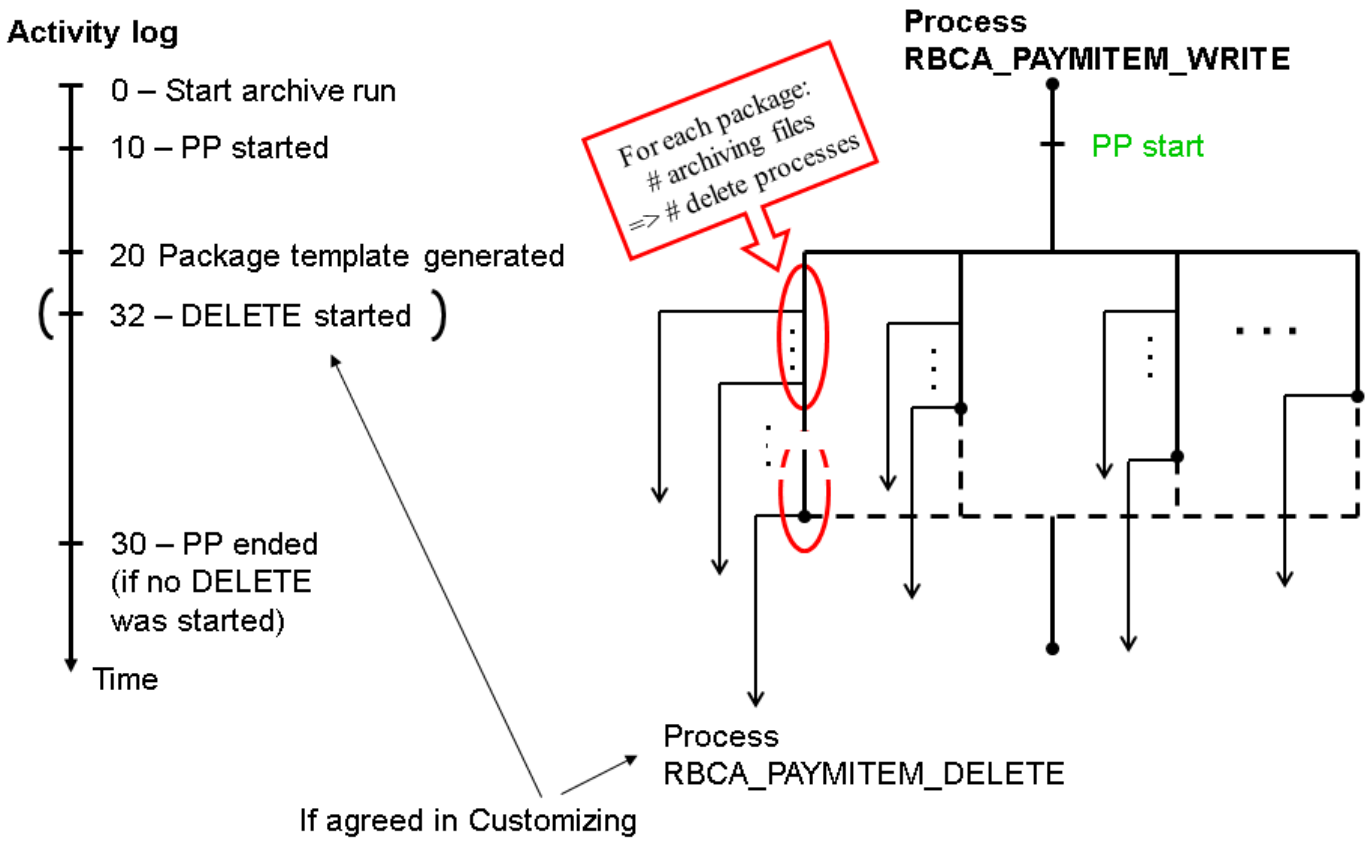
Parallelization

The time sequence for the process status is depicted on the left-hand side of the figure. activity log always shows the most up-to-date status of a process. There are two possible final statuses indicating a successfully completed process, depending on the Customizing settings: 31 indicates that a WRITE subprocess has started automatically and 30 indicates that the ANALYSIS subprocess has ended and no WRITE process has started.

2. Write

In the standard setup, the write program is started automatically by the analysis program and duplicates the data flagged previously by the analysis subprocess (status **Can Be Archived**) from the operational database to new archive files. The actual data archiving is therefore executed in this step.

Data is written, as in the Analysis process, in parallel in mutually independent jobs (package administrators see figure). All package administrators process different subpackages that they take from the joint worklist. There is always just one archive package created per package administrator in parallel processing; this may consist of one or more archive files.



Overview

3. Delete

Once the data has been duplicated to the archive files, it is removed from the operational database by using the Delete subprocess. To do this, the archived data is read from the archive files and only deleted from the database if it is read successfully from the archive. This procedure ensures that data is only removed from the database if it has been archived successfully.

If the write process has closed an individual archive file successfully, a separate delete process is started automatically in the standard setup. are therefore only ever as many delete processes created per package in the write program parallel processing as the number of archive files this package created.

If the test reading of an archive file fails, the data remains in the operational system with the status **Can Be Archived** and is processed again during the write process in the next archiving run. The archive files that have already been created can be deleted manually or simply left in the archive. The latter option is safe, as no reference is made to the files from the operational system.

Result

Successful Conclusion

Once archiving has been completed according to rule, the data that can be archived, from a business-related and technical perspective, is moved from the operational database into archive files. You can use the sequential read programs and the archiving information system (transaction SARI) to display the archiving files.

Reloading the Data

You have the option of recovering archived data using reload programs. During this process, data is read from the archive files and inserted into the operational database. This is, however, only permitted as an emergency strategy (incorrect Customizing settings, technical problems). To prevent this function from being misused and inconsistencies from occurring owing to old data being imported into the operational system, data may only be reloaded within a period of five days after successful archiving. The archive information structures are not updated during the reload process and can be restructured explicitly by the user via transaction SARI. The **Archive Status** attribute of the reloaded data records is set to **Cannot Be Archived** and the resubmission date is not adjusted. Note: The reloaded data records are written to the archive again in the next archiving run. (If you do not want this to occur, you must alter the Customizing setting for the retention periods accordingly).

Storing the Archive Files

Storing the Archive Files It is generally not sufficient just to write the data that is to be archived to archive files and remove it from the database. The archive files themselves must be stored safely and managed to permit any access required at a later time. There are several different options for this:

- HSM systems (hierarchical storage management)

  An unlimited file system is simulated for an HSM system. The file system into which the data is archived is integrated into the memory hierarchy of the HSM system. It is sufficient to maintain the file path accordingly in the archiving Customizing settings. No communication via the SAP ArchiveLink is required.

- Storage system via SAP ArchiveLink

  If a storage system of a third-party administrator is connected via the SAP ArchiveLink, this storage system is ordered to store the processed archive file at the end of a successfully completed delete program.

- Manual management

  If you do not want the files to be stored in a storage system, the IT department can manage the archive files independently instead.

Example

The **Variable Transaction** archiving object is used in this example.

More Information

For more information, see the program documentation for the archiving objects.

The names of the programs are constructed as follows:

- Analysis RJBD_*_ARCH_ANALYZE
- Write RJBD_*_ARCH_WRITE
- Delete RJBD_*_ARCH_DELETE
- Reload RJBD_*_ARCH_RELOAD

Replace * with the technical name of the archiving object (see table at the start of this document) without the JB_.

Example:

- The program names of archiving object JB_VTMD (variable transaction master data) are as follows:

- Analysis RJBD_VTMD_ARCH_ANALYZE
- Write RJBD_VTMD_ARCH_WRITE
- Delete RJBD_VTMD_ARCH_DELETE
- Reload RJBD_VTMD_ARCH_RELOAD

Note that in the case of archiving object GAP opportunity interest rates (JB_GPTP), the program names start with RJBR, for example RJBR_GPTP_ARCH_WRITE for the Write program.

For the other archiving objects (see table) the program names are as follows:

RDBRA_REC (RDB Risk Analyzer individual records)

- Write program: RDBRA_REC_ARC
- Delete program: RDBRA_REC_DEL

TRTM_LM (TR Limit Management: Limits, Utilizations)

- Write program: RFTBARC1
- Delete program: RFTBARC2
- Reload program: RFTBARC3

COPA1_* (Costing-Based CO-PA, Operating Concern *): See the online documentation under **Accounting** > **Controlling** > **Profitability Analysis (CO-PA)** > **Tools** > **Archiving** >..