EUREX® Release 14.0

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1 Introduction

1.1 Purpose
This document consists of two parts.

The first part, the document's second chapter, provides a summary of the Eurex system and its documentation. It also contains some general information on the system functions, which are used in the trading and clearing system. Detailed descriptions of these functions can be found in the manuals “Eurex @X-ceed Trading User Guide” and “Eurex @X-tract Clearing User Guide”.

This part is designed to support those users who are working with the Eurex system for the first time. More experienced users should use it as a reference. A new user should read this part of the document before working with the Eurex system.

The second part, the document's further chapters, answers questions for Eurex users concerning trades cleared by Eurex Clearing AG (the clearing house for the Eurex exchange) and by the EEX AG Clearing Department (the clearing house for the EEX Exchange). Both are referred to as the clearing house. The questions are answered with examples and detailed descriptions.

Note: Data contained in the screenshots and samples in this publication are for illustrative purposes only and should not be relied upon as a true representation of the current market.

1.2 How to Use
This document covers use by readers of the exchanges Eurex, EEX and the Vienna Stock Exchange (WBAG - Wiener Börse AG), but does not describe WBAG-specific market and/or system settings. The applicability is stated at the respective places in the document.

The Electronic Trading System, Eurex, is used for the Eurex and EEX exchanges, and is referred to by the generic term, “Eurex” or “Eurex System” for all exchanges.

There are a number of exchange-specific points which appear in many sections and are only explained here once. This avoids repetitions that would make the entire document difficult to read.

The reader is advised to become familiar with these items as they are not individually clarified within the remainder of the document. Where appropriate, references may appear throughout the remainder of this document to guide the reader back to this section to look up the following points.

(1) Window and report layouts
Window and report layouts, if shown, are derived from an existing Eurex implementation. They may also apply for other exchanges. Particular attention is drawn to the header section of windows and reports. For Eurex and EEX the name “Eurex” and a time field is normally shown.
(2) Display of times

A variety of reports and windows features fields which display time. Plain time values displayed in these fields are generated by the respective exchange system and correspond to the time kept by the exchange's central back end. Time values displayed in brackets (e.g. in some windows of the GUI trading application) are generated by the respective member's front end systems. The reader should note that the time values published by each exchange correspond to the respective exchange's system time and may differ from local time. The time generated by the member front end system depends on the setup installed by member front end system administration and cannot be controlled by the respective exchanges.

(3) References to system interfaces

Since existing Eurex documentation is the base for this document, some examples may reference system interfaces that may not be implemented for a specific exchange.

1.3 Explaining Terms and Concepts

The terms and concepts used in this document are explained in the glossary, provided in the Appendix of this document or are available at:

- http://www.eurexclearing.com/documents/glossary_en.html, and
2 System Overview

2.1 Structure and Content of the Eurex Documentation

2.1.1 Eurex Manuals

This chapter provides a short overview of the Eurex manuals. Figure 1-1 outlines the structure of the Eurex manuals and fields of application.

![Figure 1-1: Organization of the Eurex member documentation](image)

Each manual is briefly described below, and some advice given for the target reader.

**Eurex User Manual - System Overview & Information Manual**

The “Eurex User Manual – System Overview & Information Manual” gives a summary of the Eurex system and serves as an introduction to all the other manuals. It deals with general aspects of the trading and clearing system and contains information that is mentioned and referred to in the other manuals. The manual additionally serves as a reference for the clearing and back office personnel and therefore contains detailed information on the use of the Eurex clearing system.

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1. All documents, with exception of the @X-ceed Trading User Guide, may also be of interest for members of the CCorp clearing EU products.
Eurex @X-ceed Trading User Guide
The “Eurex @X-ceed Trading User Guide” describes the Eurex Release 14.0 front end trading GUI. It gives explanations on the use and content of the windows. The manual can be seen as a daily reference for all questions concerning the GUI based trading system @X-ceed.

Eurex @X-tract Clearing User Guide
The “Eurex @X-tract Clearing User Guide” describes the Eurex Release 14.0 front end clearing GUI. It gives explanations on the use and content of the windows. The manual can be seen as a daily reference for all questions concerning the GUI based clearing system @X-tract.

Eurex User Manual – System Security
The “Eurex User Manual – System Security” is exclusively designed for the security coordinators and their representatives. It explains the windows and reports of the Eurex system, which are needed for the maintenance of trading adjustments and user profiles of individual users. The user profiles help determine the access authorizations needed by individual members of staff.

The “Eurex XML Report Reference Manual” contains XML report descriptions for all Eurex member reports. It covers clearing reports, trading reports and security reports. This document is intended for the staff of members dealing with reports. Its purpose is to explain the content of the reports and to describe each report in detail. In addition, information related to generic text reports, market maker performance reports and additional fee reports are included.

The information of this document is extended by XML schemas which support the customers in their inhouse implementation of report related facilities. These schemas are published in the internet.

Common Front End – Technical Overview
The objective of the “Common Front End - Technical Overview” document is to give member MISS based installations which support the front end components of exchange applications. This includes a general description of the hardware and software components as well as an overview of front end network configuration and administration requirements.

Common Front End Sizing Guidelines
The “Common Front End Sizing Guidelines” defines the system requirements for front end, workstation and MISS installations in terms of CPU, memory and disk space requirements. It also specifies supported operating system versions and the needed patch levels.

Eurex Front End Operations Guide/Eurex Front End Installation Guide
These manuals contain technical information on the set up of the front end Architecture. They contain information on the arrangement and maintenance of the Eurex front end hardware and software as well as their servicing and control.
Front End Operations Guide GATE/Front End Installation Guide GATE
These manuals enable the system administrator of the member to install and execute the operations tasks for the use of the accompanying GATE (Generic Access To Exchanges) front end software.

Common Front End Network Setup
The “Common Front End Network Setup” supports members in setting up their private front end network for the use of the exchange software.

Eurex Member Interface Specification - File Interface Layouts
The “Eurex Member Interface Specification - File Interface Layouts” describes the reports and files distributed to the members via the Eurex file interface. It is also a reference for back office personnel. It contains file descriptions, record layouts and details on the file transfer and access.

Eurex Enhanced Broadcast Solution Interface Specification
The “Eurex Enhanced Broadcast Solution Interface Specification” is intended for system designers and programmers who wish to develop/adapt their client application to interact with the services offered by the Enhanced Broadcast Solution interface: a low latency solution with a highly granular dissemination model that closely resembles the FIX 5.0 SP1 (Financial Information eXchange) protocol.
Eurex Enhanced Transaction Solution Interface Specification

The “Eurex Enhanced Transaction Solution Interface Specification” describes the message-based Eurex trading interface and covers Eurex core trading functionality, i.e. order and quote maintenance. It further describes the main Enhanced Transaction Solution design concepts, an in-depth description of the functionality provided, a detailed description of the functional concepts and a full specification of the message data layouts as well as the definition of the encoding scheme used.

Eurex Enhanced Confirmation Solution Interface Specification

The “Eurex Enhanced Confirmation Solution Interface Specification” is a trading interface containing the necessary components to serve as an open interface to the Eurex system. The Enhanced Confirmation Solution comprises Eurex order and quote handling functionality, that is, add, modify, delete and inquiry operations for options, futures, future time spreads and option strategies.

The Enhanced Confirmation Solution enjoys similar design principles and concepts as used with the Enhanced Transaction Solution interface and gives members the flexibility to select the infrastructure (hardware platform, operating system, compiler etc.) of their choice.

Eurex Enhanced Risk Solution Interface Specification

The “Eurex Enhanced Risk Solution Interface Specification” provides Eurex Clearing AG Members (General, Direct and Non-Clearing Members) with a near-time risk data distribution service. The interface for this new message-based service can be divided into a transport and an application layer. The Advanced Message Queuing Protocol (AMQP) constitutes the transport layer (the quasi envelopes) for delivering messages. AMQP is an open standard with a specific focus on the financial services industry which can be used royalty free. Members can choose the platform and programming language for their client applications. Application layer messages (the quasi letters in envelopes) are in FIXML. FIXML is the XML vocabulary for creating Financial Information eXchange (FIX) protocol messages.

Eurex Market Data Interface Specification

The “Eurex Market Data Interface Specification” is intended for system designers and programmers who wish to develop/adapt their client application to interact with the services offered by the Eurex Market Data Interface: A market data interface for the dissemination of price level aggregated, netted depth data in multicast format. The netted market data interface utilizes the FIX Adapted for Streaming protocol (FAST) and has low bandwidth requirements. The market data content provided is the same as the market data content via VALUES API, that is, order book depth of 10 for some futures and top of book for all other futures and all options products. Cross and Quote Request information are also included in the interface.

2.1.2 Use of the Manuals

The User Manuals only explain how to use the Eurex system, not the theory of options and futures trading. The manuals are structured in the same way and describe the system functions employed in the relevant area.
Each manual contains a chapter called “Purpose and Use/Introduction” which gives a summary of the contents. The section “Purpose” briefly describes the functions dealt with in the manual. The section “Use” explains how to use the manual for maximum benefit. The chapters “Trading Overview” (Eurex @X-ceed Trading User Guide), and “Clearing Overview” (Eurex @X-tract Clearing User Guide) describe important aspects of these systems. They contain information necessary for understanding the trading and clearing functions. The chapter “Window Layouts and Descriptions” of the Eurex @X-ceed Trading User Guide and the Eurex @X-tract Clearing User Guide describes the purpose and structure of the application windows and their individual fields, tables and buttons in detail.

2.1.3 Updates

Eurex publishes revised manuals on its website www.eurexchange.com and announces a publication by a circular. Once the revised document has been published, only the updated version is valid. Should you locate an error in a Eurex document, please fill in the appropriate error form. You can obtain it from your Eurex manual coordinator. Please return the filled form to her/him. Thank you very much for your cooperation!
2.2 Membership Setup

2.2.1 Membership Types
The Eurex clearing structure is defined by three types of membership: General Clearing Member (GCM), Direct Clearing Member (DCM), and Non Clearing Member (NCM). GCMs and DCMs are referred to as Clearing Members (CM). NCMs are exchange members without clearing membership. Each type of membership implies various duties and requirements.

2.2.2 Personnel Requirements on the Members
The exchange has defined specific positions within its member's organization in order to secure a close collaboration between the exchange and the exchange members. Certainly, organization and surveillance of the internal structure lies in the hands of the exchange members, yet certain positions in the exchange member's organization must be provided in order to guarantee efficient communication between the exchange and the exchange members.

The exchange member is responsible for the distribution of the positions and functions relating to the management of the Eurex front end. If necessary, individual persons can take several roles. However, it is strongly recommended to not assign trading or clearing responsibility to the security coordinators. They will be able to change their own trading and clearing authorization, otherwise.

The following functions and positions are important for the management of a Eurex front end:

1. Coordinator for General Questions
   The coordinator for general questions is the exchange contact person for all questions of a general or administrative nature.

2. Trading Coordinator
   The trading coordinator is the most important contact person of the exchange for all questions regarding trading. During trading hours, he is the person the exchange turns to if necessary or who contacts the exchange himself.

3. Clearing Coordinator
   The clearing coordinator is the most important contact person of the exchange for all questions concerning clearing as well as back office matters. During exchange system time, he is the person the exchange contacts if necessary or who contacts the exchange himself.

4. Training Coordinator
   The training coordinator is the contact person of the exchange for all training measures taken by the exchange for exchange members.

5. Security Coordinator
   The security coordinator is responsible for maintaining the security of the Eurex MISS of the exchange member. He determines the access rights of users to the clearing and trading system, and maintains traders' personal identification numbers (PINs) for trading-on-behalf and their related rights. During exchange system time, he is the person the exchange contacts if necessary or who contacts the exchange himself.
(6) System Administrator/Front End Coordinator
The system administrator/front end coordinator is responsible for the system management of
the front end (MISS and WS). He controls the use of the MISS, monitors back-up processes
of front end data, etc.

(7) Manual Coordinator
The manual coordinator of the Eurex member downloads the revised versions of the
manuals from the Eurex homepage, www.eurexchange.com, and is responsible for their
distribution. If necessary, he hands out error forms to a user who has located an error in a
manual and transmits the completed form to the exchange.

(8) Traders
Traders actively participate in options and futures trading. They can also function as market
makers, use a PIN to request a “trading-on-behalf” service from Eurex and modify their own
PIN and see their rights as to the actions they can take.

(9) Traders with preliminary admission
Traders with Preliminary Admission participate in options and futures trading. This status
expires if the trader exam (Trader Exam – Complete Exam or Trader Exam – Partial Exam)
has not been passed successfully within nine months of the admission date. If the exam is
passed successfully, the status automatically changes into Trader.

(10) Clearing Personnel
The clearing personnel are responsible for the execution of all clearing and back office
functions of the exchange member.

2.2.3 Use of Windows and Reports
Using the Eurex windows and reports, understanding their use and availability requires
knowledge of the various types of accounts and memberships (GCM, DCM, and NCM) described
in section 2.2.3.1 “Types of Membership” on page 18. The concept of the data ‘As of Date’
(2.2.3.2 “As of Date” on page 18.) that appears in each Eurex report, is also of great
importance.
2.2.3.1 Types of Membership

The type of membership determines which input and inquiries a member can perform, and which information is displayed on screens and reports. General and direct clearing members have access to the data relating to their own accounts and the accounts of their non clearing members. To access information on its accounts a clearing member enters its member ID to the clearing and exchange member fields. To look up information on a related non clearing member, the clearing member enters its member ID to the clearing member field and the member ID of the non clearing member to the exchange member field.

Non Clearing members only have access to information concerning their own accounts. Windows and reports provide information concerning the NCM itself and the relationship with its clearing member.

There are further access restrictions on windows and reports for non clearing members. NCMs cannot see all fields and areas of some windows and reports, and have no access to other windows and reports. The restricted access of non clearing members to windows and reports is explained in the relevant window/report description.

2.2.3.2 As of Date

“As of Date” is the data used in reports to describe how current the information is. “As of Date” refers to the date of the last overnight batch processing, i.e. the previous business day. When reading the report descriptions, it is important to remember that data like “of today” or “of previous day” refer to the “As of Date” and not to the day on which the report is made available.

2.3 Products/Product Types

For detailed contract and product specifications of the product types, information can be retrieved from several sources, such as product brochures and web sites. There is also telephone service available at the following numbers:

Eurex Publications Service:+ 49/ 69 2 11 1 - 1510.
EEX Publications Service:+ 49/ 341 21 56 - 0.
2.3.1 Eurex Product Types

The following product types are available for Eurex exchanges:

- FBND  Fixed Income Futures
- FCRD  Futures on Credit Derivatives
- FINT  Money Market Futures
- FINX  Index Futures
- FSTK  Futures on Stocks
- FVOL  Volatility Futures
- OFBD  Fixed Income Options
- OFIT  Money Market Options
- OINX  Index Options
- OSTK  Options on Stocks

A complete list of Eurex products can be found at [http://www.eurexchange.com/trading/products_en.html](http://www.eurexchange.com/trading/products_en.html)

2.3.2 EEX Product Types

The following products types are available for EEX exchanges:

- FENE  Futures on Electricity
- OFEN  Options on Electricity Futures
- FSTK  Futures on Stocks
- OFIX  Options of Futures on Indices

2.3.3 Products of Other Trading Locations

The following products are available for clearing by the Eurex Clearing:

- Bond trades arising from cash bond transactions
- Bond trades being the cash leg of basis trades
- Repo transactions
- Equity trades/ETF Trades arising from orders executed at FWB

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2. The same statements that are valid for equities in this document can also be applied to unconditional subscription rights. Therefore, the clearing calculation and the settlement procedure are not explicitly presented for unconditional subscription rights.
2.4 Eurex Online Environment

2.4.1 Introduction

The Eurex online environment consists of two parts: the @X-ceed Trading GUI and the @X-tract Clearing GUI. The trader support system and the Eurex security system are also available on the GUI based front end. For further information, please refer to the “Eurex @X-ceed Trading User Guide”, the “Eurex @X-tract Clearing User Guide” and to the “Eurex Front End Operations Guide”.

The purpose of the trading GUI windows is to enter orders and quotes. Most of the windows are updated online, which means they always display current information. Please refer to the “Eurex @X-ceed Trading User Guide” for details.

The purpose of the clearing GUI windows is to manage positions. Most of the windows need to be updated manually. Please refer to the “Eurex @X-tract Clearing User Guide” for details.


2.4.2 Entering and Leaving the System

If a member wants to use the Eurex system, he must log on to the front end (MISS or WS) entering a valid user name and the password (which are supplied by the security coordinator).

2.4.3 GUI Front End

Advanced GUI front ends are provided for Eurex and EEX.

The Logon/Logoff procedure is described in the “Eurex @X-ceed Trading User Guide” and “Eurex @X-tract Clearing User Guide”.

Note:
(1) Always leave the Eurex system in an orderly fashion. Whenever you are logged on, anyone can carry out transactions in your name from your workstation.

(2) If you switch off your workstation without logging off, the system automatically logs you off.

2.4.4 Supported Keyboards

The following keyboards and its standard functions are supported by the Eurex GUIs:

- SUN keyboard
- IBM-compatible-keyboard

Several windows of the @X-tract Clearing GUI and the @X-ceed Trading GUI are reachable via shortcuts. For more information please refer to the respective user guide.

Note: The Cut, Copy and Paste functionalities in GUI entry fields are available using the key combinations <Ctrl> + <Shift> + <X>, <Ctrl> + <Shift> + <C> and <Ctrl> + <Shift> + <V>, respectively.
2.5 Online Help for the Front End GUIs

2.5.1 Explanations on the Online Help
@X-ceed and @X-tract are equipped with a Help function that allows the user to see information on windows, individual commands and fields. Explanations are also given on their purpose, restrictions and use. The Online Help corresponds to the information in the “Eurex @X-ceed Trading User Guide” and “Eurex @X-tract Clearing User Guide”.

2.5.2 Invoking the Online Help
In order to invoke the GUI Online Help, select the “Help” item on the window menu. The Online Help can also be invoked via the shortcut F1.

2.5.3 GUI Online Help, Example
The following image provides an example of the @X-ceed Trading GUI Online Help.

![Online Help window]
2.5.4 The ‘What’s new’ Window
The ‘What’s new…’ window shows the changes due to the current release. By default it is automatically opened, when the application starts.

Example for the What's new... window

2.6 Report Generation

2.6.1 Types of Reports
The Eurex system produces reports. Members can ask for reports on the most diverse activities. These reports have several purposes:

- Up-to-date information for the back office on events which might necessitate some action.
- Up-to-date information for the Management on trading and clearing activities.
- Adjustment of matched orders and preparation of documents for revision.
- Adjustment of the member's back office status with the positions held at Eurex.
- Preparation of data for manual entry in the back office system of the member.

Three types of reports are produced: trading, clearing and security reports. For details please refer to the “Eurex XML Report Reference Manual”.
2.6.1.1 Daily Trade Confirmation

This report is provided for Eurex and EEX when:

- Orders are completely or partially matched.
- Trades entered to the system or resulting positions are adjusted by a member.

The “Eurex XML Report Reference Manual” contains a detailed description of the report. These trade confirmations can be used for adjustment of the back office data.

The Daily Trade Confirmation report is sent through the Eurex network directly to the member’s report node MISS, where it is printed.

Your System Administrator will tell you where the defined printer is located.

The report is produced for all trades without exception and can be used by the members, should they wish to, for the completion of their internal transaction processes.

If trade confirmations are needed immediately after the order is matched, this information can be retrieved using EurexPTC (Printable Trade Confirmations) as described in chapter “EurexPTC Application” of the “Eurex @X-ceed Trading User Guide”.

Reports are also available via the Common Report Engine.

2.6.1.2 Batch Overnight Reports

These reports are provided for Eurex and EEX.

Batch Overnight Reports are shorthand reports with information on Clearing and Trading activities that are produced in a Batch Processing period outside trading time. They are made electronically available to the members on the next business day. Various reports are available depending on the type of membership (refer to section 2.6.3 “Available Reports” on page 23.).

The various types of membership are described in detail in the “Eurex @X-tract Clearing User Guide.” More information on the individual reports can be found in the “Eurex XML Report Reference Manual”.

2.6.2 Common Report Engine

XML Reports are available via the Common Report Engine. For details about the Common Report Engine, report availability and selection, please refer to the “Common Report Engine User Guide”.

2.6.3 Available Reports


2.7 Error Messages and Error Correction

2.7.1 Types of Error

In case of an error, an error message is displayed by the system. The transaction can only proceed when the error has been rectified.
A distinction of the following types of errors must be made:

- Errors by the User
- Errors by the System
- “SYS” errors

### 2.7.1.1 User Errors

The user can make an error by entering incorrect data or when trying to carry out an invalid transaction. The error must be rectified in order to proceed.

### 2.7.1.2 System Errors

System errors can have the following reasons:

- errors in the Eurex applications
- errors in the hardware
- errors in the Communication/System Software
- errors in the Back Office Functions or in other member internal interfaces.

Errors in the Eurex trading and clearing applications can arise during the execution of Eurex transactions. The user cannot correct these errors. They must be relayed to the System Administrator for correction.

In case of a system error originating from the hardware or from the Communication/System Software, no transaction can be carried out until the error has been eliminated. This requires assistance from your System Administrator.

### 2.7.1.3 “SYS” Error 25054

As opposed to system errors, “SYS” errors are only generated by very serious back end exceptions.

The error 25054 with message “SYSError HAS BEEN CALLED! PLEASE CONTACT YOUR SYSADMIN” is mentioned here due to its severity.

Ignoring this error message could lead to serious system errors; therefore users encountering this error are advised to contact Eurex Technical Help desk immediately.
2.7.2 Error Correction

There are several ways to recognize and correct an error. While the user himself can correct some mistakes, some errors call for a specialist. In order to be able to correct an error, the user must first determine which type of error has been made.

- **Display of an Error Message**: Error messages are displayed on all windows in the message bar at the bottom of the window. The message tells the user the cause of the error. These messages are for user errors which the user can also correct.

- **Display of an Error Window**: In some cases, the Eurex system displays an error message in a separate pop-up window.
2.7.2.1 Elimination of User Errors

In the case of user errors, an error message is displayed in the status bar of the respective window. The user can correct the error and proceed with work. It is not necessary to contact the system administrator.

Due to insufficient space of the message bar some error messages may be not fully visible. In this case the user can move the mouse to the status bar or open the message log window to get more information.

2.7.2.2 Elimination of System Errors

The System Administrator should be informed immediately of system errors. Only specialists can remove system errors. The user can resume only when the error has been corrected.

The exchange should be notified of errors in the Eurex User Software at once, so that they can be eliminated.

Users who discover such errors should ask the System Administrator for a Standard Error Form that should then be passed on to the exchange.

2.8 Failures and Exceptional Situations

2.8.1 Types of Failures/Exceptional Situations

There are two types of intervention/exceptional situations:
- system failures
- market induced exceptional situations

Failures of the Eurex system can be caused by hardware or software problems at the exchange, or can take place in the MISS/workstation area of the user or within the communication network.

Market induced exceptional situations are created by external influences which lie outside the control of the exchange, but concern the system nevertheless and require appropriate measures on the part of the exchange. Such conditions can originate from an irregular market, the suspension of trading in a product or important events of general interest which have repercussions on the market.

The two following sections discuss the two forms of intervention in detail and explain how they are recognized and how they should be dealt with.

2.8.2 System Failure

A system failure is the result of a disturbance in the hardware or software of the exchange, of the exchange member or of the communication network connecting them. The causes can be power failure, damage to the data management circuit, faults in the hardware, software or any other problem. In the case of a failure of the Eurex main computer the entire system ceases to be available to the members. A disturbance of a single MISS only affects its user, not the rest of the system or other members. Depending on the type and extent of the interference in the communication network, single members or the entire system are affected.
2.8.2.1 Failure of a MISS

The failure of a MISS can be due to several factors:

- power failure or short disconnection
- locally limited communication disturbance
- hardware fault in the MISS

It is the member's responsibility to rectify these problems. In each case, the System Administrator must be informed immediately. As mentioned before, Market Supervision and other members are not affected by a MISS disturbance and can keep trading or using other system functions.

The MISS Trading and Clearing coordinators should evaluate the extent of the disturbance and depending on their current situation in the market, decide whether to inform the exchange and ask for support in the processing of the data.

The Eurex Market Supervision can perform all the trading and clearing function in the name of the members and delete or insert all the orders and/or quotes for an exchange member. The procedure in this case can be studied in the Eurex manual “Emergency Procedures”.

All transactions carried out in this order are marked accordingly on the corresponding report of the member.

If the disturbance makes it impossible to print reports at the member's location, Market Supervision can do this, too. The possible causes of a system failure are described in detail below.

- **Power Failure - System Disconnection**
  A fault of this type brings all data processing to a halt. The user might receive a message on the window telling him that the session has been interrupted. Nothing can be entered with the keyboard, until the system is started again.

- **Locally Limited Communication Disturbance**
  Local communication disturbances are communicated to the user in the form of system error messages (see section 10.2 “Eurex Error Messages List for Trading and Clearing Applications” on page 232.). The System Administrator determines the cause and takes the necessary steps to resolve it.

- **Hardware Fault in the MISS**
  Customer Services must be called in the event of a hardware fault; processing has been interrupted, and no transactions that have been started can be completed. Superficially, this type of fault corresponds with a sudden system disconnection. Work can only be continued when the system has been repaired and started again.

When the system is available again after any of the above failures, the user should follow this procedure:

1. Log on to the Eurex application.
2. Determine whether the transaction processed at the time of the failure has been settled. If not, re-enter the transaction.
3. Continue processing as usual.
2.8.2.2 Failure of the Eurex System

In order to provide a continuous availability of the Eurex main computer and of the communication network, the system is provided with parallel processing and security functions. Should a system failure still occur, however, the exchange informs all members of the details.

2.8.3 Market Induced Exceptional Situations

Market induced exceptional situations lie outside the influence of the exchange and can have considerable effects on the market. These situations call for measures from the exchange. Examples are:

- trading in an underlying has been suspended
- a market on which the underlying is traded has been closed

A possible measure which the exchange can take in such cases is the suspension of trading. This can happen to the entire market or to a part of it only. Trading can be suspended at any time. Depending on the type and range of the measure, some functions may still be made available to the members.

2.8.3.1 Member Exception

If a member has severely transgressed the Eurex rule book, he can be debarred from trading. More on this subject can be found in the market regulation: restitution, suppression, revocation, withdrawal and pending of the market license.

A member which is set up at the Eurex system for technical reasons can be excluded from Eurex Clearing if he has failed The Clearing Corporation rules and regulations.

2.8.3.2 Suspension of Trade in an Underlying

This measure brings to a halt the trading of contracts on a determined underlying. The members can still perform all the functions of the pre and post trading period. The suspension of trade in an underlying only stops the matching process. As soon as the suspension is lifted, all the contracts concerned are analyzed in order to determine a new opening price.

All the members are informed as soon as trading is suspended in an underlying. A corresponding message appears on each terminal in the system at this point. More information can be retrieved from the Market Supervision Messages window. The members are informed as soon as trading is started again.

2.8.3.3 Complete Cessation of Trading

A complete cessation of trading is comparable to an early market closure. The members still have all the functions of the pre and post trading period at their disposal. They are informed of the complete cessation of trading by a message on their terminals. The Market Supervision Messages window has more details on this point. When the market opens again, the same procedures are followed as with normal market opening.
2.9 Market Events and Non-persistent Orders/Quotes

The processing time of non-persistent orders and quotes is significantly reduced by a back end processing for non-persistent orders and quotes versus persistent orders. In short:

- Unreliable order response information for persistent orders are sent out after the transaction has been completed.

- Unreliable order response information for non-persistent orders and quotes are sent out immediately after the order/quote has been processed by the core matching process, but before the transaction is finally completed.

The expression “unreliable order response information” summarizes the information provided by:

- The synchronous response and the all order/quote confirmation broadcast via VALUES.

- The synchronous response notification and information notification via the Enhanced Transaction Solution.

2.9.1 Order Response Information for Non-persistent Orders and Quotes

As a result of this performance improvement, the unreliable order response information for non-persistent orders/quotes may be sent out indicating that the order/quote was executed but, in reality, the transaction itself could not be stored because of a technical interruption on the back end. In this very rare situation, the unreliable order response information contains an execution status which is not correct.

As a result, the execution status of an unreliable order response information for non-persistent orders or quotes only gives a preliminary indication whether the order/quote has been matched. This preliminary indication must be confirmed by a recoverable (i.e. reliable) event notification via the Enhanced Transaction Solution or by a recoverable Matching Event broadcast or a Trade Confirmation broadcast via VALUES.
2.9.2 Market Reallocation Event

If a technical interruption occurs on the Eurex back end, a Market Reallocation Event message is automatically sent out, indicating that all non-persistent orders or quotes stored in the order book of a specific product have been automatically deleted, and that the preliminary execution status of the non-persistent orders or quotes entered most recently may differ from the final execution status.

The Market Reallocation Event message provides information concerning:

- The time the market reallocation event occurred.
- The time up to which all order response information is correct.
- The deletion of non-persistent orders or quotes stored in the order book.

A Market Reallocation Event message is sent out to all Members who have placed non-persistent orders or quotes in the order book of a product affected by the Market Reallocation Event by one or more of the following streams:

- The ‘unreliable all order confirmation’ broadcast stream via VALUES.
- The ‘unreliable quote confirmation’ broadcast stream via VALUES.
- The ‘recoverable matching event’ broadcast stream via VALUES.
- The ‘unreliable info notification’ via the Enhanced Transaction Solution.
- The ‘recoverable event notification’ via the Enhanced Transaction Solution.

Since a Market Reallocation Event occurs exclusively at a product level, only one message is sent out per product for each VALUES and Enhanced Transaction Solution stream regardless of how many non-persistent orders or quotes a member has previously stored in the order book.

Members receiving a Market Reallocation Event message are highly recommended to verify the execution status of their most recently received order response information, as described below.

Compared to a Market Reallocation Event, a Market Reset Event describes the deletion of non-persistent orders and quotes stored in the order book of an affected product, but has no impact on the execution status. That is, the preliminary execution status of the unreliable order response information is expected to be identical to the final execution status.

**Note:** A Market Reset Event occurs in one or both of the following situations, and is communicated to Members in the same way as a Market Reallocation Event:

- A product state change has been executed from HALT to PRE-TRADING, triggered either by Market Supervision or as a result of a volatility interrupt released for a futures product.
- A technical interruption occurred on the back end side without affecting the preliminary execution status of the order response information.
2.9.3 Recommended Course of Action following a Market Reallocation Event

A Member who has received a Market Reallocation Event message is highly recommended to verify the execution status of the unreliable order response information of their previously entered non-persistent orders or quotes, as follows:

- **Verification whether potentially affected orders or quotes exist**
  If non-persistent orders or quotes have been entered before the Market Reallocation Event occurred, but after the time provided in the Market Reallocation Event message up to which all order response information is correct, then the execution status of these orders or quotes should be checked in more detail.

- **Identification of affected orders or quotes**
  To check the execution status of potentially affected orders or quotes contained in the unreliable order response information, use one of the following:
  - An appropriate recoverable event notification via the Enhanced Transaction Solution.
  - An appropriate recoverable matching event broadcast via VALUES.
  
  If the execution status of a non-persistent order or quote cannot be confirmed by a recoverable event notification or matching event broadcast, then the execution did not in fact take place. Instead, the non-persistent order or quote was automatically deleted by the Market Reallocation Event without being executed.

- **Impact on member applications**
  Member applications relying on the execution status of a non-persistent order or quote contained in the unreliable order response information must consider that the execution status is preliminary until confirmed by a corresponding recoverable event notification or matching event broadcast.

  Since the consistency of the order response information is not affected by a Market Reset Event, no such actions need to be taken in such a situation.
3 Clearing Calculation and Settlement Procedure

3.1 Introduction

This chapter explains the settlement of options, futures contracts and cash market transactions in the clearing house by detailed examples and illustrations.

This chapter also deals with the daily settlement of open positions (margining, variation margin) and the exercise procedure of positions (assignment procedure, delivery, and calculation of the service charge). Special subjects like capital adjustments and cash settlement are also explained.

The procedures only apply to transactions concluded on the Eurex and EEX exchanges, and on other trading locations where transactions are cleared by the clearing house. Since different exchanges operate with different clearing counterparts, the term “clearing house” is used as a substitute for the actual clearing company:

<table>
<thead>
<tr>
<th>Exchange</th>
<th>Clearing House</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eurex</td>
<td>Eurex Clearing</td>
</tr>
<tr>
<td>EEX</td>
<td>European Commodity Clearing AG.</td>
</tr>
</tbody>
</table>

3.2 Risk-based Margining

This section only applies to transactions cleared by the respective clearing houses. There is also a separate brochure on “Risk-based Margining” available for download from Eurex Clearing, which can be found on the website [http://www.eurexclearing.com/index.html](http://www.eurexclearing.com/index.html) under menu item: “Clearing & Settlement” > “Overview” > “Risk-based Margining”.

3.2.1 Report and Calculation Examples

The italicized column names appearing in brackets in the course of the text (e.g. [IntvProd]) refer to the corresponding fields of text reports or columns of the windows mentioned in the explanations.

The numerical examples given on the windows and in the reports allow the reader to follow and better understand the statements and calculations made in the text. The various window layouts, as well as the report layouts, are found at the end of section 3.2 “Risk-based Margining” on page 32.
3.2.2 Overview of the Risk-based Margining Method

The risk-based margining system determines the necessary margin requirement for all the options and futures positions of a clearing member, and the positions of their associated non-clearing members.

The Eurex risk-based margining system is a portfolio based method for the calculation of adequate margin requirements. This methodology requires that the products be allocated to margin classes, which represent the portfolios. It determines, for all the products included in a margin class, the portfolio value of all the options and futures positions that they contain. Risk-based margining determines, on a daily basis, the real market value of a portfolio, based on the day's closing prices of the options series or of the futures contracts, as well as various potential market values. The calculation of potential market values is based on various assumed prices of the underlying, or of the underlying financial instrument. The projected prices are determined with the help of a margin interval (see section 3.2.5.6.2 "Determination and Use of Margin Intervals, Eurex" on page 50). The real and the potential market values of the portfolio reflect their actual and projected liquidation proceeds and costs. The margin requirement of an exchange member, determined within the framework of the risk-based margining, is found after including the projected costs of liquidation, which would arise in the case of the assumed unfavorable price and volatility development of the underlying instrument. This is known as “worst case loss”.

Once the minimum and maximum potential prices of the underlying security have been determined using the margin parameters, then the resulting theoretical prices of the associated contracts are calculated. At Eurex Clearing, this calculation takes place with the help of various options pricing models, for example the Cox-Ross-Rubinstein model.

In the Eurex risk-based margining system OTC Flexible Options transactions are included in the margin class of the regular series. Inside the margin class, OTC Flexible Options transactions are considered as individual stand-alone series. For the calculation of margin requirements, the margin calculation methodology for the margin class applies to the OTC Flexible Option transaction unless otherwise mentioned.

For trading purposes, exchange members may use several different accounts. There are the proprietary accounts (P1, P2), market maker accounts (M1, M2) and optional customers account (A1 – A9). For the purposes of clearing and calculation of margin requirements, it is only necessary to differentiate between proprietary positions owned directly by the members and positions owned by member’s customers (if applicable). The proprietary positions booked into accounts P1, P2, M1, and M2 are therefore brought into a single consolidated account PP, and the customer positions on accounts A1 – A9 are considered separately.

The margin requirements of an exchange member are calculated separately for accounts A1 - A9 and PP. The aggregation of margin requirements for a Clearing Member depends on the Client Asset Protection Solution selected by the Clearing Member (see section 4 "Client Asset Protection" on page 152). If the Clearing Member has opted for the existing solution, the daily margin requirement is determined by adding the margin requirements of each account related to the Clearing Member; that is, the A1 - A9 and PP accounts, and the A1 and PP account of each of its Non Clearing Members (including their CCP-only Non Clearing Members).
If the Clearing Member has selected the individual segregation and/or omnibus solution, the daily margin requirement consists of:

- The margin requirement which results from non-segregated positions and which is covered by the default pool. It is calculated by adding the margin requirements of the non-segregated A and PP accounts of the Clearing Member and the A1 and PP accounts of each of the Clearing Member's non-segregated Non Clearing Members.

- The margin requirement which results from omnibus segregated positions and which is covered by the omnibus pool. It is calculated by adding the margin requirements of the segregated A accounts of the Clearing Member and the A1 and PP accounts of each of the Clearing Member's omnibus segregated Non Clearing Members.

- The margin requirement which results from individually segregated positions and which is covered by a segregated pool. It is calculated by adding the margin requirements of the A1 and PP accounts of an individually segregated Non Clearing Member.

### 3.2.3 Structure of Margin Classes and Margin Groups

The methodology of the clearing house risk-based margining requires that all the traded products on Eurex and EEX first be allocated to a margin class. A margin class can contain more than one product.

All the index based products can be placed together in the margin class of the underlying index of these products (e.g. the products: option on the DAX and future on the DAX in the margin class DAX). In the same way, all the products based on one type of security can be put together in a margin class (e.g. option on the BUND future (OGBL) and BUND future (FGBL) in the margin class FGBL) and different bonds can be assigned to a single margin class. All products in a margin class must have the same product currency.

All option on energy series are set up in different Margin Classes, whereby a margin class is characterized by the delivery product (base, peak load), the delivery period (yearly, quarterly, monthly) and the maturity of the contract. An option product is in the same Margin Class as its underlying futures product.

As long as the underlying/underlying securities of two or more margin classes show a certain degree of positive or negative price correlation, the margin classes can be assembled into a margin group. All the positions of a margin class/margin group are termed a “portfolio” for calculating the necessary margin requirements. A margin group may consist of margin classes based on different currencies.

Margin Parameters are provided by the Eurex Risk Management system in the end-of-day FPPARM file sent to the Eurex MISS, and are available on the Eurex Clearing AG website (www.eurexclearing.com). With the Enhanced Risk Solution, Margin Parameters are provided to the Eurex Members intraday via messages in FIXML format.

So-called “risk-based” margin parameters are subdivided into “CLASS PARAMETERS” and “PRODUCT PARAMETERS”.
The following items make up the “CLASS PARAMETERS”:

- Interval product [IntvProd] determines which product yields the exercise prices for the calculation of closeout risks for the portfolio of products within the margin class.

- **Example:** A margin class contains two option products ABC and XYZ. The strike price interval of ABC is 25 ticks, that of XYZ, 50 ticks. If ABC is chosen to be the interval product for this margin class, the calculation of closeout risks is performed for every available strike price of ABC within the margin interval, meaning in steps of 25 ticks. If XYZ is the interval product, the step between the calculation points is 50 ticks, analogous to the strike price interval of XYZ. Usually, the product with the smallest strike price interval is the interval product.

- Margin parameter (historical volatility) of the underlying/underlying security [HistVola] is a risk parameter of the margin class determining the margin interval.

- Hist Vol Tick Flag [HistVolaTicFlag] indicates whether the margin parameter (historical volatility) is an absolute total (“A”) or a percentage of the underlying price (“P”).

- Futures spread rates [SprdRateSpot, SprdRateBack] are the amounts to be paid for futures spread positions of the spot-month and of the back-months for all spread types (e.g. Mar/Jun, Jun/Sep or Mar/Sep). These amounts are used to determine the futures spread margin.

The last line displays all the products belonging to the margin class.

Item comprising “PRODUCT PARAMETERS”:

- “Out-of-the-money” minimum [OutOfMoneyMin] is part of the calculation of the short option adjustment for the determination of margin requirements in short option positions.

Eurex can add, update, display and cancel “CLASS PARAMETERS”, but only allows the update or display of “PRODUCT PARAMETERS”. Only clearing members can display these parameters.
3.2.4 Components of the Margin Requirement

For Eurex products, the overall margin requirement of a margin class is calculated daily based on the following components:

- **Premium Margin:**
  This is calculated for all the positions of the option products that are subject to “traditional style premium posting”, and where the option premium must be paid or is received in full at the opening or closing of the relevant position. It covers the costs due in the case of liquidation at the day's closing price of all the “traditional style” option positions contained in a margin class.
  No premium margin is calculated for the position of the option products subject to “futures style premium posting”. The risk resulting from the positions is adjusted daily through the mark-to-market process (variation margin), similar to the treatment of all futures positions. At the exercise or maturity of one of the options positions subject to “futures style premium posting”, the intrinsic value of the option is due in addition to the mark-to-market. In other words, the option premium must only be paid in full at the end of the contract term or upon exercise of the contract. This procedure provides an advantage to the holder of a long position, in that he does not have to pay the options premium in full at the time the transaction takes place.

- **Current Liquidating Margin:**
  This is calculated daily for cash, bond and equity positions and is equal to the profits and losses in such positions at the time of calculation. This margin protects the clearing house if it is required to close out cash, equity or bond positions at the day's closing price, and is analogous to the premium margin for options.

- **Futures Spread Margin:**
  Ensures that the limited risk of futures spread positions caused by the imperfect positive price correlation of various expiration months of a futures product is covered.

- **Additional Margin:**
  This is the margin requirement that covers the potential additional liquidation costs due for all the option positions, for the non-spread futures positions and for bond and equity positions of a margin class or margin group (if applicable). These potential costs arise if the actual market value of the portfolio moved to the worst case price within the next trading day.

For EEX products, the margin requirement of a margin class is calculated daily based on the following components:

- **Premium Margin:**
  The Premium Margin is calculated daily for positions in options on electricity futures. It covers the costs of liquidation at the day's closing price of all the option positions contained in a margin class.

- **Current Liquidating Margin:**
  This is calculated daily for positions on EEX EUA deliveries and is equal to the profits and losses in such positions at the time of calculation.
• Additional Margin:
  This is the margin requirement that covers the potential additional liquidation costs due for all the option positions. These potential costs arise if the actual market value of the portfolio moved to the worst case price within the next trading day.

3.2.5 Steps Determining the Margin Requirement

The following sections outline the calculation of daily margin requirement per margin class.

Note: A range of eight additional agent accounts (A2 - A9) is available for Clearing Members who offer the omnibus solution to their clients. Clearing Members not offering the omnibus solution can specifically request the assignment of the additional eight agent accounts to their Member ID. For full details refer to section 4 "Client Asset Protection" on page 152 and section 4.3 "Usage of Additional Agent Accounts" on page 165.

3.2.5.1 Bond Trades

The risk-based margining system splits repo transactions into two separate bond trades, one for the front leg of the repo, and the other for the term leg of the repo. Bond trades are, in turn, split into separate cash and bond positions for purposes of the calculations that follow. For example, a bond trade to deliver Euro 100,000 nominal bonds to the clearing house against a payment from the clearing house of Euro 99,950 on a certain date would be treated as two separate positions as follows: (i) a short nominal Euro 100,000 bond position and (ii) a long cash position of Euro 99,500 for such date. The date when the obligations related to a bond or cash position are due to be performed is referred to as the bond or cash "settlement date".

3.2.5.2 Netting

All the bonds, equities, cash, options and futures positions contained in a margin class are subject to netting. The netting process is performed separately for A1 - A9 and PP accounts. For EEX products, no netting is done within a margin class. Calculation of the additional margin is done on a contract basis.
3.2.5.2.1 Positions Netting in the Case of Options

For options on futures and options on indices, only net long positions and net short positions are offset against each other, since exercises and assignments of these products lead, on the exercise day, to corresponding positions in the underlying future or to cash credits and debits.

OTC Flexible Options transactions within a margin class are not considered for netting. Instead, each OTC Flexible Options transaction is considered as an individual standalone series.

To determine the net long and the net short positions, the open long positions are balanced against the open short positions. The Margined Position Overview window shows the relevant information regarding the calculation of net positions.

The margining for cash market positions resulting from exercise and assignment of stock options is performed by the CCP. In intraday margining on the exercise day, the exercised and assigned positions still contribute to the net position.

The calculation method can be described as follows (with reference column names of the Margined Position Overview window):

\[
\text{net position [NetPos]}^3 = \text{open long position [OpenLong]} - \text{open short position [OpenShort]}
\]

Whether the calculation leads to an open long or open short net position depends on the conditions presented below; see the “Premium Margin” report (RPTCC010).

- If the open long position is \text{larger} than the open short position, the net long position corresponds to the open long position minus the open short position; the net short position equals zero.

\[
\text{If } [\text{LngOpn}] > [\text{ShtOpn}] \text{ then } [\text{Net Lng}] = [\text{LngOpn}] - [\text{ShtOpn}];
\text{[Net Sht]} = 0
\]

- If the open long position is \text{smaller} than the short position, the net short position corresponds to the open short position minus the open long position; the net long position equals zero.

\[
\text{If } [\text{LngOpn}] < [\text{ShtOpn}] \text{ then } [\text{Net Sht}] = [\text{ShtOpn}] - [\text{LngOpn}];
\text{[Net Lng]} = 0
\]

- If the open long position is \text{equal} to the open short position, both the net long position and the net short position equal zero.

\[
\text{If } [\text{LngOpn}] = [\text{ShtOpn}] \text{ then } [\text{Net Lng}] = 0 \text{ and } [\text{Net Sht}] = 0
\]

3. In intraday margining on the exercise day, the exercised and assigned positions still contribute to the net position. The formula is then net position = (open long position + exercised position) - (open short position + assigned position).
If the underlying security of a stock option is affected by a re-capitalization, the net position in the option series of the security is calculated according to each individual version. Series with different version numbers are always treated as separate contracts. This is also the case when two versions of an option series have the same exercise price and the same expiration month.

3.2.5.2.2 Position Netting with Eurex Futures

The basis of the calculation of net positions for future spread margin for Eurex products consists of three steps:

- Calculation of the open long/allocated positions and the open short/notified positions.
- Balancing of the open long/allocated positions with the open short/notified positions for each futures contract.
- Determination of the net position for the relevant spot-month, of the net long position and of the net short position for the back-months.

OTC Flexible Futures transactions within a margin class are not considered for netting. Instead, each OTC Flexible Futures transaction is considered as an individual standalone series.

The Margined Position Overview window also shows the relevant information for the calculation of the net position for futures. The net position per futures contract in a margin class is determined as follows:

\[
\text{net position} = (\text{open long position} + \text{allocated long position}) - (\text{open short position} + \text{notified short position})
\]

Whether the resulting net position is a spot-month net long position, a spot-month net short position, a back-month net long position or a back-month net short position depends on meeting the following conditions:

The recognized net positions of each Eurex futures contract in a margin class are presented in the report “Futures Spread Margin” (RPTCC020).

- If the expiration month of the futures contract and the spot-month are identical and the net position is greater than zero, the result is a positive spot-month net position \(\text{SpotMthNet}\) (long).
- If the expiration month of the futures contract and the spot-month are identical and the net position is less than zero, the result is a negative spot-month net position \(\text{SpotMthNet}\) (short).
- If the expiration month of the futures contract and the spot-month are not identical and the net position is greater than zero, the result is a back-month's net long position \(\text{BckMthNetLng}\).
- If the expiration month of the futures contract and the spot-month are not identical and the net position is less than zero, the result is a back-month's net short position \(\text{BckMthNetSht}\).

Once all the net positions in the futures contracts of the spot-month and the net long and net short positions of the back-months are determined, they are totaled in \(\text{Margin Class Total}\) for each margin class considered and the total spread margin is calculated.
3.2.5.2.3 Positions Netting with Bonds

The netting of bond trades is calculated differently for net bond and cash positions. For bond positions, netting is performed for each bond and settlement date. For cash positions, netting is performed at the level of the related bond positions. For example, if there are multiple bond trades for the same bond with the same bond settlement date, then the cash positions related to these bond positions are netted. This is also true for coupon compensation payments related to repo transactions. In this case, the coupon cash flow is netted against any other cash flow due on the date of such coupon and in the same margin class as the bond positions related to the repo opening and closing legs.

3.2.5.2.4 Positions Netting with Equities

The netting of equity trades is calculated differently for net equity and cash positions. The long and short equity positions are kept per member (CM and NCM), account type (A1 - A9/PP), security (ISIN) and settlement date. The respective positions are calculated by adding up the nominal amount of the respective equities that are to be settled. The long and short equity positions are balanced within each unique grouping of the attributes listed above (for example, a balancing is done within the Agent Accounts A1 - A9 and the Proprietary Account PP but not across them).

Netting is performed to offset the opposite risks of stock short and long positions. The stock net position for a settlement date is computed as the sum of stock long and stock short positions. The cash long and short positions are kept per member (CM and NCM), currency, account type (A1 - A9/PP), security (ISIN) and settlement date. Both sides of a cash position are calculated by accumulating all incoming and outgoing payments that are expected in one day. All cash positions in a security (ISIN), account type (A1 - A9/PP), currency and settlement date are netted per member and the current liquidating value (CLV) for this net cash position is calculated.

3.2.5.2.5 Positions Netting with EEX Futures

If an account holds a number of positions on EEX futures, that are based on the same underlying instrument (e.g. monthly Base Load), the long and short positions can be offset against each other as long as they have the same maturity ("netting of positions"). In such a case, the price risks are equal and opposite.

No netting takes place between underlyings with different delivery periods (spread margining), e.g. between January and February Base Load Contracts.
Sample calculation of position netting:
In December 2001, a market participant is holding various Base and Peak Load futures positions. The following netting of positions results:

<table>
<thead>
<tr>
<th>Contract</th>
<th>Base Load</th>
<th>Peak Load</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Long</td>
<td>Short</td>
</tr>
<tr>
<td>February 2002</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>April 2002</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>3rd Quarter 2002</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td>Year 2002</td>
<td>5</td>
<td>3</td>
</tr>
</tbody>
</table>

### Calculation of the Premium Margin

This chapter only applies to Eurex and EEX options.

As previously mentioned in section 3.2.4 "Components of the Margin Requirement" on page 36, the premium margin is only calculated for those option products that are subject to traditional style premium posting. The (net) premium margin is calculated for the net long positions and for the net short option positions of the margin classes left after netting.

The calculation of the net premium margin is shown in the "Premium Margin" report (RPTCC010).

For net short positions \([Net\ Shl]\) in a margin class, the premium margin \([PremMgn]\) represents the liquidation costs and thus the corresponding margin requirements. On the other hand, the premium margin of net long positions \([Net\ Lng]\) represents the liquidation proceeds and consequently the margin credit, which has a negative sign. The (net) premium margin \([Total\ Premium\ Margin\ For\ Class]\) for the whole margin class can result in either a margin requirement or in a margin credit. This depends on which of the net short or the net long positions predominate the margin class.

The trade unit value is found for all Eurex products by dividing the tick value by the tick size and multiplying by the trade unit. The tick value of stock options is 0.1 or 0.01, as is the tick size, which means in this case that the trade unit value corresponds to the trade unit (usually 10, 50 or 100 shares).

In the "Premium Margin" report (RPTCC010), the net position is shown with one of the following characters, specifying the type of net position.

- \(L\) = net long position
- \(S\) = net short position

The possible liquidation costs and proceeds of the open net positions are calculated by using the day's closing price and the trade unit value of the option.
The premium margin of net long positions is calculated as follows:

\[ \text{premium margin} \ [PremMgn] = \text{net position long} \ [Net Lng] \times \text{trade unit value} \ [TrdUntVal] \times \text{day's settlement price of the option} \ [SetlPrc] \times (-1) \]

The premium margin of net short positions results from the following equation:

\[ \text{premium margin} \ [PremMgn] = \text{net position short} \ [Net Sht] \times \text{trade unit value} \ [TrdUntVal] \times \text{day's settlement price of the option} \ [SetlPrc] \]

In consequence, whether the calculated premium margin represents a margin requirement or a credit (negative sign) depends on the type of net position. The total premium margin for the whole margin class \([Total\ Premium\ Margin\ For\ Class]\) is obtained by adding up the premium margin for all the options series of all products in a particular margin class. This sum is displayed in the currency of the margin class. The total premium margin for the relevant account (PP, A1 - A9) \([Total\ Premium\ Margin\ For\ Account]\) corresponds to the total sum of the premium margin of all of the account margin classes. One sum is displayed for each account and currency.

For OTC Flexible Option transactions with traditional style premium posting premium margin credits and debits are calculated like for the standard contracts. The result is added to the premium margin of the standard contracts.

For OTC Flexible Option transactions with future-style premium posting premium margin is not applicable.

### 3.2.5.4 Calculation of CLM for Cash, Bond and Equity Positions

The following sign convention is used in risk-based margining calculations and reports for cash bond and repo positions. For member short positions, where Eurex Clearing is due to receive cash, bonds or equities, the associated current liquidating value is assigned a positive sign, consistent with the fact that this position is of positive value to Eurex Clearing. For member long positions, where Eurex Clearing is due to deliver cash, bonds or equities, the associated current liquidating value is assigned a negative sign. When summed together, positions with a total net value that is positive represent net positive value from the perspective of the Eurex Clearing and give rise to increased margin requirements. The opposite is true for positions where the total net value is negative. Note that different sign conventions are used in certain other (i.e. non risk-based margining) calculations and reports.

Current liquidating margin (CLM) is calculated at the level of each margin class by aggregating the current liquidating value (CLV) for each bond or equity position, and related cash position, assigned to such class. The “Current Liquidating Margin” report (RPTCC011) presents the CLVs for bond and equity positions and presents an overall total CLM for each margin class. The CLMs for all margin classes in a group are aggregated to generate the current liquidating margin for the margin group. The CLV calculation methods for cash, bond and equity positions are presented separately below.
Current Liquidating Value of a Cash Position

The current liquidating value of a cash position is its value as of valuation date, after performing a time value of money adjustment. For cash positions to be paid in the future, the CLV is lower than the nominal amount of the cash position. Money market interest rates are used to make these adjustments.

More specifically, the CLV of a cash payment is calculated by the following formulas:

\[
\text{CLV}_{\text{cash}} = \frac{C}{(1 + r_D \times t / 365)}, \quad \text{for member cash short positions with future settlement date}
\]

\[
\text{CLV}_{\text{cash}} = \frac{C}{(1 + r_U \times t / 365)}, \quad \text{for member cash long positions with future settlement date}
\]

\[
\text{CLV} = C, \quad \text{for past due cash payments},
\]

where

- \(C\) is the size of the cash payment,
- \(t\) is the number of days from the valuation date to the payment date, and
- \(r_D\) and \(r_U\) are two different money market rates for the time period from the valuation date to the payment date (see description immediately below).

To protect Eurex Clearing against shifts in short term market rates, the CLV of a cash payment is calculated with different rates, depending on whether the member’s cash position is long or short. The rate used to discount the member short cash positions \((r_D)\) is below market rates, thereby overstating the value to the Eurex Clearing of the expected cash receipt. The rate used to discount member long cash positions \((r_U)\) is above market rates, thereby understating the cost of the cash flow to Eurex Clearing. The combined effect of the above is to overstate the value to Eurex Clearing of its net cash positions, resulting in a higher current liquidating value of transactions and, therefore, a higher margin requirement, i.e. providing greater protection to the Eurex Clearing. Market Supervision sets \(r_D\) and \(r_U\) to create the appropriate level of protection against market movements in short term rates. This approach obviates the need for an additional margin related to cash positions.

Current Liquidating Value of a Bond Position

Bond values are calculated by reference to market prices as of the valuation date. With the exception of cases where there are coupon payments between valuation date and settlement date, bond valuation is not impacted by the settlement date of a given bond position.

The approach to bond valuation is (i) to ascertain the spot market price of the bond as quoted on the valuation date, (ii) to determine the amount of cash that is exchanged for the bond based on such price, (iii) to determine the date when the bond is exchanged for cash at such price (e.g. on trade date plus 2 days for T+2 securities), (iv) to discount the cash amount back to the current valuation date, and (v) to add or subtract coupon adjustments as described below.
For securities that are quoted on a clean price basis, the following formula applies:

\[
CLV_{\text{bond}} = X \times \left\{ \frac{(P + A)}{(1 + r \times t' / 365)} \right\} +/- \text{coupon adjustments},
\]

where

- \(X\) is the nominal size of the position, with a positive sign for member short positions and a negative sign for member long positions.
- \(P\) is the clean price of the bond.
- \(A\) is the accrued interest for the bond, as of the valuation date plus the standard settlement period calculated according to the applicable convention.
- \(r\) is the short term interest rate.
- \(t'\) is the number of days between (i) the valuation date and (ii) the settlement date of a spot transaction concluded on the valuation date for the relevant security. Note that \(t'\) is not the number of days between valuation date and settlement date of the position.

Coupon adjustments are calculated as described below:

**Coupon Adjustments**

Coupon adjustments are required when the bond position includes different coupons from those reflected in the spot price for the bond and the calculations performed above. For example, a coupon adjustment is required in a case where the valuation date is 1 week before a coupon date and the settlement date for the position is 2 weeks after the coupon date. The current market value includes the value of the upcoming coupon; the settlement obligation is based only on the bond excluding such coupon.

The calculation of the coupon adjustment proceeds in four steps.

1. **Identify the coupon discrepancies**, i.e. determine the differences, if any, between the coupons valued in the standard valuation formula and the coupons that are covered by the bond position in question. For longer term transactions in bonds with coupons paid more frequently than annually, the discrepancy could be more than one coupon. This is performed as follows.
   - Find the coupons that should be valued in the position: all coupons that are due on a date after the settlement date for the position.
   - Find all coupons that are included in the normal valuation of the bond, before making any coupon adjustment. These are all coupons that are due on a date after the valuation date plus the standard settlement period.
   - Identify “extra” coupons in normal bond valuation and/or “missing” coupons.

Extra and missing coupons give rise to a coupon adjustment, calculated for each individual “missing” or “extra” coupon.

2. **For each coupon requiring adjustment**, determine whether the adjustment is a “+” or a “−” adjustment.
   - For “extra” coupons the adjustment is “−”.
   - For “missing” coupons the adjustment is “+”. 
(3) Determine whether the coupon adjustment should be performed using the present value or the future value formula

- If coupon payment date ≥ valuation date then use the “present value formula”.
- If coupon payment date < valuation date then use “future value formula”.

(4) Add the coupon values calculated immediately above.

Present/Future Value Calculation

In most cases, the adjustment involves adding or subtracting the present value of a future coupon. For settlement delays extending beyond the coupon date, this adjustment could relate to a past coupon, necessitating a future value calculation for settlement delays extending beyond the coupon date.

For future coupons, the formula is
\[ d / (1 + r \cdot t / 365) \]
In the case of past coupons, the formula is
\[ d \cdot (1 + r \cdot t / 365) \]
where
- d is the coupon, expressed as a percentage of nominal
- t is the number of days from the valuation date to coupon payment date
- r is a money market interest rate.

Current Liquidating Margin of an Equity Position

Equity values can be ascertained by referring to market prices. At the end of the day, the closing price for each is determined. This price is the basis for mark-to-market valuation as well as for the volatility calculation. The valuation considers the standard settlement period of the equity position.

Market pricing for an equity indicates the price at which parties would be willing to exchange the equity for cash with settlement in the standard 2 business days. The assumption is that the current market price also reflects the value of future corporate actions. In case of a corporate action the initial position change and additional rights (“Bezugsrechte”), depending on the event may be added. In case a corporate action or if the process includes a subscription right (e.g. “Bezugsrechte”), the theoretical option price is calculated based on the closing price and the volatility of the equity. The market value \((X \cdot P)\) for a spot transaction in the equity is as of the settlement date. Therefore, it must be adjusted back to the current valuation date.

Thus, the following formula applies:

\[ CLV = (X \cdot P) / (1+r \cdot t'/365) \]

Where:
- \( CLV \) is the current liquidating value
- \( X \) is the security position (or a subscription right, bonus share, etc.) expressed as a quantity (positive for member short positions and negative for member long positions)
- \( P \) is the last price quote exclusive (= market price of a security)
- \( r \) is the market interest rate expressed as a daily rate (for the period to settlement date)
- \( t' \) is the (standard) settlement period for a spot transaction in the equity
Valuation Background: The valuation of bonds, equities and repos is based on the premises that, at the time of default, each obligation between the CCP and the defaulting party has an ascertainable market value. In the event of default, all existing obligations between the CCP and the defaulting party are cancelled and replaced by a single cash amount owed by one party to the other. The single cash amount equals the net of the values of all of the underlying transactions that have been cancelled. The party (CCP or the defaulting member) whose claims against the other party exceed its obligations to that party receives a net payment in return for cancellation of all transactions.

Current Liquidating Margin of a Margin Group
After calculating the current liquidating value of each bond/equity and related cash position, the current liquidating margin for each margin class is calculated by adding up the current liquidating value of each cash, bond and equity position associated with the class. Note that the cash positions are assigned to the same classes as the related bond positions. The CLMs of each margin class within a margin group are added together to arrive at the CLM of the margin group.

3.2.5.5 Calculation of the Futures Spread Margin
This chapter only applies to Eurex Futures.
The futures spread margin is calculated for futures net long and net short positions remaining in the margin class after netting. The regular and OTC Flexible Futures positions in a margin class and expiring in the same month are netted. The net long position of a contract (e.g. FGBL MAR 99) is balanced against the net short position of another contract (e.g. FGBL JUN 99). This spreading allows various conditions to be used, which decides whether the futures spread margin is a spot-month spread margin or a back-month spread margin. The spot-month margining amount is used when expiration month is equal to current month else the back-month margin amount is used. The calculations concerning the futures spread margin are shown on the “Futures Spread Margin” report (RPTCC020).

3.2.5.5.1 Calculation of the Spot-Month Spread Margin
This chapter only applies to Eurex futures.
In calculating the spread margin, a differentiation is made between spot-month spread margin and back-month spread margin. The expiration month closest to the delivery date is called the “spot-month”, and the associated contract is the “front contract”. All other expiration months are considered “back-months” and their related contracts are referred to as “deferred contracts”. This procedure takes into account the fact that, for futures contracts which are physically deliverable (e.g. Bund Futures), the volatility increases during the last few days leading up to the delivery date. Therefore, as the expiration of a contract approaches, the risk also rises that the price correlation between the spot-month and the back-month contract becomes increasingly unbalanced. In other words, the possibility increases that the risks of long and short positions no longer compensate each other.
As long as the delivery month of the front contract has not yet been reached, the margin calculation is based on the normal spread margin rate (i.e. the back-month spread margin rate).
Once the month starts in which the front contract expires, it is automatically assumed that this contract will demonstrate a higher degree of volatility. From this day onwards, all spread pairs containing a front-month position must be backed at the higher spot-month spread margin rate. When spreading is being done, the attempt is always made first to create spreads that include front contracts. Only when that is no longer possible is spreading carried out among the deferred contracts.

For index futures contracts, this phenomenon of increased volatility in the days prior to final settlement does not arise because no physical delivery of the underlying instrument takes place. For that reason, the spot-month and back-month spread margin rates are the same.

On the “Futures Spread Margin” report (RPTCC020), the conditions for the calculation of the spot-month spread margin are as follows:

A positive (long) spot-month net position \([\text{SpotMthNet}]\) resulting from netting is balanced against a back-month’s net short position \([\text{BckMthNetSht}]\).

- If the spot-month net long position can be completely balanced, the spot-month spread margin corresponds to the spot-month net position of the margin class \([\text{SpotMthNet}]\). Any remaining back-month net short position \(\left(\left|\text{BckMthNetSht}\right| - \left|\text{SpotMthNet}\right|\right) > 0\) is balanced against the back-month net long position \([\text{BckMthNetLng}]\) when calculating the back-month spread margin.

- If the spot-month net long position cannot be completely balanced because the back-month net short position is smaller, the spot-month spread margin corresponds only to the covered part of the spot-month net position of the margin class. The uncovered difference \(\left(\left|\text{SpotMthNet}\right| - \left|\text{BckMthNetSht}\right|\right) > 0\) represents the non-spread spot-month net position (long). The non-spread position is then subject to additional margin.

A negative (short) spot-month net position \([\text{SpotMthNet}]\) resulting from netting is balanced against a back-month net long position \([\text{BckMthNetLng}]\). These conditions are similar as for the case of positive spot-month net position.

- If the spot-month net short position can be completely balanced, the spot-month spread margin corresponds to the spot-month net position of the margin class \([\text{SpotMthNet}]\). Any remaining back-month net long position \(\left(\left|\text{BckMthNetLng}\right| - \text{abs}\left(\left|\text{SpotMthNet}\right|\right)\right) > 0\) is balanced against the back-month net short position \([\text{BckMthNetSht}]\) when calculating the back-month spread margin.

- If the spot-month net short position cannot be completely balanced because the back-month net long position is smaller, in absolute values, the spot-month spread margin corresponds to the covered part of the spot-month net position of the margin class. The uncovered difference \(\text{abs}\left(\left|\text{SpotMthNet}\right| - \left|\text{BckMthNetLng}\right|\right) > 0\) represents the non-spread spot-month net position (short). The non-spread position is then subject to additional margin.

The calculated spot-month net position \([\text{SpotMthNet}]\) is multiplied by the spot-month spread margin amount \([\text{Spot Mth Margin/Contract}]\) and gives the spot-month spread margin \([\text{Spot Mth Margin}]\):

\[
[\text{Spot Mth Margin}] = \text{abs}(\left|\text{SpotMthNet}\right|) \times [\text{Spot Mth Margin/Contract}]
\]

4. If \(x \geq 0\) then \(\text{abs}(x) = x\), if \(x < 0\) then \(\text{abs}(x) = (-1) \times x\)
The spot-month spread margin amount is clearly higher than that of the back-month spread margin \([\text{Back Mth Margin}/\text{Contract}]\). This allows for the fact that the price volatility of the futures contract generally rises in the expiration month.

The future spread margin amounts are margin class parameters and are determined by Eurex. They are provided by the Eurex Risk Management system in the end-of-day FPPARM file sent to the Eurex MISS, and are also available on the Eurex Clearing AG website (www.eurexclearing.com). With the Enhanced Risk Solution, Margin Parameters are also provided intraday via messages in FIXML format.

3.2.5.5.2 Calculation of the Back-Months' Spread Margin

This chapter only applies to Eurex futures.

This section describes the calculation of back-month spread and back-month spread margin \([\text{Back Mth Margin}]\), as shown on the “Futures Spread Margin” report (RPTCC020). It must be remembered that the back-month net long/net short positions \([\text{BckMthNetLng}/\text{BckMthNetSht}]\) are offset against the spot-month net short/net long positions \([\text{SpotMthNet}]\) at the time of the calculation of the spot-month spread margin.

- If the back-month net long position \([\text{BckMthNetLng}]\) is larger (smaller) than the back-month net short-position \([\text{BckMthNetSht}]\), then the latter (the previous) corresponds to the back-month net position for the margin class \([\text{Back Mth Position}]\) and, consequently, to the net position used for the calculation of the back-month spread margin \([\text{Back Mth Margin}]\).

- The non-spread back-month net position is the difference between the back-month net long position and the back-month net short position, and is subject to additional margin.

The back-month net position \([\text{Back Mth Position}]\) is multiplied with the back-month spread margin amount \([\text{Back Mth Margin}/\text{Contract}]\) and gives the back-month spread margin \([\text{Back Mth Margin}]\):

\[
[\text{Back Mth Margin}] = [\text{Back Mth Position}] * [\text{Back Mth Margin}/\text{Contract}]
\]

3.2.5.5.3 Calculation of the Futures Spread Margins

This chapter only applies to Eurex futures.

As shown on the “Futures Spread Margin” report (RPTCC020), the sum of the futures spread margin for the margin class \([\text{Total Spread Margin}]\) is obtained by adding up the spot-month spread margin \([\text{Spot Mth Margin}]\) and the back-month spread margin \([\text{Back Mth Margin}]\). This sum is displayed in the currency of the margin class. The sum for each type of account (PP, A1 - A9) \([\text{Account Total}]\) is found by adding up the futures spread margin of this account’s margin classes. One sum is displayed for each account and currency.
3.2.5.6 Calculation of Additional Margin

As mentioned in section 3.2.4 “Components of the Margin Requirement” on page 36, the additional margin is the potential additional liquidation amount of a portfolio. This amount is necessary when a portfolio of positions in a margin class or a margin group (if applicable) must be liquidated, not at the immediate liquidation costs/proceeds based on the day's settlement prices, but at the liquidation costs/proceeds resulting from the substitution of an assumed future unfavorable “worst-case” price.

When short option positions are embedded in complex portfolios, a major part of the risk may be compensated either by option long positions or by corresponding future positions. In detail, any short call position risk is limited by long call positions with same or longer time to expiry and lower or equal strike, or by any long future position. Any short put position risk is limited by long put positions with same or longer time to expiry and higher or equal strike, or by any short future position.

This cross margining is provided within a margin class and a margin group (if applicable) and reduces the actual liquidation costs.

Note: OTC Flexible Contracts positions in a margin class are not considered for this cross margining.

3.2.5.6.1 Essential Input Parameters

The first phase in the calculation of the additional margin requires that the risk-based margining system has access to the following input parameters:

- Interest rate for variable rate investments, which is needed for the calculation of the theoretical options prices by the Option Pricing Model (OPM).
- Dividend information for underlying stocks. This information refers to the date of the payment of the dividends, as well as their size, and is needed by the OPM.
- The margin interval of all underlyings/underlying securities and bonds for bond positions based on a margin parameter (historical volatility). Eurex calculates the relevant margin parameter (historical volatility) for the underlying securities on which derivative instruments can be traded on its market.
- Maturity Factors: These are for margin classes that have maturity-dependent margining switched on. A maturity factor is a coefficient between 0 and 1 defined per margin class and expiry. It is used to multiply the margin interval (and thus decrease the interval size for some expirations). Furthermore, maturity factors are defined per margin class, expiration month and expiration year, and are only performed for such derivative margin classes of type EED (EEX derivatives) and EXD (Eurex derivatives), where maturity dependent margining is enabled.

For margin classes with enabled maturity dependent margining, spread margin is no lon-
Volatility Offsets: These adjust the current implied volatility of option underlyings for different projected underlying prices. Thus the offsets affect the calculated projected option prices. The setup of volatility offsets is available in the FPPARV file on the Eurex Clearing AG website.

The details regarding the interest rate for variable rate investments and margin parameter (historical volatility) are shown in the end-of-day FPPARM file sent to the Eurex MISS, and are also available on the Eurex Clearing AG website (www.eurexclearing.com). With the Enhanced Risk Solution, they are provided intraday via messages in FIXML format. (Compare with section 3.2.3 “Structure of Margin Classes and Margin Groups” on page 34).

3.2.5.6.2 Determination and Use of Margin Intervals, Eurex

This chapter only applies to Eurex.

Finally, the maximum price movement by which the underlying security can move with 99% confidence is calculated. Additional margin is intended to cover this movement. The maximum price movement is defined as margin interval, that is, the range by which security or underlying prices oscillate.

For bond positions (related to cash bond and repo transactions), a margin interval is based on observed and anticipated volatility in the value of the respective bond. “Worst case” bond values are calculated by (i) adding and subtracting the margin interval from the clean bond price to arrive at two clean prices and (ii) adjusting these prices according to the CLVbond shown in section 3.2.5.4 “Calculation of CLM for Cash, Bond and Equity Positions” on page 42.

This is done as follows:

First, the change in the CLV of a bond position, that results from the maximum anticipated upward or downward movement in the price of the bond, is calculated. This is done by adding or subtracting the margin parameter from the current clean price. These modified clean prices are then inserted into the CLV formula to arrive at the Liquidation Value (LV) for the position for the worst case upward and downward price movement in the bond.

The highest and lowest anticipated clean price, PU and PD, is predicted for each underlying bond using the current clean bond price P and the largest relative movement, δ, in percent. δ is the margin parameter.

\[
\text{upside-price } \quad PU = P \cdot (1 + \delta), \\
\text{downside-price } \quad PD = P \cdot (1 - \delta)
\]
The upside and downside change in value for a net bond position is computed for each net bond position for each settlement date by using the liquidating value of the bond position based on the clean upside-price and down-side price and using the CLV formula. In the notation below, LV and \( \Delta LV \), denote liquidating value and change in liquidating value, respectively.

\[
\Delta LV_{up} = [LV_{bonds/\text{net}}(PU) - CLV_{bonds/\text{net}}]
\]

\[
\Delta LV_{down} = [LV_{bonds/\text{net}}(PD) - CLV_{bonds/\text{net}}]
\]

These calculated changes in value are then used at the class level to calculate the Additional Margin requirement as described in the next section.

Theoretical Values II (RPTCO031) provides information about the margin interval for bonds. Columns [MaxUpMovement] and [MaxDownMovement] show the upside and downside values of bond positions, taking into account all elements of the CLV_{bond} calculation except for coupon adjustments. Column [CouponAdj] indicates the value of a coupon adjustment for various coupons, if the valuation date and the settlement date for a given bond position require such an adjustment.

For stock options, the margin interval is calculated by multiplying the daily closing price of the underlying security by the margin parameter (historical volatility), in terms of a percentage.

Starting from the daily settlement price of the underlying, the margin interval is calculated in both directions of the price range, upside and downside.

This establishes the projected maximum price of the higher price range and the projected minimum price of the lower price range.

Example:

\[
\text{margin interval percentage} = (37.44\%/\sqrt{250}) \times 3.8 = 9\%
\]

underlying: BASF  hist volatility per day: 2.368 daily settlement price: 33

\[
\begin{array}{c|c|c}
-9\% & +9\% \\
30.00 & 33.00 & 36.00 \\
proj. minimum price & daily settlement price & proj. maximum price \\
\end{array}
\]

Since the extreme values of an option portfolio are achieved either when the underlying reaches an extreme of the applied margin interval, or when the underlying trades at an option exercise price, all the exercise prices of active regular options series (situated between minimum and maximum price, and not necessarily equal to the daily closing price of the underlying), are used with the projected minimum and maximum prices of the underlying.

For futures, as well as for options on futures and indices, the margin interval is expressed in percentage points (where underlying is an interest rate product) or in index points (where underlying is an index). The margin interval is calculated in the same way, margin parameter (historical volatility) per day multiplied by the Eurex risk factor.
Example:

margin class DAX, interval product ODAX
DAX margin interval: 290 index points
day's settlement price; 5.000,00
|......................................5.000......................................|
|4.710|minimum|day's settlement price|5.290|maximump

Where a margin class contains more than one product, one of the products must be used as the interval product.

The Eurex risk-based margining system uses the following method to determine the value of positions in the margin classes DAX and FGBL.

The margin class DAX contains the product option on the DAX index with monthly expiry (ODAX), the options on the DAX index with weekly expiry (ODX1, ODX2, ODX4 and ODX5) as well as the DAX future (FDAX). The products ODAX, ODX1, ODX2, ODX4, ODX5 and FDAX are based on the underlying DAX.

Eurex has chosen the ODAX as the interval product of the margin class DAX. Taking a DAX closing price of 5.000 as the base and a margin interval of 290 index points, the minimum price is 4.710 and the maximum price 5.290. The theoretical prices for all the series in this margin class are calculated at a double rate of margin interval for all the exercise prices of the interval product and for the minimum and maximum price.

For each projected DAX price, the ODAX, ODX1, ODX2, ODX4, ODX5 and FDAX prices are also calculated. All the calculated theoretical prices of a margin class form the risk array of the class.

The products BUND future (FGBL) and option on BUND future (OGBL) are included in the margin class FGBL. The BUND future is based on a synthetic government loan at a nominal interest of 6%. For this synthetic loan, there is no clear underlying and consequently no underlying price in the real sense.

The prices of the next relevant BUND futures contract falling due substitutes for the underlying prices and forms the risk array, to make up for the unavailability of real prices. Eurex has chosen the OGBL as the interval product of the margin class FGBL.

The margin interval of the margin class FGBL is the margin parameter (historical volatility) of the relevant BUND future contract, next falling due, expressed in percentage points and multiplied by the risk factor. For the calculation of the risk array, the daily settlement price of the BUND future contract, next falling due is also used as underlying closing price. The Eurex risk-based margining system supposes that market price variations affecting all three contract settlements struck at the same time are adjusted and are identical. The formation of the risk array and the associated valuation of the positions of the products OGBL and FGBL contained in a margin class are illustrated in the following example:

The future contract next falling due is FGBL Jun 99 with a settlement price of 117.70 and a margin interval of 1.6 percentage points.

The minimum price is therefore 116.10, the maximum 119.30. Since the exercise price intervals for the product OGBL (interval product of the class) are 0.5%, the projected (underlying) prices between the minimum and maximum are as follows: 116.50, 117.00, 117.50, 118.00, 118.50, 119.00. The basis of these underlying prices is determined by the theoretical option prices for the OGBL Jun 99 series.
For the FGBL Jun 99, these projected underlying prices correspond to the theoretical future prices (since, as shown above, the future contract is used as a substitute for non-existent underlying prices).

In our example, the settlement price of the FGBL Sep 99 is 117.22 (= -0.38 difference to FGBL Jun 99). 0.38 is subtracted from each of the projected (underlying) prices (minimum, exercise prices, maximum) of the futures contract FGBL Jun 99 next falling due and making up the risk array. The theoretical option prices for the series OGBL Sep 99 are based on the resulting (underlying) prices. For the FGBL Sep 99, these projected (underlying) prices correspond to the theoretical future prices.

In our example, the settlement price of the FGBL Dec 99 116.70 (= -0.90 difference to FGBL Jun 99) – 0.90 is subtracted from each one of the projected (underlying) prices (minimum, exercise prices, maximum) of the future contract FGBL Jun 99 next falling due and making up the risk array. The theoretical option prices for the series OGBL Dec 99 are based on the resulting (underlying) prices. For the FGBL Dec 99 these projected (underlying) prices correspond to the theoretical future prices.

For any margin class, if the margin class has maturity-dependent margining switched on, the margin interval is multiplied for each expiry by the maturity factor (coefficient between 0 and 1) defined for this expiry.

Example:

<table>
<thead>
<tr>
<th>Margin Class</th>
<th>Base Margin Interval</th>
<th>Expiry 2011-12, Maturity Factor 0.30</th>
<th>Margin Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXD</td>
<td>8.9 index points</td>
<td>2.67</td>
<td></td>
</tr>
<tr>
<td>Expiry 2012-12, Maturity Factor 0.90</td>
<td>Margin Interval</td>
<td>8.01</td>
<td></td>
</tr>
<tr>
<td>Expiry 2013-12, Maturity Factor 1.00</td>
<td>Margin Interval</td>
<td>8.90</td>
<td></td>
</tr>
</tbody>
</table>

3.2.5.6.3 Determination and Use of Margin Intervals, EEX

This chapter only applies to EEX.

EEX option products are in the same Margin Class as its underlying futures product.

For EEX margin classes the maximum price movement of the underlying is calculated. The additional margin is intended to cover this movement. The maximum price movement is defined as margin interval.

The margin interval is expressed in percentage points. It is calculated as the margin parameter (historical volatility) per day multiplied by the Eurex risk factor. Starting from the daily settlement price of the underlying, the margin interval is calculated in both directions of the price range, upside and downside. This establishes the projected maximum price of the higher price range and the projected minimum price of the lower price range.

The margin interval of the margin class is the margin parameter (historical volatility) of the relevant EEX future contract, next falling due, expressed in percentage points and multiplied by the risk factor. For the calculation of the risk array, the daily settlement price of the FENE futures contract next falling due is also used as underlying closing price.

The risk-based margining system supposes that market price variations affecting all three contract settlements struck at the same time are adjusted and are identical.
Furthermore, if the margin class has maturity-dependent margining switched on, the margin interval is multiplied for each expiry by the maturity factor (coefficient between 0 and 1) defined for this expiry.

### 3.2.5.6.4 Determination of Volatility

Volatility is one of the key inputs for calculation of market conformed option prices for the projected underlying prices. Application of a single volatility value for all projected underlying prices would be unrealistic. Therefore, changes in volatility are modeled by volatility offsets - percentage coefficients for adjusting the base volatility of the series. The volatility offset table (described below) provides three offsets for each projected underlying price of given series - up, neutral and down.

**Example:**

<table>
<thead>
<tr>
<th>base volatility 10.0</th>
<th>volatility offset up = 50% -&gt; volatility up = 15.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>volatility offset neutral = 10% -&gt; volatility neutral = 11.0</td>
<td></td>
</tr>
<tr>
<td>volatility offset down = -30% -&gt; volatility down = 7.0</td>
<td></td>
</tr>
</tbody>
</table>

The volatility offsets are defined per:

1. Margin class (or product type - used if there is no margin-class-specific offset)
2. Call/put flag (empty means both call and put)
3. Days to expiration
4. Moneyness = \( m \) for calls or \( 1/m \) for puts, rounded to four decimal places, where:
   - \( m = \frac{\text{Underlying Price}}{\text{Series Exercise Price}} \)
   - \( m = (\frac{\text{Underlying Price} - 1}{\text{Series Exercise Price} - 1} - 1) \times 10 + 1 \) for OFBD and OFIT product types
5. Price move: percentage price movement of the projected underlying price with respect to the current underlying price

The volatility offset table does not contain a record for every possible combination of these parameters. Instead the volatility offsets are found in the table by the following algorithm:

1. Records for given margin class are found (if not, product type offsets are used, if they also do not exist, default offsets are used).
2. Among the records from step 1, those with matching call/put flag are selected (if not found, records with empty call/put flag are used).
3. Among the records from step 2, those with nearest lower or equal days to expiration are selected.
4. Among the records from step 3, those with the closest moneyness are selected.
5. Among the records from step 4, the one with the closest price move is selected.
Example - Volatility Offset Setup and Selection:

<table>
<thead>
<tr>
<th>line</th>
<th>PT</th>
<th>MC</th>
<th>C/P</th>
<th>Days</th>
<th>Moneyness</th>
<th>Price move</th>
<th>Vola up</th>
<th>Vola neut</th>
<th>Vola down</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>1.0000</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>2</td>
<td>DAX</td>
<td>C</td>
<td></td>
<td>0</td>
<td>1.0000</td>
<td>-5.00</td>
<td>7.50</td>
<td>4.29</td>
<td>-5.50</td>
</tr>
<tr>
<td>3</td>
<td>DAX</td>
<td>C</td>
<td></td>
<td>0</td>
<td>1.0000</td>
<td>0.00</td>
<td>9.00</td>
<td>0.00</td>
<td>-6.50</td>
</tr>
<tr>
<td>4</td>
<td>DAX</td>
<td>C</td>
<td></td>
<td>0</td>
<td>1.0000</td>
<td>5.00</td>
<td>10.50</td>
<td>6.63</td>
<td>-7.50</td>
</tr>
<tr>
<td>5</td>
<td>DAX</td>
<td>P</td>
<td></td>
<td>0</td>
<td>1.0000</td>
<td>0.00</td>
<td>9.00</td>
<td>0.00</td>
<td>-6.50</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>OINX</td>
<td></td>
<td>0</td>
<td>1.0000</td>
<td>0.00</td>
<td>15.00</td>
<td>0.00</td>
<td>-10.00</td>
</tr>
</tbody>
</table>

Selecting volatility offsets for:

ODAX Call@5000 2011-06, current underlying price 5000, projected price 5200:
- MC: DAX (lines 2-5)
- C/P: C (lines 2-4)
- Days: the closest smaller or equal is 0 (lines 2-4)
- Moneyness: the only available (and thus the closest) is 1.00 (lines 2-4)
- Price move: 4% -> closest 5% (line 4)
- Selected volatility offsets: (10.5, 6.63, -7.5)

OESX option:
- MC: not in table, PT: OINX, there is only one record (line 6)
- Volatility offsets: (15.0, 0.0, 10.0)

OEU3 option:
- MC: not in table, PT: not in table, use default, there is only one record (line 1)
- Volatility offsets: (0.0, 0.0, 0.0)
### 3.2.5.6.5 Calculation of Market Conformed Option and Future Prices

This chapter only applies to Eurex.

Market conformed option prices for each of the projected base prices (minimum price, maximum price and intermediate exercise prices) are calculated using arithmetic models for all the option series of the margin class containing positions.

**The Cox-Ross-Rubinstein Binomial Model** is used for the calculation of the option prices for net long/net short positions. One of the important parameters in calculation of theoretical price of option series is the volatility of the underlying instrument.

For each projected underlying price, there are three volatilities - the base implied volatility adjusted by three volatility offsets, see section 3.2.5.6.4 "Determination of Volatility" on page 54. These three volatilities result in three option prices: for volatility-up, volatility-neutral and volatility-down scenarios.

To correct the inaccuracies emerging from higher implied volatility of some short options, the short option adjustment \( ShtOptAdj \) is applied for out-of-the-money options. The theoretical prices calculated for these positions are typically too low. The short option adjustment is then calculated for each option series and is used in the following cases as a theoretical option price:

- **When the upside price \( UndrPrcCls/Proj \) of a call option held in a short position is less than the short option adjustment \( ShtOptAdj \), the upside price is replaced by the short option adjustment.**

- **When the downside price \( UndrPrcCls/Proj \) of a put option held in a short position is less than the short option adjustment, the downside price is replaced by the short option adjustment.**

Part of the calculation of the short option adjustment is the *out-of-the-money minimum*. It is used as a system parameter by Eurex and is shown in the end-of-day FPPARM file sent to the Eurex MISS.

It is also available on the Eurex Clearing AG website (www.eurexclearing.com) and with the Enhanced Risk Solution, it is provided intraday via messages in FIXML format.

The following formula is used for the out-of-the-money minimum calculation:

\[
\text{short option adjustment} = \text{(margin interval of the corresponding underlying)} \\
\times \ "\text{("out-of-the-money" minimum percentage)} \\
+ \ \text{day's settlement price of the option series.}
\]

The option prices for exercised and assigned positions (EA theoretical values \( EaTheoVal \)) in stock options are calculated by an arithmetic model which determines the intrinsic value of an “in-the-money” option. This is the difference between the closing price of the underlying and the exercise price of the stock option.

The theoretical prices for OTC Flexible Options are calculated using the methodology used for the corresponding regular option series. Short option adjustments are applied for out-of-the-money options.

As explained in section 3.2.5.6.3 “Determination and Use of Margin Intervals, EEX” on page 53, the theory behind the calculation of prices of market conformed future prices assumes that the future contracts move point for point with the price of the underlying security, and that
the prices of DAX future contracts exactly follow the movement of the DAX. The immediate liquidation value of a future position is zero, since futures positions are “mark-to-the-market”.

### 3.2.5.6.6 Calculation of the Projected Liquidation Costs and Proceeds

For bond positions, the projected “worst case” liquidation cost or proceeds are calculated by multiplying the bond position by the “worst case” move bond values calculated in section 3.2.5.4 “Calculation of CLM for Cash, Bond and Equity Positions” on page 42, and using values displayed in Theoretical Values II (RPTCC031).

For equity positions, the projected worst case liquidation cost or proceeds are calculated by multiplying the equity position by the worst case move (margin parameter) calculated in section 3.2.5.4 “Calculation of CLM for Cash, Bond and Equity Positions” on page 42 and using values displayed in Theoretical Values III (RPTCC033).

Theoretical Prices report (RPTCC034) contains information about the theoretical prices for unconditional subscription rights. The theoretical value is displayed for the maximum and minimum expected price as well as for the settlement price of the underlying. The maximum and minimum expected price movement and the settlement price are shown. If the underlying of the subscription right is also an underlying of derivative series, it is necessary for cross margining to display the theoretical value of the subscription right for intermediate strike prices of derivative series. All amounts are in the security settlement currency.

In the case of options and futures, the projected liquidation value is determined by the type of net position, long or short. In the case of option positions, whether considering exercised, assigned (only in intraday margining), long or short net positions, the calculation uses the specific theoretical prices mentioned in the previous chapters, including, if applicable, the special case of the short option adjustment.

The following calculations are carried out for the relevant upside prices, downside prices and in-between exercise prices combined with corresponding volatilities of the underlyings of the option series and future contracts, see the report “Liquidating Values” (RPTCC040). Therefore, volatility-dependent margin classes (that is, those with option as an interval product and some non-expired option position) have six liquidating values: for two price movement directions combined with three volatilities for each of the directions. The theoretical prices/EA theoretical prices are found in the file “Theoretical Price File” (FPTHED).

\[
\text{liquidation proceeds for } \text{net position} \\
\text{long net positions}^5 \quad \text{* trade unit} \\
\text{* theoretical price or EA theoretical price} \\
\text{*(-1)} \\
\]

\[
\text{liquidation costs for } = \text{net position} \\
\text{short net positions}^6 \quad \text{* trade unit} \\
\text{* theoretical price or EA theoretical price} \\
\]

5. In intraday margining on the exercise day, “long positions + exercised net positions”.
6. In intraday margining on the exercise day, “short positions + assigned net positions”.

Details on Short Option Compensation and Short Option Minimum (SOM)

When short option positions are embedded in complex portfolios, a major part of the risk may be compensated either by long option positions or by corresponding future positions. For the uncompensated part of short options positions, short option minimum is used. This cross margining is provided within a margin class.

For regular option series, any short call position risk is limited by long call positions with the same or longer time to expiration and lower or equal strike, or by any long future position. Any short put position risk is limited by long put positions with the same or longer time to expiration and higher or equal strike, or by any short future position. Only futures (net position over all maturities) with a time to maturity of more than one day can be used for coverage of short option positions because, in the other case, half a day would be uncovered. The futures are taken into account only after all options are used for the coverage.

The short put compensation potential applies to the evaluation of the downside risk, short call compensation potential applies to the upside risk.

OTC Flexible Contracts positions are not considered for short option compensation.

The following example illustrates the short option compensation in detail:

Example Data:
Options positions are sorted and those where the SOM would be used are identified:

<table>
<thead>
<tr>
<th>No.</th>
<th>L/S</th>
<th>C/P</th>
<th>Exp.</th>
<th>Strike</th>
<th>Position</th>
<th>Trade Unit</th>
<th>Val</th>
<th>SOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Long</td>
<td>Call</td>
<td>Oct</td>
<td>4200</td>
<td>100</td>
<td>100.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Short</td>
<td>Call</td>
<td>Oct</td>
<td>4000</td>
<td>200</td>
<td>100.000</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Long</td>
<td>Call</td>
<td>Oct</td>
<td>3600</td>
<td>50</td>
<td>100.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Short</td>
<td>Call</td>
<td>Dec</td>
<td>4500</td>
<td>400</td>
<td>100.000</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Long</td>
<td>Call</td>
<td>Dec</td>
<td>4400</td>
<td>100</td>
<td>100.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Long</td>
<td>Call</td>
<td>Dec</td>
<td>4000</td>
<td>50</td>
<td>100.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Long</td>
<td>Call</td>
<td>Dec</td>
<td>3900</td>
<td>100</td>
<td>100.000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Algorithm:
If series are found where the SOM would be used, the following steps are performed:

Step 1: Identify the first short position where the SOM would be used.
Example: Position 2

Step 2: Find the first long position which meets the compensation rules.
Example: Position 3

Step 3: Calculate compensation potential for position 2 and mark the short SOM position and the
long position used for compensation with the amount compensated \([\text{CMP}]\) / used for compensation \([\text{UFC}]\). This potential is calculated in the following way:

\[
\text{compensated short positions} = \text{floor}(\text{number of long positions} \\
\times \text{trade unit value of long position} \\
/ \text{trade unit value of short position})
\]

\[
\text{long positions used for compensation} = \text{ceiling}(\text{compensated short positions} \\
\times \text{trade unit value of short position} \\
/ \text{trade unit value of long position})
\]

Result:

<table>
<thead>
<tr>
<th>No.</th>
<th>L/S</th>
<th>C/P</th>
<th>Exp.</th>
<th>Strike</th>
<th>Position</th>
<th>Trade Unit Val</th>
<th>SOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Long</td>
<td>Call</td>
<td>Oct</td>
<td>4200</td>
<td>100</td>
<td>100.000</td>
<td>CMP 50</td>
</tr>
<tr>
<td>2</td>
<td>Short</td>
<td>Call</td>
<td>Oct</td>
<td>4000</td>
<td>200</td>
<td>100.000</td>
<td>UFC50</td>
</tr>
<tr>
<td>3</td>
<td>Long</td>
<td>Call</td>
<td>Oct</td>
<td>3600</td>
<td>50</td>
<td>100.000</td>
<td>Y</td>
</tr>
<tr>
<td>4</td>
<td>Short</td>
<td>Call</td>
<td>Dec</td>
<td>4500</td>
<td>400</td>
<td>100.000</td>
<td>Y</td>
</tr>
<tr>
<td>5</td>
<td>Long</td>
<td>Call</td>
<td>Dec</td>
<td>4400</td>
<td>100</td>
<td>100.000</td>
<td>Y</td>
</tr>
<tr>
<td>6</td>
<td>Long</td>
<td>Call</td>
<td>Dec</td>
<td>4000</td>
<td>50</td>
<td>100.000</td>
<td>Y</td>
</tr>
<tr>
<td>7</td>
<td>Long</td>
<td>Call</td>
<td>Dec</td>
<td>3900</td>
<td>100</td>
<td>100.000</td>
<td>Y</td>
</tr>
</tbody>
</table>

Step 4: Repeat steps 2 and 3 until the short position is fully compensated or no more long
positions for compensation can be found.

Result:

<table>
<thead>
<tr>
<th>No.</th>
<th>L/S</th>
<th>C/P</th>
<th>Exp.</th>
<th>Strike</th>
<th>Position</th>
<th>SOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Long</td>
<td>Call</td>
<td>Oct</td>
<td>4200</td>
<td>100</td>
<td>CMP</td>
</tr>
<tr>
<td>2</td>
<td>Short</td>
<td>Call</td>
<td>Oct</td>
<td>4000</td>
<td>-200</td>
<td>CMP</td>
</tr>
<tr>
<td>3</td>
<td>Long</td>
<td>Call</td>
<td>Oct</td>
<td>3600</td>
<td>50</td>
<td>UFC50</td>
</tr>
<tr>
<td>4</td>
<td>Short</td>
<td>Call</td>
<td>Dec</td>
<td>4500</td>
<td>-400</td>
<td>Y</td>
</tr>
<tr>
<td>5</td>
<td>Long</td>
<td>Call</td>
<td>Dec</td>
<td>4400</td>
<td>100</td>
<td>Y</td>
</tr>
<tr>
<td>6</td>
<td>Long</td>
<td>Call</td>
<td>Dec</td>
<td>4000</td>
<td>50</td>
<td>UFC50</td>
</tr>
<tr>
<td>7</td>
<td>Long</td>
<td>Call</td>
<td>Dec</td>
<td>3900</td>
<td>100</td>
<td>UFC100</td>
</tr>
</tbody>
</table>

Step 5: Identify the next short position where the SOM would be used.
Example: Position 4

Step 6: Repeat steps 2 to 5 until all short SOM positions are compensated or no more long
positions can be used for compensation. If a short SOM position cannot be compensated in full,
it is split into a compensated and uncompensated part.

7. \(\text{floor}(x)\) ... highest integer value not greater than \(x\)
8. \(\text{ceiling}(x)\) ... lowest integer value not smaller than \(x\)
Result:

<table>
<thead>
<tr>
<th>No.</th>
<th>L/S</th>
<th>C/P</th>
<th>Exp.</th>
<th>Strike</th>
<th>Position</th>
<th>TradeUnit</th>
<th>Val</th>
<th>SOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Long</td>
<td>Call</td>
<td>Oct</td>
<td>4200</td>
<td>100</td>
<td>100.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Short</td>
<td>Call</td>
<td>Oct</td>
<td>4000</td>
<td>-200</td>
<td>100.000</td>
<td>CMP</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Long</td>
<td>Call</td>
<td>Oct</td>
<td>3600</td>
<td>50</td>
<td>100.000</td>
<td>UFC50</td>
<td></td>
</tr>
<tr>
<td>4a.</td>
<td>Short</td>
<td>Call</td>
<td>Dec</td>
<td>4500</td>
<td>-100</td>
<td>100.000</td>
<td>CMP</td>
<td></td>
</tr>
<tr>
<td>4b.</td>
<td>Short</td>
<td>Call</td>
<td>Dec</td>
<td>4500</td>
<td>-300</td>
<td>100.000</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Long</td>
<td>Call</td>
<td>Dec</td>
<td>4400</td>
<td>100</td>
<td>100.000</td>
<td>UFC100</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Long</td>
<td>Call</td>
<td>Dec</td>
<td>4000</td>
<td>50</td>
<td>100.000</td>
<td>UFC50</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Long</td>
<td>Call</td>
<td>Dec</td>
<td>3900</td>
<td>100</td>
<td>100.000</td>
<td>UFC100</td>
<td></td>
</tr>
</tbody>
</table>

Special Case 1:

1. Short Call Oct 4000 1 300.0000
2. Long Call Oct 3600 1 100.0000
3. Long Call Nov 3800 2 100.0000

Position 2 cannot completely compensate position 1 because the potential (the number of contracts multiplied by trade unit value of the contract) of position 2 is lower than the potential of position 1. The potential of position 2 is only stored and the algorithm continues. The potential of the next long positions which meet the compensation conditions are accumulated until the sum of the long potential is greater or equal than the short potential to cover. The compensation of position 1 can then be made with positions 2 and 3 together. This leads to the following results:

1. Short Call Oct 4000 1 300.0000 CMP
2. Long Call Oct 3600 1 100.0000 UFC1
3. Long Call Nov 3800 2 100.0000 UFC2

Special Case 2:

1. Short Call Oct 4000 1 300.0175
2. Long Call Oct 3600 1 300.0154
3. Long Call Nov 3800 1 300.0120

Position 2 cannot completely compensate position 1 because the potential of position 2 is lower than the potential of position 1. Then both positions 2 and 3 are used to compensate position 1 and cannot be used to compensate any other position.

Example 1 of the Special Cases:

<table>
<thead>
<tr>
<th>MARGIN GROUP:</th>
<th>PRODUCT/ CONTRACTS</th>
<th>NET POS</th>
<th>UNIT VAL</th>
<th>CURRENT VALUE</th>
<th>MINIMUM VALUE</th>
<th>RISK VALUE</th>
<th>SOM COMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>MARGIN CLASS:</td>
<td>SAP3</td>
<td>----------</td>
<td>----------</td>
<td>---------------</td>
<td>---------------</td>
<td>------------</td>
<td>----------</td>
</tr>
<tr>
<td>---------------</td>
<td>---------------------</td>
<td>---------</td>
<td>----------</td>
<td>---------------</td>
<td>---------------</td>
<td>------------</td>
<td>----------</td>
</tr>
<tr>
<td>P SAP3 JUL 00</td>
<td>1667 1</td>
<td>1 S</td>
<td>299.9400</td>
<td>30.00</td>
<td>23.30</td>
<td>0.00</td>
<td>CMP</td>
</tr>
<tr>
<td>P SAP3 JUL 00</td>
<td>1733 1</td>
<td>2 S</td>
<td>300.0577</td>
<td>60.00</td>
<td>228.80</td>
<td>0.00</td>
<td>CMP</td>
</tr>
<tr>
<td>P SAP3 JUL 00</td>
<td>1800 1</td>
<td>4 L</td>
<td>300.0000</td>
<td>120.00</td>
<td>1,436.10</td>
<td>7.70-</td>
<td>UFC000004</td>
</tr>
<tr>
<td>P SAP3 JUL 00</td>
<td>1866 1</td>
<td>1 S</td>
<td>300.1072</td>
<td>30.00</td>
<td>818.00</td>
<td>17.40</td>
<td>CMP</td>
</tr>
<tr>
<td>P SAP3 JUL 00</td>
<td>1933 1</td>
<td>1 S</td>
<td>300.0517</td>
<td>30.00</td>
<td>1,602.20</td>
<td>70.30</td>
<td>CMP</td>
</tr>
<tr>
<td>P SAP3 JUL 00</td>
<td>2000 1</td>
<td>1 L</td>
<td>300.0000</td>
<td>60.00</td>
<td>2,754.20</td>
<td>162.80</td>
<td>UFC000001</td>
</tr>
<tr>
<td>P SAP3 JUL 00</td>
<td>2066 1</td>
<td>2 S</td>
<td>300.0986</td>
<td>360.10</td>
<td>8,501.90</td>
<td>946.50</td>
<td></td>
</tr>
<tr>
<td>P SAP3 JUL 00</td>
<td>2133 1</td>
<td>1 L</td>
<td>300.0469</td>
<td>540.10</td>
<td>5,980.70</td>
<td>1,016.10</td>
<td>UFC000001</td>
</tr>
<tr>
<td>P SAP3 AUG 00</td>
<td>1667 1</td>
<td>25 S</td>
<td>299.9400</td>
<td>18,716.30</td>
<td>51,196.80</td>
<td>20,138.00</td>
<td>UFC000025</td>
</tr>
<tr>
<td>P SAP3 SEP 00</td>
<td>1667 1</td>
<td>26 L</td>
<td>299.9400</td>
<td>18,716.30</td>
<td>51,196.80</td>
<td>20,138.00</td>
<td>UFC000025</td>
</tr>
<tr>
<td>P SAP3 SEP 00</td>
<td>1733 1</td>
<td>4 S</td>
<td>300.0577</td>
<td>3,720.70</td>
<td>9,862.90</td>
<td>4,026.40</td>
<td></td>
</tr>
<tr>
<td>P SAP3 SEP 00</td>
<td>1800 1</td>
<td>2 L</td>
<td>300.0000</td>
<td>2,400.00</td>
<td>6,244.80</td>
<td>2,633.10</td>
<td>UFC000001</td>
</tr>
<tr>
<td>P SAP3 SEP 00</td>
<td>2000 1</td>
<td>17 L</td>
<td>300.0000</td>
<td>44,880.00</td>
<td>104,251.20</td>
<td>52,274.80</td>
<td>UFC000006</td>
</tr>
<tr>
<td>P SAP3 SEP 00</td>
<td>2066 1</td>
<td>27 L</td>
<td>300.0986</td>
<td>88,760.10</td>
<td>235,752.80</td>
<td>117,058.00</td>
<td></td>
</tr>
</tbody>
</table>
According to the algorithm shown above, the following processing is done:

1 P SAP3 JUL 00 1800 1compensates 1 P SAP3 JUL 00 1667 1
3 P SAP3 JUL 00 1800 1compensates 2 P SAP3 JUL 00 1733 1
1 P SAP3 JUL 00 2000 1
1 P SAP3 JUL 00 2133 1compensate 1 P SAP3 JUL 00 1866 1
2 P SAP3 SEP 00 2000 1compensate 1 P SAP3 JUL 00 1933 1
25 P SAP3 SEP 00 1667 1compensate 25 P SAP3 AUG 00 1667 1
2 P SAP3 SEP 00 1800 1
4 P SAP3 SEP 00 2000 1compensate 4 P SAP3 SEP 00 1733 1
( in the last step the following occurs: 2 P SAP3 SEP 00 1800 1compensate 1 P SAP3 SEP 00 1733 1 and
4 P SAP3 SEP 00 2000 1compensate 3 P SAP3 SEP 00 1733 1 )

Example 2 of the Special Cases:

<table>
<thead>
<tr>
<th>CONTRACTS</th>
<th>NET</th>
<th>UNIT</th>
<th>CURRENT VALUE</th>
<th>MINIMUM VALUE</th>
<th>RISK VALUE</th>
<th>SOM COMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>P SAP3 JUL 00 1533 1</td>
<td>30 S</td>
<td>300.0469</td>
<td>55,808.70</td>
<td>150,096.30</td>
<td>150,096.30</td>
<td>UFC000010</td>
</tr>
<tr>
<td>P SAP3 AUG 00 1800 1</td>
<td>4 L</td>
<td>300.0000</td>
<td>12,000.00-</td>
<td>31,224.10-</td>
<td>31,224.10-</td>
<td>UFC000010</td>
</tr>
<tr>
<td>P SAP3 AUG 00 1933 1</td>
<td>4 L</td>
<td>300.0517</td>
<td>4,320.70-</td>
<td>14,609.80-</td>
<td>14,609.80-</td>
<td>UFC000004</td>
</tr>
<tr>
<td>P SAP3 AUG 00 2000</td>
<td>5 L</td>
<td>100.0000</td>
<td>2,450.00-</td>
<td>8,046.70-</td>
<td>8,046.70-</td>
<td>UFC000004</td>
</tr>
</tbody>
</table>

According to the algorithm shown above, the following processing has been made:

3 P SAP3 JUL 00 1866 1compensate 3 P SAP3 JUL 00 1533 1
11 P SAP3 JUL 00 1933 1compensate 10 P SAP3 JUL 00 1533 1
4 P SAP3 AUG 00 1800 1compensate 3 P SAP3 JUL 00 1533 1
4 P SAP3 AUG 00 1933 1compensate 3 P SAP3 JUL 00 1533 1
4 P SAP3 AUG 00 2000 compensate 1 P SAP3 JUL 00 1533 1
10 P SAP3 SEP 00 1800 1compensate 9 P SAP3 JUL 00 1533 1
4 P SAP3 SEP 00 2000 compensate 1 P SAP3 JUL 00 1533 1
Example 3 of the Special Cases:

<table>
<thead>
<tr>
<th>PRODUCT/CONTRACTS</th>
<th>NET POS.</th>
<th>UNIT VAL</th>
<th>CURRENT VALUE</th>
<th>MAXIMUM VALUE</th>
<th>RISK VALUE</th>
<th>DAX</th>
</tr>
</thead>
<tbody>
<tr>
<td>FDAX SEP 00</td>
<td>109 L</td>
<td>25.0000</td>
<td>20,284.900.00-</td>
<td>21,374.900.00-</td>
<td>20,302.312.80-</td>
<td></td>
</tr>
<tr>
<td>FDAX MAR 01</td>
<td>2 S</td>
<td>25.0000</td>
<td>381,425.00</td>
<td>401,425.00</td>
<td>381,744.50</td>
<td></td>
</tr>
</tbody>
</table>

OPTIONS EQUIVALENT: 535 L 5.0000

CONTRACTS | POS | VAL | VALUE | VALUE | VALUE | COMP |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Clearing Calculation and Settlement Procedure

As of Jan. 31, 2013


Eurex 14.0

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PROD
After compensation with long call positions, there are 367 uncovered short positions left. These positions are covered by the (long) net futures position after calculation of the options equivalent.

### 3.2.5.6.7 Calculation of the Settlement Difference to Determine the Additional Margin

The liquidation costs/proceeds determined for all projected underlying prices in all option series (including OTC Flexible Options)/future contracts (OTC Flexible Futures) of all the products of the margin class are added together for the whole margin class. The exception is maturity-dependent margin class, where each expiration is treated separately: only the series of the same expiration are added together.

If the interval product of the margin class is option and the portfolio contains some non-expired options, there are three liquidation costs/proceeds for each projected underlying price. They stem from the three different volatilities as adjusted by the volatility offset up/neutral/down.

**Example: Extract from Report RPTCC040 - Liquidating Values for an Option Position:**

<table>
<thead>
<tr>
<th>Security</th>
<th>Settl Date</th>
<th>Contract</th>
<th>FtxTrnNo</th>
<th>SfxNo</th>
<th>FtxContract</th>
<th>C DEK O 2009 3900</th>
</tr>
</thead>
<tbody>
<tr>
<td>OESX DEC 2009</td>
<td>3900</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1,000.000</td>
<td>L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Scenario**

- PriceUpVolaUp
- PriceUpVolaNeutral
- PriceUpVolaDown
- PriceDownVolaUp
- PriceDownVolaNeutral
- PriceDownVolaDown

**Liqu Value**

- 3,667,290.00
- 3,202,050.00
- 2,993,490.00
- 1,920,110.00
- 1,094,240.00
- 852,220.00

**Price/Vola**

- 4,197.30
- 150.65
- 96.00
- 51.09
- 96.00
- 74.97

Apart from the up and down price movements, a no-price-movement scenario is also evaluated to cover the special case when a stable price carries the highest risk. By default, the liquidating value of this scenario is not shown in the RPTCC040 Liquidating Values for an Option Position report as in most cases either the up or down price movement entails a higher liquidating cost. Where the no-price-movement scenario results in a positive liquidating which is higher than the liquidating cost of the price-up and price-down scenarios, the lesser of these two liquidating costs is substituted by the no-price-movement liquidating cost.

---

9. Where the liquidating value of the position is calculated as the net position × the appropriate theoretical price for price and current price and volatility scenario (calculated in 3.2.5.6.5 "Calculation of Market Conformed Option and Future Prices" on page 56), × trade unit value. Note also that the value maturity factors have an influence on the size of margin interval, and thus liquidating value of the position itself.
The risk is calculated as the difference between the projected liquidation cost/proceeds (gains) and the current liquidating value (that is, net premium margin) for all strikes in the margin interval and for all volatility scenarios (if applicable for the given margin class). Report RPTCC040 displays information about the risk:

- Current value liquidating value \([\text{Crt Liqu Value}]\)
- Current underlying price for each position \([\text{Crt Secu Price}]\)
- Projected liquidating value \([\text{Liqu Value}]\) for each scenario
- Projected underlying price and volatility \([\text{Price/Vola}]\) for each scenario
- Short option compensation \([\text{SOM Comp}], \text{[NetFutPos]}\) net futures position, \([\text{OptEqu}]\) option equal position; mark [*] indicates each scenario where the compensation was used
- Securities only: up/down indicator \([\text{I}]\): (U/D) for gross-delivered positions, indicating the part of the position which is being displayed
- Totals per margin class (or margin class/expiry, for maturity-dependent class): current liquidating value, scenario liquidating values, resulting risk

### 3.2.5.6.8 Additional Margin of a Margin Class

The additional margin of the margin class is the mathematically highest difference (carrying a positive sign) between the projected liquidating value and the current liquidating value of the margin class, over all price/volatility movement scenarios. If all differences between projected and current liquidating values are negative, the additional margin of the margin class is equal to zero.

**Example: Extract from Report RPTCC040 - Risk Scenarios of OESX Option Portfolio:**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Totals Per Margin Class</td>
<td>561,477.00</td>
<td>471,813.00</td>
<td>642,636.00</td>
<td>222,457.00</td>
<td>389,860.00</td>
<td>413,954.00</td>
</tr>
<tr>
<td>Total Crt Liqu Value</td>
<td>424,800.00</td>
<td>47,013.00</td>
<td>217,836.00</td>
<td>202,343.00</td>
<td>34,940.00</td>
<td>10,846.00</td>
</tr>
</tbody>
</table>

In this example, the additional margin for the margin class amounts to 217,836 EUR (the highest risk). It is displayed in the currency of the margin class. The ‘Risk’ line is carried over to the ‘Additional Margin’ report (RPTCC045) for further processing, see section 3.3.2.1 "Calculation of Additional Margin for Margin Groups" on page 91.
A negative difference between projected and current liquidating values means a reduction in the liquidation costs (or an adjustment of the liquidation proceeds) and consequently a margin credit. A positive difference between projected and current liquidating values means an increase of the liquidation costs (or a reduction of the liquidation proceeds) and consequently a margin requirement. If the biggest difference between projected and current liquidating values in the lower price range of the margin interval is negative (positive), the biggest difference between projected and current liquidating values in the higher price range of the margin interval has, in most cases, a positive (negative) sign. However, it is conceivable that some combinations of positions show both negative and positive differences between projected and current liquidating values.

Unlike premium margin, which can be a margin requirement or a margin credit, additional margin is always a positive margin requirement or is equal to zero, if it carries a negative sign (although within a margin group one of the values for one margin class may be negative). This means that when calculating the additional margin of a margin class, margin credits are not considered. This is because the calculated risk of the “worst-case” loss of the portfolio within the next 24 hours, in this case a margin credit, must in no case lead to a reduction of the margin requirement for the current risk, expressed through premium margin and futures spread margin.

For equities positions, the additional margin of the margin class is calculated as follows:

For all equities associated with a class, the $\Delta LVs$ (up and down) are calculated as described above. Two sums are then calculated. The first is the sum of all $\Delta LVs$ from the upside movement and the second is the sum of the $\Delta LVs$ for the downside movements. These sums are shown in report “Liquidating Values” (RPTCC040).

### 3.2.5.6.9 Additional Margin of a Margin Group

The calculation method described above applies for margin classes that are not part of a margin group. For margin classes that are part of a margin group, an additional calculation is performed to take into account the correlation of the products in the group.

Margin classes with different currencies can be combined into a margin group. The risks in all price and volatility movement scenarios in different currencies must be compared. Margin group offset factors express how credits can be used to offset debits (interval [-1,1]). The bigger of the upside and downside values is used for the additional margin.

The risks ([Risk] in the “Additional Margin” report RPTCC045) that are calculated in different currencies are converted into the clearing member currency and then summed to a compound risk of each price/volatility scenario for the entire margin group [GroupTot] in RPTCC045.

Negative values are multiplied with the offset factor before they are added to the positive risk values, see [Offset] in RPTCC045 for risks after this multiplication.
The maximal resulting compound risk over all the price/volatility scenarios of the margin group indicates the price/volatility scenario to choose for all margin classes within the margin group, see [Worst case scenario] in RPTCC045. The additional margin of a margin class displayed as [Additional Mgn] in RPTCC045 is the offset risk for the group worst case scenario converted back into the currency of the margin class.

**Example: Extract from Report RPTCC045 - Risk Scenarios of EUSX Margin Class:**

<table>
<thead>
<tr>
<th>MgnGrp</th>
<th>OfsFac</th>
<th>MgnCl</th>
<th>Expiry</th>
<th>Cur</th>
<th>Worst case scenario</th>
<th>Pure</th>
<th>Additional Mgn</th>
<th>MgnFct %</th>
<th>Additional Mgn</th>
</tr>
</thead>
<tbody>
<tr>
<td>STOX</td>
<td></td>
<td>EUSX</td>
<td>EUR</td>
<td>PriceUpVolaDown</td>
<td>217,836.00</td>
<td>100</td>
<td>217,836.00</td>
<td>100</td>
<td>10,846.00</td>
</tr>
</tbody>
</table>

**3.2.5.6.10 Cross Margining over Cascading Products (EEX)**

For EEX futures, positions can be held in annual, seasonal, quarterly and monthly contracts simultaneously. Long term contracts can fully overlap short term contracts. In terms of the risk of a potential loss on the next trading day it is possible that gains in one contract can partially compensate losses in other overlapping contracts. In the following portfolio the potential liquidation costs are less than the costs of liquidating the individual positions:

10L for F0BQ Jan 01
10S for F0BA Jan 01

This is true independent of the direction in which the prices of the single contracts move. However it cannot be presumed that the prices of all products in a cascade are positively correlated for all contracts. Therefore the EUREX approach with margin groups is not applicable.

The functional solution introduced by EEX is the following:

1. All positions in cascaded EEX futures are split in one part that is not covered by a position in a long term product (non-crossed position) and another part which is covered by a position in a long term product (crossed position).
2. For all non-crossed positions, additional margin is required as it is now.
3. For all crossed positions, a reduced volatility is assumed which is determined as the volatility of the product times a reduction factor that can be entered by Market Supervision.
4. For all crossed positions, the additional margin is computed with the reduced volatility.

A margin class includes futures and options with the same delivery product and the same maturity. The additional margin calculation takes this into account.
3.2.5.6.11 Overlapping Position Splitting Scheme (EEX)

The following scheme shows how to determine the position split between non-overlapping and overlapping positions for each contract on level l:

\[ P_{l,crossed} = \begin{cases} 0, & \text{if } P_l \text{ and } R_l \text{ have the same sign} \\ P_l, & \text{if } P_l \text{ and } R_l \text{ have the different sign and } |P_l| \leq |R_l| \\ -R_l, & \text{if } P_l \text{ and } R_l \text{ have the different sign and } |P_l| > |R_l| \end{cases} \]

\[ P_{l,non-crossed} = P_l - P_{l,crossed} \]

Example: Calculation for a position of 100 short in contract F0BA Jul 02 and assumed positions of 100 short in F0BQ Jul 02 and 100 long in F0BY Jan 02:

<table>
<thead>
<tr>
<th>Level I</th>
<th>Position</th>
<th>Remaining Overlap R_l</th>
<th>Crossed Position P_{l,crossed}</th>
<th>Non-Crossed Position P_{l,non-crossed}</th>
</tr>
</thead>
<tbody>
<tr>
<td>F0BY Jan 02</td>
<td>100L</td>
<td>0</td>
<td>0</td>
<td>100L</td>
</tr>
<tr>
<td>F0BQ Jul 02</td>
<td>100S</td>
<td>100L</td>
<td>100S</td>
<td>0</td>
</tr>
<tr>
<td>F0BA Jul 02</td>
<td>100S</td>
<td>0</td>
<td>0</td>
<td>100S</td>
</tr>
</tbody>
</table>

For a more detailed description see section 3.2.5.6.13 "Cross Margining Example (EEX)" on page 68.
3.2.5.6.12 Theoretical Values (EEX)

The theoretical prices for derivatives are calculated event-driven. The theoretical values are printed for all products in the FPTHED Theoretical Price File which is distributed twice a day, i.e., intraday and end-of-day.

The application supports the Volatility Offsets feature for non-expired options to model the change in implied volatility as the underlying price changes. The used volatility is displayed alongside each theoretical price in the FPTHED file. Additionally, the Short Option Adjustment feature can take effect as described in “Details on Short Option Compensation and Short Option Minimum”.

3.2.5.6.13 Cross Margining Example (EEX)

(1) **Contract Volumes:**

The following table shows the contract size of base load futures contracts used in this example.

<table>
<thead>
<tr>
<th>Contract</th>
<th>Volume (MWh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>F0BY JAN02</td>
<td>8760 MWh</td>
</tr>
<tr>
<td>F0BS OCT01</td>
<td>4368 MWh</td>
</tr>
<tr>
<td>F0BS APR02</td>
<td>4392 MWh</td>
</tr>
<tr>
<td>F0BS OCT02</td>
<td>4368 MWh</td>
</tr>
<tr>
<td>F0BQ JAN02</td>
<td>2160 MWh</td>
</tr>
<tr>
<td>F0BQ APR02</td>
<td>2184 MWh</td>
</tr>
<tr>
<td>F0BQ JUL02</td>
<td>2208 MWh</td>
</tr>
<tr>
<td>F0BQ OCT02</td>
<td>2208 MWh</td>
</tr>
<tr>
<td>F0BA JAN02</td>
<td>744 MWh</td>
</tr>
<tr>
<td>F0BA FEB02</td>
<td>672 MWh</td>
</tr>
<tr>
<td>F0BA MAR02</td>
<td>744 MWh</td>
</tr>
<tr>
<td>F0BA APR02</td>
<td>720 MWh</td>
</tr>
<tr>
<td>F0BA MAY02</td>
<td>744 MWh</td>
</tr>
<tr>
<td>F0BA JUN02</td>
<td>720 MWh</td>
</tr>
<tr>
<td>F0BA JUL02</td>
<td>744 MWh</td>
</tr>
<tr>
<td>F0BA AUG02</td>
<td>744 MWh</td>
</tr>
<tr>
<td>F0BA SEP02</td>
<td>720 MWh</td>
</tr>
<tr>
<td>F0BA OCT02</td>
<td>744 MWh</td>
</tr>
<tr>
<td>F0BA NOV02</td>
<td>720 MWh</td>
</tr>
<tr>
<td>F0BA DEC02</td>
<td>744 MWh</td>
</tr>
</tbody>
</table>
(2) Sample Portfolio

The following position portfolio is assumed:

<table>
<thead>
<tr>
<th>Product</th>
<th>Trading Unit</th>
<th>Closing Price</th>
<th>Upside Theoretical Value</th>
<th>Downside Theoretical Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>F0BY JAN02 100 L</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F0BQ JAN02 50 S</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F0BA JAN02 20 S</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F0BA APR02 20 S</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F0BA JUL02 100 S</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(3) Reduction Factors

In this example the used reduction factors are:

<table>
<thead>
<tr>
<th>Product</th>
<th>Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>F0BY</td>
<td>1.00</td>
</tr>
<tr>
<td>F0BQ</td>
<td>0.50</td>
</tr>
<tr>
<td>F0BA</td>
<td>0.50</td>
</tr>
</tbody>
</table>

This means that the volatility of F0BQ for crossed positions is only one half of the volatility of F0BQ for non-crossed positions. This is also valid for the monthly product.

(4) Theoretical Values for Crossed and Non-Crossed Positions

A closing price of 20 Euros is assumed for all products here. But any other price could be chosen because the calculation only depends on the difference between upside theoretical value and closing price and downside theoretical value and closing price.

<table>
<thead>
<tr>
<th>Product</th>
<th>Contract</th>
<th>Crossed/Non-crossed</th>
<th>Trading Unit</th>
<th>Closing Price</th>
<th>Downside Theoretical Value</th>
<th>Upside Theoretical Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>F0BA</td>
<td>Jan 02</td>
<td>crossed</td>
<td>744</td>
<td>20</td>
<td>16.00</td>
<td>24.00</td>
</tr>
<tr>
<td>F0BA</td>
<td>Jan 02</td>
<td>crossed</td>
<td>744</td>
<td>20</td>
<td>18.00</td>
<td>22.00</td>
</tr>
<tr>
<td>F0BA</td>
<td>Apr 02</td>
<td></td>
<td>720</td>
<td>20</td>
<td>16.00</td>
<td>24.00</td>
</tr>
<tr>
<td>F0BA</td>
<td>Apr 02</td>
<td>crossed</td>
<td>720</td>
<td>20</td>
<td>18.00</td>
<td>22.00</td>
</tr>
</tbody>
</table>
(5) **Calculation of the Crossed and Non-Crossed Positions**

**Annual Product:**

<table>
<thead>
<tr>
<th>Product</th>
<th>Contract</th>
<th>Crossed/Non-crossed</th>
<th>Trading Unit</th>
<th>Closing Price</th>
<th>Downside Theoretical Value</th>
<th>Upside Theoretical Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>F0BA</td>
<td>Jul 02</td>
<td>744</td>
<td>20</td>
<td>16.00</td>
<td></td>
<td>24.00</td>
</tr>
<tr>
<td>F0BA</td>
<td>Jul 02</td>
<td>crossed</td>
<td>744</td>
<td>20</td>
<td>18.00</td>
<td>22.00</td>
</tr>
<tr>
<td>F0BQ</td>
<td>Jan 02</td>
<td>2160</td>
<td>20</td>
<td>17.00</td>
<td></td>
<td>23.00</td>
</tr>
<tr>
<td>F0BQ</td>
<td>Jan 02</td>
<td>crossed</td>
<td>2160</td>
<td>20</td>
<td>18.50</td>
<td>21.50</td>
</tr>
<tr>
<td>F0BQ</td>
<td>Jul 02</td>
<td>2208</td>
<td>20</td>
<td>17.00</td>
<td></td>
<td>23.00</td>
</tr>
<tr>
<td>F0BQ</td>
<td>Jul 02</td>
<td>crossed</td>
<td>2208</td>
<td>20</td>
<td>18.50</td>
<td>21.50</td>
</tr>
<tr>
<td>F0BY</td>
<td>Jan 02</td>
<td>8760</td>
<td>20</td>
<td>18.00</td>
<td></td>
<td>22.00</td>
</tr>
<tr>
<td>F0BY</td>
<td>Jan 02</td>
<td>crossed</td>
<td>8760</td>
<td>20</td>
<td>18.00</td>
<td>22.00</td>
</tr>
</tbody>
</table>

**Quarterly Product:**

<table>
<thead>
<tr>
<th>Level I</th>
<th>Position P_i</th>
<th>Remaining Overlap R_i</th>
<th>Crossed Position P_li,crossed</th>
<th>Non-Crossed Position P_li,non-crossed</th>
</tr>
</thead>
<tbody>
<tr>
<td>F0BY Jan 02</td>
<td>100L</td>
<td>0</td>
<td>0</td>
<td>100L</td>
</tr>
<tr>
<td>F0BQ Jan 02</td>
<td>50S</td>
<td>100L</td>
<td>50S</td>
<td>0</td>
</tr>
</tbody>
</table>
## Clearing Calculation and Settlement Procedure

### Monthly Product:

<table>
<thead>
<tr>
<th>Level I</th>
<th>Position $P_l$</th>
<th>Remaining $R_l$</th>
<th>Crossed Position $P_{l,crossed}$</th>
<th>Non-Crossed Position $P_{l,non-crossed}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>F0BY Jan 02</td>
<td>100L</td>
<td>0</td>
<td>0</td>
<td>100L</td>
</tr>
<tr>
<td>F0BQ Jul 02</td>
<td>100S</td>
<td>100L</td>
<td>100S</td>
<td>0</td>
</tr>
<tr>
<td>F0BA Jan 02</td>
<td>20S</td>
<td>50L</td>
<td>20S</td>
<td>0</td>
</tr>
<tr>
<td>F0BY Jan 02</td>
<td>100L</td>
<td>0</td>
<td>0</td>
<td>100L</td>
</tr>
<tr>
<td>F0BQ Jan 02</td>
<td>50S</td>
<td>100L</td>
<td>50S</td>
<td>0</td>
</tr>
<tr>
<td>F0BA Jan 02</td>
<td>20S</td>
<td>50L</td>
<td>20S</td>
<td>0</td>
</tr>
<tr>
<td>F0BY Jan 02</td>
<td>100L</td>
<td>0</td>
<td>0</td>
<td>100L</td>
</tr>
<tr>
<td>F0BQ Apr 02</td>
<td>0</td>
<td>100L</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>F0BA Apr 02</td>
<td>20S</td>
<td>100L</td>
<td>20S</td>
<td>0</td>
</tr>
<tr>
<td>F0BY Jan 02</td>
<td>100L</td>
<td>0</td>
<td>0</td>
<td>100L</td>
</tr>
<tr>
<td>F0BQ Jul 02</td>
<td>100S</td>
<td>100L</td>
<td>100S</td>
<td>0</td>
</tr>
<tr>
<td>F0BA Jul 02</td>
<td>100S</td>
<td>0</td>
<td>0</td>
<td>100S</td>
</tr>
</tbody>
</table>
### Liquidating Values for Crossed and Non-Crossed Positions

Resulting from the theoretical values and the position splitting the following liquidating values are derived:

#### Downside Values

<table>
<thead>
<tr>
<th>Product</th>
<th>Contract</th>
<th>Crossed/Non-crossed</th>
<th>Net Pos</th>
<th>Trad Unit</th>
<th>Current Value</th>
<th>Downside Risk Value</th>
<th>Downside Variation</th>
</tr>
</thead>
<tbody>
<tr>
<td>F0BA</td>
<td>Jan 02</td>
<td>crossed</td>
<td>-20</td>
<td>744</td>
<td>297600</td>
<td>267840</td>
<td>-29760</td>
</tr>
<tr>
<td>F0BA</td>
<td>Apr 02</td>
<td>crossed</td>
<td>-20</td>
<td>720</td>
<td>288000</td>
<td>259200</td>
<td>-28800</td>
</tr>
<tr>
<td>F0BA</td>
<td>July 02</td>
<td>crossed</td>
<td>-100</td>
<td>744</td>
<td>1488000</td>
<td>1190400</td>
<td>-297600</td>
</tr>
<tr>
<td>F0BA</td>
<td>July 02</td>
<td>crossed</td>
<td>0</td>
<td>744</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>F0BQ</td>
<td>Jan 02</td>
<td>crossed</td>
<td>-50</td>
<td>2160</td>
<td>2160000</td>
<td>1998000</td>
<td>-162000</td>
</tr>
<tr>
<td>F0BQ</td>
<td>Jul 02</td>
<td>crossed</td>
<td>-100</td>
<td>2208</td>
<td>4416000</td>
<td>4084800</td>
<td>-331200</td>
</tr>
<tr>
<td>F0BY</td>
<td>Jan 02</td>
<td>crossed</td>
<td>100</td>
<td>8760</td>
<td>17520000</td>
<td>15768000</td>
<td>1752000</td>
</tr>
<tr>
<td>F0BY</td>
<td>Jan 02</td>
<td>crossed</td>
<td>0</td>
<td>8760</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
## Upside Values

<table>
<thead>
<tr>
<th>Product</th>
<th>Contract</th>
<th>Crossed/Non-crossed</th>
<th>Net Pos</th>
<th>Trad Unit</th>
<th>Current Value</th>
<th>Upside Risk Value</th>
<th>Upside Variation</th>
</tr>
</thead>
<tbody>
<tr>
<td>F0BA</td>
<td>Jan 02</td>
<td>0</td>
<td>744</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>F0BA</td>
<td>Jan 02</td>
<td>crossed -20</td>
<td>744</td>
<td>297600</td>
<td>327360</td>
<td>29760</td>
<td></td>
</tr>
<tr>
<td>F0BA</td>
<td>Apr 02</td>
<td>0</td>
<td>720</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>F0BA</td>
<td>Apr 02</td>
<td>crossed -20</td>
<td>720</td>
<td>288000</td>
<td>316800</td>
<td>28800</td>
<td></td>
</tr>
<tr>
<td>F0BA</td>
<td>Jul 02</td>
<td>-100</td>
<td>744</td>
<td>1488000</td>
<td>1785600</td>
<td>297600</td>
<td></td>
</tr>
<tr>
<td>F0BA</td>
<td>Jul 02</td>
<td>crossed 0</td>
<td>744</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>F0BQ</td>
<td>Jan 02</td>
<td>0</td>
<td>2160</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>F0BQ</td>
<td>Jan 02</td>
<td>crossed -50</td>
<td>2160</td>
<td>2160000</td>
<td>2322000</td>
<td>162000</td>
<td></td>
</tr>
<tr>
<td>F0BQ</td>
<td>Jul 02</td>
<td>0</td>
<td>2208</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>F0BQ</td>
<td>Jul 02</td>
<td>crossed -100</td>
<td>2208</td>
<td>4416000</td>
<td>4747200</td>
<td>331200</td>
<td></td>
</tr>
<tr>
<td>F0BY</td>
<td>Jan 02</td>
<td>100</td>
<td>8760</td>
<td>17520000</td>
<td>19272000</td>
<td>-175200</td>
<td></td>
</tr>
<tr>
<td>F0BY</td>
<td>Jan 02</td>
<td>crossed 0</td>
<td>8760</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

(7) **Additional Margin for Crossed and Non-crossed Positions**

<table>
<thead>
<tr>
<th>Product</th>
<th>Contract</th>
<th>Crossed/Non-crossed</th>
<th>Upside Value</th>
<th>Downside Value</th>
<th>Offset Factor</th>
<th>Adjusted Upside</th>
<th>Adjusted Downside</th>
<th>Additional Margin</th>
</tr>
</thead>
<tbody>
<tr>
<td>F0BA</td>
<td>Jan 02</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.00</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>F0BA</td>
<td>Jan 02</td>
<td>crossed</td>
<td>29.760</td>
<td>-29.760</td>
<td>0.00</td>
<td>29.760</td>
<td>0</td>
<td>29.760</td>
</tr>
<tr>
<td>F0BA</td>
<td>Apr 02</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.00</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>F0BA</td>
<td>Apr 02</td>
<td>crossed</td>
<td>28.800</td>
<td>-28.800</td>
<td>0.00</td>
<td>28.800</td>
<td>0</td>
<td>28.800</td>
</tr>
<tr>
<td>F0BA</td>
<td>July 02</td>
<td>297.600</td>
<td>-297.600</td>
<td>0.00</td>
<td>297.600</td>
<td>0</td>
<td>297.600</td>
<td></td>
</tr>
<tr>
<td>F0BA</td>
<td>July 02</td>
<td>crossed</td>
<td>0</td>
<td>0</td>
<td>0.00</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
3.2.5.6.14 Additional Margin for Physically Settled Energy Futures

Before the start of settlement period, the additional margin for physically settled energy future contracts is calculated as for other energy future contracts. The contract’s trade unit is used for calculation of additional margin.

A physically settled energy future contract enters the settlement period two trading days before the start of the delivery month. The volatility for a physically settled contract increases during the delivery month. Therefore it is required, that the daily additional margin is constant during the settlement period. To achieve this the original trade unit, received from Eurex the day before entering the settlement period, is used for margin calculation during the whole settlement period and not the trade unit, which is reduced continuously each business day during the settlement period. The margin parameter must be entered as an absolute value and is in this context an amount in the margin class currency per MWh. The margin class currency is the same as the currency of the product(s) assigned to the margin class.

<table>
<thead>
<tr>
<th>Product</th>
<th>Contract</th>
<th>Crossed/Non-crossed</th>
<th>Upside Value</th>
<th>Downside Value</th>
<th>Offset Factor</th>
<th>Adjusted Upside</th>
<th>Adjusted Downside</th>
<th>Additional Margin</th>
</tr>
</thead>
<tbody>
<tr>
<td>F0BQ</td>
<td>Jan 02</td>
<td>crossed</td>
<td>162.000</td>
<td>-162000</td>
<td>0.00</td>
<td>162.000</td>
<td>0</td>
<td>162.000</td>
</tr>
<tr>
<td>F0BQ</td>
<td>Jul 02</td>
<td>crossed</td>
<td>331.200</td>
<td>-331200</td>
<td>0.00</td>
<td>331200</td>
<td>0</td>
<td>331200</td>
</tr>
<tr>
<td>F0BY</td>
<td>Jan 02</td>
<td>crossed</td>
<td>-1.752.00</td>
<td>1.752.00</td>
<td>0.00</td>
<td>1.752.00</td>
<td>0</td>
<td>1.752.000</td>
</tr>
</tbody>
</table>

The overall margin requirement in this example is 2,601,360 Euros.

If the cross margin parameter in step 3.) of this example is set to “1” for all products, one would arrive at the full margin amount for all products and an overall margin requirement of 3,153,120 Euros - which is considerably more than the amount calculated with the reducing cross margin parameter.
3.2.5.6.15 Additional Margin for EEX futures on Expiration Day

For cash settled and physically settled EEX futures additional margin is not required on the expiration day.

For EEX futures that are settled via the cascading approach, additional margin on the expiration day is not required for the root but for the target positions resulting from the cascading settlement.

3.2.5.7 Margin Requirement of a Margin Class

The calculation of the margin requirement and of the margin credit of a margin class is displayed on the “Daily Margin” report (RPTCC050). The daily margin requirement is displayed in the currency of the margin class.

For Eurex products, the daily margin requirement/margin credit (unadjusted margin requirement of a margin class) is calculated by adding up:

- the margin requirement (credit) of the options premium margin
- the current liquidating margin requirement/credit
- the margin requirement of the futures spread margin
- the margin requirement/credit of the additional margin

If matching specific equity collateral was assigned to the exchange member and account type (A1 - A9/PP), effective unadjusted margin requirement of a margin class is calculated:

- If the unadjusted margin requirement is positive, it is decreased by the value of the assigned specific equity collateral. If the value of the specific equity collateral is higher than the unadjusted margin requirement, effective unadjusted margin requirement is set to zero. The over-allocated specific equity collateral never transforms into a margin credit.
- If the unadjusted margin requirement is negative (margin credit), it stays unchanged.

Specific equity collateral is applicable only if it matches the underlying security of the margin class it is intended to cover. The matching is resolved automatically. Specific equity collateral cannot be used to cover cash market positions, including those resulting from exercised stock options.

The usage and valuation of specific equity collateral and the remaining effective unadjusted margin requirement are displayed on the “Specific Equity Collateral” report (RPTCC051).

For details on assignment and valuation of the specific equity collateral see section 8.4 “Specific Equity Collateral” on page 193.

For EEX products, the daily margin requirement of a margin class is calculated based on:

- the margin requirement of the options premium margin
- the margin requirement/credit of the additional margin EEX
- the margin requirement of the delivery margin

For equity positions, the daily margin requirement is not calculated on the margin class level but on the margin group level.
3.2.5.8 Margin Requirements of a Margin Group

The overall daily margin requirement is calculated in two steps. First, the effective additional margin requirements calculated for margin classes belonging to the group are converted by multiplying the values by the offset percentage. Then the converted requirements are added up for all the price/volatility movement scenarios. The maximum of these requirements is the additional margin for the margin group.

Note, however, that only margin credits are multiplied by an offset factor. As the offset factors can be also negative [-1,1], the margin credits can get debits. Debts are kept unchanged. Sums of upside and downside values are compared and the bigger one is used for the additional margin.

3.2.5.8.1 Balancing the Margin Credits and Debits

This chapter only applies to Eurex.

When the margin calculations of some margin classes result in a surplus or shortfall, these can be used to balance the margin requirements of other classes. For further details on margin offsetting and how the total margin requirement is obtained please refer to section 3.3 “Cross Currency Margining” on page 88.

3.2.5.9 Margin Requirements of an Exchange Member Account

The calculation of the margin requirement of an exchange member account is shown on the “Daily Margin” report (RPTCC050) without a potentially necessary balance adjustment, and on “Daily Margin Offset” report (RPTCC055) in conjunction with the “Daily Margin Summary” (RPTCC060). The “Daily Margin Summary” report also shows the delivery margin for energy trades.

As shown on the “Daily Margin” report (RPTCC050), the daily margin requirement before balance adjustment (unadjusted margin requirement, \([\text{Unad Mgn Rqr}]\)) of an exchange member account is calculated by adding premium margin \([\text{Prem Mgn}]\), current liquidating margin \([\text{Curt Liq / Dlv Mgn}]\), futures spread margin \([\text{Fut Sprd Mgn}]\) and additional margin \([\text{Add Mgn}]\) of all margin classes and currencies of this account.

If the result is a margin credit (i.e. the unadjusted margin requirement is less than zero), it can be used to reduce the margin requirements of a different class within the same Eurex Margin group and account.

For EEX margin classes, the premium margin (options on electricity futures), futures spread margin and the delivery margin (futures on electricity), and additional margin contribute to the margin requirement.
3.2.5.10 Margin Requirement of a Clearing Member

The calculation for the margin requirement is shown on the Daily Margin Overview window and the RPTC060 DAILY MARGIN SUMMARY REPORT. The ‘Daily Margin Summary’ report also shows the delivery margin for energy trades.

The margin requirements of an exchange member are calculated separately for accounts A1 - A9 and PP. The aggregation of margin requirements for a Clearing Member depends on the Client Asset Protection Solution selected by the Clearing Member. Refer to section “Overview of the Risk-based Margining Method” on page 33 for full details.

**Note:** The margin requirement is displayed in the currency of the clearing member, and the margin requirement calculated for Clearing Member with CCP-only-Non Clearing Member contains the amount for their own requirements as well as the amount for the CCP-only-Non Clearing Member.

3.2.5.11 Margin Requirement Information of Non Clearing Member

Margin requirement information of Non Clearing Members (NCMs) and the total margin requirement information of Clearing Members (CMs) is displayed in the Margin Requirement Information window. This window is only available for the CMs.

The Margin Requirement Information window is empty until the optional filter fields ExchMbr, Curr and Account are filled. Click the Inquiry icon to display the margin requirement information in the table.
3.2.5.12 Window Layouts

Please refer to the section 1.2 "How to Use" on page 9 for exchange specific points.

Example of Daily Margin Overview window (as referenced in section 3.2.5.10 “Margin Requirement of a Clearing Member” on page 77):

Example of Margined Position Overview window (as referenced in sections 3.2.5.2.1 “Positions Netting in the Case of Options” on page 38 and 3.2.5.2.2 “Position Netting with Eurex Futures” on page 39):
Example of Margin Requirement Information window (as referenced in section 3.2.5.11 “Margin Requirement Information of Non Clearing Member” on page 77)

Margin Requirement Information window

A complete description of the above windows is available in the “Eurex @ X-tract Clearing User Guide”. 
3.2.5.13 Report Layouts

Refer to section 1.2 "How to Use" on page 9 for exchange-specific points.

Example of Premium Margin report RPTCC010 (as referenced in sections 3.2.5.2.1 "Positions Netting in the Case of Options" on page 38 and 3.2.5.3 "Calculation of the Premium Margin" on page 41):

<table>
<thead>
<tr>
<th>Clearing Member</th>
<th>Exchange Member</th>
<th>Ac Curr</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABCFR - BANK CORPORATION</td>
<td>ABCFR - BANK CORPORATION</td>
<td>A1 EUR</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Margin Class</th>
<th>UndrClsPrc</th>
<th>BAS - BASF</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAS - BASF</td>
<td>41.95</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contract</th>
<th>FlxTrnNo</th>
<th>SfxNo</th>
<th>FlxContract</th>
</tr>
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<tbody>
<tr>
<td>750546333 00001</td>
<td>C BAS</td>
<td>16-05-07</td>
<td>440000 K</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LngOpn</th>
<th>LngExer</th>
<th>ShtOpn</th>
<th>ShtAsg</th>
<th>Net Lng</th>
<th>Net Sht</th>
<th>SetlPrc</th>
<th>TrdUntVal</th>
<th>PremMgn</th>
</tr>
</thead>
<tbody>
<tr>
<td>123,456</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>123,456</td>
<td>0</td>
<td>L</td>
<td>5.00</td>
<td>100.0000</td>
</tr>
</tbody>
</table>

Total Premium Margin For Class

<table>
<thead>
<tr>
<th>Total Premium Margin For Account</th>
</tr>
</thead>
<tbody>
<tr>
<td>61,728,000.00</td>
</tr>
</tbody>
</table>

Total Premium Margin For Account

<table>
<thead>
<tr>
<th>Total Premium Margin For Account</th>
</tr>
</thead>
<tbody>
<tr>
<td>61,728,000.00</td>
</tr>
</tbody>
</table>
Example of Current Liquidating Margin report RPTCC011 (as referenced in section 3.2.5.4 "Calculation of CLM for Cash, Bond and Equity Positions" on page 42):

<table>
<thead>
<tr>
<th>Margin Class</th>
<th>Cash Interest Rate</th>
<th>Risk Adapted Interest Rates - Up</th>
<th>Risk Adapted Interest Rates - Down</th>
</tr>
</thead>
<tbody>
<tr>
<td>EFG</td>
<td>3.0000</td>
<td>3.5000</td>
<td>2.5000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ISIN</th>
<th>Settlement Price</th>
<th>Coupon Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>DE4444444444</td>
<td>102.0000</td>
<td>5.000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SetlDat</th>
<th>Loc</th>
<th>TrdDat</th>
<th>TrdNo</th>
<th>SecuPos</th>
<th>CashPos</th>
<th>CA</th>
<th>CrtLiqValSecu</th>
<th>CrtLiqValCsh</th>
<th>AdjMgn</th>
</tr>
</thead>
</table>
| 04-01-07| 45,000,000.00 | 45,000,000.00  | 45,889,860.10 | 45,807,767.00 | 82,103.10

Total Current Liquidating Margin For ISIN Class And Account 82,103.10

Total Current Liquidating Margin For Class And Account 82,103.10
Example of Futures Spread Margin report (RPTCC020, as referenced in sections:

- 3.2.5.2.2 "Position Netting with Eurex Futures" on page 39
- 3.2.5.5.1 "Calculation of the Spot-Month Spread Margin" on page 46
- 3.2.5.5.2 "Calculation of the Back-Months' Spread Margin" on page 48
- 3.2.5.5.3 "Calculation of the Futures Spread Margins" on page 48

The Margin Factor field in RPTCC020 Futures Spread Margin report is available for every Clearing Member and is used for member specific adaptations of the margin requirement in order to reflect different risk classes of the members. It is applied exclusively on additional and future spread margin (both positive and negative values). The resulting additional and spread margin figures are propagated to the total margin calculation.
Example of Theoretical Values II report (RPTCC031, as referenced in sections 3.2.5.6.2 "Determination and Use of Margin Intervals, Eurex" on page 50 and 3.2.5.6.6 "Calculation of the Projected Liquidation Costs and Proceeds" on page 57):

```
<table>
<thead>
<tr>
<th>Margin Class</th>
<th>Margin Parameter</th>
<th>Currency</th>
<th>Cash Interest Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

```

```
<table>
<thead>
<tr>
<th>ISIN</th>
<th>Coupon</th>
<th>CurrentClosingPrice</th>
<th>MaxUpMovement</th>
<th>MaxDownMovement</th>
<th>CouponDate</th>
<th>CouponAdj</th>
</tr>
</thead>
<tbody>
<tr>
<td>DE0001135135</td>
<td>5.375</td>
<td>110.44</td>
<td></td>
<td></td>
<td></td>
<td>5.264</td>
</tr>
<tr>
<td>DE0001135135</td>
<td>5.375</td>
<td>110.44</td>
<td>111.39</td>
<td>109.49</td>
<td>04-01-06</td>
<td>5.264</td>
</tr>
<tr>
<td>DE0001135135</td>
<td>5.375</td>
<td>110.44</td>
<td>111.39</td>
<td>109.49</td>
<td>04-01-04</td>
<td>5.486</td>
</tr>
<tr>
<td>DE0001135135</td>
<td>5.375</td>
<td>110.44</td>
<td>111.39</td>
<td>109.49</td>
<td>04-01-03</td>
<td>5.697</td>
</tr>
</tbody>
</table>
```

---

```
BEGINNING OF REPORT
```
Example of Theoretical Values III report (RPTCC033, see example in section 3.2.5.6.6 "Calculation of the Projected Liquidation Costs and Proceeds" on page 57):

******************************************************************************
*                                                                      *
*                                EUREX                                *
*                                                                      *
*                      C O N F I D E N T I A L                        *
*                                                                      *
*                CC033  Theoretical Values III                        *
*                                                                      *
*                ABCFR BANK CORPORATION                              *
*                                                                      *
*                 AS OF DATE:    23-10-00                             *
*                                                                      *
*                 RUN DATE  :    23-10-00                             *
*                                                                      *
*                        BEGINNING OF REPORT                          *
******************************************************************************

Currency
--------
EUR

<table>
<thead>
<tr>
<th>MarginClass</th>
<th>MarginParameterUp</th>
<th>MarginParameterDown</th>
<th>Unit</th>
<th>ISIN</th>
<th>Prices</th>
<th>PriceType</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMW</td>
<td>11.00</td>
<td>11.00</td>
<td>p</td>
<td>DE0005190003</td>
<td>35.600000</td>
<td>MAX UP</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>36.000000</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>37.000000</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>38.000000</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>39.000000</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>40.000000</td>
<td>SETTL PRICE</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>41.000000</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>42.000000</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>43.000000</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>44.000000</td>
<td>MAX DOWN</td>
</tr>
</tbody>
</table>
Example of Theoretical Prices report (RPTCC034, see example in section 3.2.5.6.6 "Calculation of the Projected Liquidation Costs and Proceeds" on page 57):

<table>
<thead>
<tr>
<th>Currency</th>
<th>MgCls</th>
<th>MgnParm</th>
<th>U</th>
<th>ISIN</th>
<th>ISINOfUndr</th>
<th>SubsRtio</th>
<th>SubsPrc</th>
<th>Vola %</th>
<th>SubsPEnd</th>
<th>Prc</th>
<th>Prc Typ</th>
<th>TheoVal</th>
</tr>
</thead>
<tbody>
<tr>
<td>EUR</td>
<td>11.00</td>
<td>P</td>
<td>DE0005190081</td>
<td>DE0005190003</td>
<td>0.14286</td>
<td>30.00</td>
<td>3.00</td>
<td>00-11-10</td>
<td>35.60000</td>
<td>MAX UP</td>
<td>0.79000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>36.00000</td>
<td></td>
<td>0.88000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>37.00000</td>
<td></td>
<td>0.97000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>38.00000</td>
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<td>1.08000</td>
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</tr>
<tr>
<td></td>
<td>39.00000</td>
<td></td>
<td>1.20000</td>
<td></td>
<td></td>
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<td>40.00000</td>
<td>SETVL PRICE</td>
<td>1.35000</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>41.00000</td>
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<td>1.50000</td>
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<tr>
<td></td>
<td>42.00000</td>
<td></td>
<td>1.70000</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td></td>
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<td>44.00000</td>
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<td>2.03000</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>44.40000</td>
<td>MAX DOWN</td>
<td>2.11000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Example of Liquidating Values RPTCC040, as referenced in sections:

- 3.2.5.6.6 "Calculation of the Projected Liquidation Costs and Proceeds" on page 57
- 3.2.5.6.7 "Calculation of the Settlement Difference to Determine the Additional Margin" on page 63
- 3.2.5.6.8 "Additional Margin of a Margin Class" on page 64:

<table>
<thead>
<tr>
<th>Clearing Member</th>
<th>Exchange Member</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABCFR - ABC BANK KGAA</td>
<td>ABCFR - ABC BANK KGAA</td>
</tr>
<tr>
<td>Account</td>
<td>Curr Margin Group</td>
</tr>
<tr>
<td>A1</td>
<td>EUR</td>
</tr>
<tr>
<td>Security</td>
<td>Settl Date</td>
</tr>
<tr>
<td>C OESX DEC 2009</td>
<td>3900</td>
</tr>
<tr>
<td>Risk Position</td>
<td>LSAE</td>
</tr>
<tr>
<td>1,000.000</td>
<td>L</td>
</tr>
<tr>
<td>L4927509,997.30</td>
<td>4,197.30</td>
</tr>
<tr>
<td>Security</td>
<td>Settl Date</td>
</tr>
<tr>
<td>C OESX DEC 2009</td>
<td>3800</td>
</tr>
<tr>
<td>Risk Position</td>
<td>LSAE</td>
</tr>
<tr>
<td>900.000</td>
<td>S</td>
</tr>
<tr>
<td>L4927509,997.30</td>
<td>4,197.30</td>
</tr>
<tr>
<td>Security</td>
<td>Settl Date</td>
</tr>
<tr>
<td>C OESX DEC 2009</td>
<td>3800</td>
</tr>
<tr>
<td>Risk Position</td>
<td>LSAE</td>
</tr>
<tr>
<td>900.000</td>
<td>S</td>
</tr>
<tr>
<td>L4927509,997.30</td>
<td>4,197.30</td>
</tr>
</tbody>
</table>
An example of the Additional Margin report (RPTCC045) is given in section 3.3.2.1 "Calculation of Additional Margin for Margin Groups" on page 91.

An example of the Daily Margin report (RPTCC050) is given in section 3.3.2.2 "Calculation of Margin Requirement per Member/Account and Currency" on page 93.

Example of Specific Equity Collateral Usage report (RPTCC051), as referenced in section 3.2.5.7 "Margin Requirement of a Margin Class" on page 75:

An example of the Daily Margin Offset report (RPTCC055) is given in section 3.3.2.3 "Calculation of Cross Currency Margin Netting" on page 95.

An example of the Daily Margin Summary report (RPTCC060) is given in section 3.3.2.4 "Calculation of Total Margin Requirement" on page 96.

A comprehensive description of the above mentioned reports is available in the “Eurex XML Report Reference Manual".
3.3 Cross Currency Margining

3.3.1 Introduction

Eurex provides the facility for margin offset between margin requirements and margin surpluses, independent of their currency. This is done in an additional margin step represented by report RPTCC055.

To consider possible margin surpluses/shortfalls within the calculation of the total margin requirement, adjusted exchange rates are used to allow a more precise risk measurement: Whenever a margin surplus exists in a currency different from the clearing member currency, a currency haircut factor is applied which represents the exchange rate risk between both respective currencies. The currency haircut reduces the value of the margin surplus with the application of the risk adapted exchange rate. Whenever a margin shortfall exists in a currency different from the clearing currency, the value is increased with the application of the risk adapted exchange rate. The haircuts are published by Eurex Clearing and adjusted in case of higher volatilities between the currencies.

3.3.1.1 Basic Principles

1. The netting of margin surpluses and margin shortfalls is done per A1 - A9/PP accounts per NCM of a GCM.
2. The haircut is symmetric i.e. the haircut for a currency A against currency B is the same as for currency B against A.
3. Haircuts are defined as percentages.
4. Haircuts are applied to the daily exchange rates resulting in adjusted debit and credit exchange rates. These adjusted exchange rates are available for Eurex members daily before start of the end-of-day batch via the VALUES API.
5. The adjusted margin calculation involves margins due to positions in Eurex traded products, EEX derivative products, Eurex Bonds products, Eurex Repo products and equities cleared via the Equity CCP.
6. The collateral coverage of other currencies, transposed with the adjusted exchange rate, is taken also into account.

Note: A range of eight additional agent accounts (A2 - A9) is available for Clearing Members as outlined in section 4.3 "Usage of Additional Agent Accounts" on page 165.
The following reports show the effects of the haircut calculation:

<table>
<thead>
<tr>
<th>Report ID</th>
<th>Report Name</th>
<th>Report adjustments</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC045</td>
<td>Additional Margin</td>
<td>The adjusted exchange rates are applied for the conversion of upside and downside values. For surpluses, the credit rate is used. For shortfalls, the debit rate is used.</td>
</tr>
<tr>
<td>CC055</td>
<td>Daily Margin Offset</td>
<td>The report shows the netting of margin shortfalls and surpluses. The shortfalls and surpluses are converted into the clearer currency and are netted. The surplus sum is distributed to shortfalls. Shortfalls in different currencies are reduced in alphabetical order of the currency whereby the clearer currency is reduced as the last currency.</td>
</tr>
<tr>
<td>CC060</td>
<td>Daily Margin Summary</td>
<td>Instead of the different margin types (premium, futures spread, additional) the report contains only the unadjusted margin requirement and the total margin requirement.</td>
</tr>
<tr>
<td>CD042</td>
<td>Daily Settlement Statement</td>
<td>Instead of the exchange rate, the adjusted exchange rate is used. The credit rate is used for surpluses and the debit rate is used for shortfalls.</td>
</tr>
</tbody>
</table>
3.3.1.1 Haircut Parameters

The cross currency haircut values are maintained per currency and Eurex currency. The haircut parameter is stored as percentage (a real number with 1 digit before and 2 digits after the decimal point). The following table may serve as example.

<table>
<thead>
<tr>
<th>Currency</th>
<th>Eurex Currency</th>
<th>Haircut</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHF</td>
<td>CHF</td>
<td>0.00</td>
</tr>
<tr>
<td>CHF</td>
<td>EUR</td>
<td>1.70</td>
</tr>
<tr>
<td>EUR</td>
<td>CHF</td>
<td>1.70</td>
</tr>
<tr>
<td>EUR</td>
<td>EUR</td>
<td>0.00</td>
</tr>
<tr>
<td>USD</td>
<td>CHF</td>
<td>2.60</td>
</tr>
<tr>
<td>USD</td>
<td>EUR</td>
<td>2.40</td>
</tr>
<tr>
<td>CHF</td>
<td>USD</td>
<td>2.60</td>
</tr>
<tr>
<td>EUR</td>
<td>USD</td>
<td>2.40</td>
</tr>
</tbody>
</table>

The haircut parameters are defined per currency versus Eurex currency. The Haircut values are equal for the possible combinations of two currencies by definition. See combination CHF - EUR and EUR - CHF as example. The haircut is in both cases 0.02.

3.3.2 Maintenance of Haircuts and Adjusted Exchange Rate

For each pair of a currency and an Eurex-currency\(^{10}\), i.e. for each row in the window table, Market Supervision maintains the new cross currency haircut parameter. The Eurex host automatically calculates corresponding credit- and debit-related adjusted exchange rates. These are immediately available to the members, either in the Exchange Rate Overview window or via Values Request.

The following formulas are applied for calculation of the adjusted exchange rate by using the haircut parameter:

\[
\begin{align*}
(1) \quad \text{Adjusted credit exchange rate} & = \text{Exchange Rate} \times (1 + \text{Haircut}) \\
(2) \quad \text{Adjusted debit exchange rate} & = \text{Exchange Rate} \times (1 - \text{Haircut})
\end{align*}
\]

The base currency for the adjusted exchange rates is the respective Eurex-currency.

Members can monitor the haircut parameters and the resulting adjusted exchange rates at all times at the Exchange Rate Overview window.

\(^{10}\) A currency eligible for use as clearing (member) currency.
The precision of the adjusted credit/debit exchange rates is configured to the current reporting standards for the Exchange Rates (a real number with four digits prior to and six digits after the decimal point). The adjusted exchange rates are rounded according to the banker’s rule, i.e. if the 7th digit after the decimal point of the (internal) intermediate result is equal or greater than 5, it is rounded up, else it is rounded down.

---

3.3.2.1 Calculation of Additional Margin for Margin Groups

The calculation of the additional margin for margin groups uses the adjusted exchange rates for the conversion of the risk values for each price/volatility movement scenario into the clearing currency:

(1) surpluses are converted using the credit rate,
(2) shortfalls are converted using the debit rate.

The used rates for upside and downside are shown in the report RPTCC045:

Example of Additional Margin report RPTCC045 (as referenced in sections 3.2.5.6.8 "Additional Margin of a Margin Class" on page 64 and 3.2.5.6.9 "Additional Margin of a Margin Group" on page 65):
The field Margin Factor is available for every Clearing Member and is used for member specific adaptations of the margin requirement in order to reflect different risk classes of members. It is applied exclusively on additional and future spread margin (both positive and negative values). The resulting additional and spread margin figures is propagated to the total margin calculation.
3.3.2.2 Calculation of Margin Requirement per Member/Account and Currency

Within the calculation of the margin requirement per member/account and currency no changes are made. The corresponding report RPTCC050 shows all steps of the margin calculation. Example of Daily Margin report RPTCC050 (as referenced in sections 3.2.5.7 "Margin Requirement of a Margin Class" on page 75 and 3.2.5.9 "Margin Requirements of an Exchange Member Account" on page 76):

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**Eurex 14.0**

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**Eurex User Manual - System Overview & Information Manual**

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**Clearing Calculation and Settlement Procedure**

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**Eurex**

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**Eurex 14.0**

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**PROD**

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**As of Jan. 31, 2013**

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**Page 93**

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**Clearing Calculation and Settlement Procedure**

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**3.3.2.2 Calculation of Margin Requirement per Member/Account and Currency**

Within the calculation of the margin requirement per member/account and currency no changes are made. The corresponding report RPTCC050 shows all steps of the margin calculation. Example of Daily Margin report RPTCC050 (as referenced in sections 3.2.5.7 "Margin Requirement of a Margin Class" on page 75 and 3.2.5.9 "Margin Requirements of an Exchange Member Account" on page 76):

**Clearing Calculation and Settlement Procedure**

As of Jan. 31, 2013

---

#### VOM

<table>
<thead>
<tr>
<th>Account Total</th>
<th>70,253,898.70-</th>
<th></th>
<th>0.00</th>
<th></th>
<th>65,362,162.20</th>
<th>4,891,736.50-</th>
</tr>
</thead>
</table>

#### STXK

| KUD | 334,773.00- | 0.00 |              | 2,232.70 | 332,540.30- |

#### STXI

| SLHN | 2,597,311.20- | 0.00 |              | 1,905,571.50 | 691,739.70- |

#### STXH

| ROG | 7,807,013.00- | 0.00 |              | 1,951,712.50 | 5,855,300.50- |

#### STXB

| UBSN | 9,673,931.00- | 0.00 |              | 2,893,033.30 | 6,780,897.70- |

#### ZURN

| 1,044,114.40 | 0.00 |              | 4,939,861.30 | 5,983,975.70 |

#### SYST

| 400,714.00- | 0.00 |              | 133,732.40 | 266,981.60- |

#### SYN

| 31,288.20- | 0.00 |              | 7,247.10 | 24,041.10- |

#### SGSN

| 727,148.30- | 0.00 |              | 279,484.40 | 447,663.90- |

#### SEO

| 891,826.20 | 0.00 |              | 234,941.00 | 1,126,767.20 |

#### SCMN

| 238,314.40- | 0.00 |              | 125,539.40 | 112,775.00- |

#### RUKN

| 34,884.30- | 0.00 |              | 954,787.00 | 919,902.70 |

#### NESN

| 20,410,136.70- | 0.00 |              | 8,877,557.00 | 11,532,579.70- |

#### LTN

| 912,198.00- | 0.00 |              | 402,882.40 | 509,315.60- |

#### DON

| 449,102.50- | 0.00 |              | 449,102.50 | 449,102.50 |

#### SBF

| 711,356.00- | 0.00 |              | 797,316.40 | 2,594,567.70- |

#### RFC

| 1,561,835.00- | 0.00 |              | 338,164.70 | 1,223,670.30 |

#### BALN

| 281,832.00- | 0.00 |              | 581,521.90 | 299,689.90 |

#### BAER

| 1,545,182.80- | 0.00 |              | 750,286.40 | 794,896.40 |

#### ABBN

| 3,910,882.50- | 0.00 |              | 1,316,314.80 | 2,594,567.70- |

---

#### Clearing Member

| Account Total | 112,272,250.80- | 0.00 |              | 83,343,914.00 | 28,928,336.80- |

#### Exchange Member

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Clearing Member</td>
<td>Exchange Member</td>
</tr>
<tr>
<td>-----------------</td>
<td>-----------------</td>
</tr>
</tbody>
</table>

---

#### MgmGrp MgmCls

<table>
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<th>MgmCls</th>
<th>Prem Mgn</th>
<th>Curt Liq / Dlv Mgn</th>
<th>Fut Sprd Mgn</th>
<th>Add Mgn</th>
<th>Unad Mgn Reqr</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABCEX BANK CORPORATION</td>
<td>ABCEX BANK CORPORATION</td>
<td>EUR</td>
<td>PP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>707,349.00</td>
<td>0.00</td>
<td>772,621.20</td>
<td>1,479,970.20</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

#### Account Total

| 70,253,898.70- | 0.00 | 65,362,162.20 | 4,891,736.50- |

---

#### Clearing Calculation and Settlement Procedure

As of Jan. 31, 2013

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**PROD**
3.3.2.3 Calculation of Cross Currency Margin Netting

To calculate the margin offset amounts, an additional step within the margin calculation is introduced and is represented by report RPTCC055.

An additional step for the calculation of cross currency margin netting is also added to the total margin calculation. This step performs the following logic:

The calculation of the margin offset amounts and of the cross currency margin netting is done according to the following logic:

- calculate the sum of unadjusted margin requirements per:
  - clearing member
  - exchange member
  - account
  - currency
- convert the resulting sums into the clearing currency with:
  - using the credit exchange rate for surpluses
  - using the debit exchange rate for shortfalls
- sum up the surpluses in the clearing currency per:
  - clearing member
  - exchange member
  - account
- if the sum of surpluses is greater than zero then reduce the shortfalls per currency with the available surplus in the following order:
  - alphabetically per currency code
  - clearing currency to be used as last
Example of the Daily Margin Offset Report (RPTCC055), showing the offset between margin surplus and margin shortfall in different currencies:

<table>
<thead>
<tr>
<th>Curr</th>
<th>Unad Mgn Surplus</th>
<th>AdjExchRat</th>
<th>Mgn Surplus (Clr Curr)</th>
<th>Account Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CHF</td>
<td>333,279.00-</td>
<td>1.633485</td>
<td>204,029.40-</td>
<td>204,029.40-</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>EUR</td>
<td>2,015,940.00</td>
<td>1.000000</td>
<td>2,015,940.00</td>
<td>204,029.40-</td>
<td>1,811,910.60</td>
<td>1,811,910.60</td>
</tr>
</tbody>
</table>

3.3.2.4 Calculation of Total Margin Requirement

The Daily Margin Summary Report (RPTCC060) displays total margin requirement (on exchange member and account level) in particular currencies, the exchange rate, total margin requirement converted to the clearing currency and the overall clearing member total in clearing currency. The converted shortfall values are used on the Daily Margin Summary Report (RPTCC060).

Because there is no immediate relation between the values of premium margin, current liquidating/delivery margin, future spread margin, additional margin and the total margin requirement, the contributions of individual margin types are not displayed on the Daily Margin Summary Report (RPTCC060). The report shows just the sums of unadjusted margin requirements and total margin requirements per clearing member, currency, exchange member and account.
Example of Daily Margin Summary report (RPTCC060, as referenced in sections 3.2.5.9 “Margin Requirements of an Exchange Member Account” on page 76 and 3.2.5.10 “Margin Requirement of a Clearing Member” on page 77):

```
<table>
<thead>
<tr>
<th>Clearing Member</th>
<th>ClrCurr Currency</th>
<th>ExMbr Ac Unadjusted Margin Requirement</th>
<th>Total Margin Requirement</th>
<th>ExchRat</th>
<th>Mgn Requ (Clr Curr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABCFR - ABCFR</td>
<td>EUR</td>
<td>264,224.40</td>
<td>264,224.40</td>
<td>1.477915</td>
<td>178,781.90</td>
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<tr>
<td></td>
<td>CHF</td>
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<td></td>
</tr>
<tr>
<td>CAREX A1</td>
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<td>138,000.00</td>
<td>1.477915</td>
<td>93,374.80</td>
</tr>
<tr>
<td>PP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------</td>
<td>------------------</td>
<td>----------------------------------------</td>
<td>--------------------------</td>
<td>---------</td>
<td>----------------------</td>
</tr>
<tr>
<td>Exchange Member Total</td>
<td></td>
<td>402,224.40</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
```

```
<table>
<thead>
<tr>
<th>Clearing Member</th>
<th>ClrCurr Currency</th>
<th>ExMbr Ac Unadjusted Margin Requirement</th>
<th>Total Margin Requirement</th>
<th>ExchRat</th>
<th>Mgn Requ (Clr Curr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CISEX A1</td>
<td></td>
<td>127,512.00</td>
<td>127,512.00</td>
<td>1.477915</td>
<td>86,278.30</td>
</tr>
<tr>
<td>PP</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------</td>
<td>------------------</td>
<td>----------------------------------------</td>
<td>--------------------------</td>
<td>---------</td>
<td>----------------------</td>
</tr>
<tr>
<td>Exchange Member Total</td>
<td></td>
<td>127,512.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clearing Member Total</td>
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<td>529,736.40</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
```

```
<table>
<thead>
<tr>
<th>Clearing Member</th>
<th>ClrCurr Currency</th>
<th>ExMbr Ac Unadjusted Margin Requirement</th>
<th>Total Margin Requirement</th>
<th>ExchRat</th>
<th>Mgn Requ (Clr Curr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAREX A1</td>
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<td>362,344.50</td>
<td>1.000000</td>
<td>362,344.50</td>
</tr>
<tr>
<td>PP</td>
<td>EUR</td>
<td>82,503.20</td>
<td>82,503.20</td>
<td>1.000000</td>
<td>82,503.20</td>
</tr>
<tr>
<td>------------------</td>
<td>------------------</td>
<td>----------------------------------------</td>
<td>--------------------------</td>
<td>---------</td>
<td>----------------------</td>
</tr>
<tr>
<td>Exchange Member Total</td>
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<td>444,847.70</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
```

```
<table>
<thead>
<tr>
<th>Clearing Member</th>
<th>ClrCurr Currency</th>
<th>ExMbr Ac Unadjusted Margin Requirement</th>
<th>Total Margin Requirement</th>
<th>ExchRat</th>
<th>Mgn Requ (Clr Curr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CISEX A1</td>
<td>EUR</td>
<td>425,394.00</td>
<td>425,394.00</td>
<td>1.000000</td>
<td>425,394.00</td>
</tr>
<tr>
<td>PP</td>
<td>EUR</td>
<td>132,240.00</td>
<td>132,240.00</td>
<td>1.000000</td>
<td>132,240.00</td>
</tr>
<tr>
<td>------------------</td>
<td>------------------</td>
<td>----------------------------------------</td>
<td>--------------------------</td>
<td>---------</td>
<td>----------------------</td>
</tr>
<tr>
<td>Exchange Member Total</td>
<td></td>
<td>557,634.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clearing Member Total</td>
<td></td>
<td>1,002,481.70</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
```

```
<table>
<thead>
<tr>
<th>Clearing Member</th>
<th>ClrCurr Currency</th>
<th>ExMbr Ac Unadjusted Margin Requirement</th>
<th>Total Margin Requirement</th>
<th>ExchRat</th>
<th>Mgn Requ (Clr Curr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PP</td>
<td>EUR</td>
<td>1,360,916.70</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
```
3.3.2.5 Calculate Daily Settlement Statement & Overview

For the currency conversions the adjusted exchange rates are used instead of the original exchange rate. If the “Over/Under” value (in product currency) is positive, the adjusted exchange rate credit is used otherwise the adjusted exchange rate debit.

Example of Daily Settlement Summary Report (RPTCD042):

```
                     BEGINNING OF REPORT

  Curr   RequiredMargin | CashAccounts | AdjSecu | AdjGuar | Ovr/Udr | AdjExchRate | Ovr/Udr
  ----- ------------------ ----------------- -------- -------- ------- ------------ -------
  AUD  0.00 0.00 0 0 0 0 0.00 1.770012 0.00
  CAD  0.00 0.00 0 0 0 0 0.00 1.642376 0.00
  CHF  50,853.20 0.00 0 0 50,853.20- 1.572632 32,336.36-
  DEM  0.00 0.00 53,622,270 0 53,622,270.00 1.955830 27,416,631.30
  DKK  0.00 0.00 0 0 0 0.00 7.533489 0.00
  EUR  130,256,895.90 274,844.00 135,399,463 0 5,417,411.10 1.000000 5,417,411.10
  GBP  0.00 0.00 0 0 0 0.00 0.824171 0.00
  JPY  0.00 0.00 0 0 0 0.00 169.383580 0.00
  NOK  0.00 0.00 0 0 0 0.00 8.170138 0.00
  SEK  0.00 0.00 0 0 0 0.00 9.536663 0.00
  USD  0.00 0.00 0 0 0 0.00 1.526221 0.00

  Net Mgn Srpl 32,801,706.04
```

3.4 Calculation of the Variation Margin

3.4.1 General Description

Eurex calculates and books the profits and losses resulting from the open positions of products which are settled according to the “mark-to-market” procedure in the currency of the respective product daily. All Eurex futures are settled following this method, which is also used for options on futures (futures style method)\(^\text{11}\). In the “mark-to-market” procedure, each position in a futures or options contract is revalued at the daily settlement price.

This means that the holder of a long position which, on trading day, opened at a lower price than the daily closing price, is credited with the difference to the daily settlement price, while the holder of the corresponding short position must pay the price difference. When using the “mark-to-market” procedure on options positions, the calculation of credits and debits depends on how the value of a call options position or put options position develops (see section 3.12 "Settlement of Options in the “Future Style” Method (Options on Futures)" on page 144).

\(^\text{11}\) This also applies to OTC Flexible Fixed Income Options.
The positions that are valued at the daily closing price on a business day are submitted for a re-valuation using the "mark-to-market" procedure on the following business day. In this case, the difference between the previous day settlement price and that of the following business day is balanced with a corresponding variation margin.

The owner of a long position which was purchased at a lower price than the daily closing price (settlement price) is credited with the difference between the two prices, whereas the holder of the related short position must pay that difference. The calculation of the appropriate credits and debits depends on how the value of a call or put position changed during the trading day.

The “posting” of potential losses and profits by means of a new daily valuation is at the heart of the “mark-to-market” procedure. Thus, losses and profits from a futures position are not only realized on the contract expiration day, but every day. On the futures expiration day, only a final valuation of all of the open positions at the closing settlement price takes place.

In the case of options positions, the last valuation at the settlement price takes place either on the option maturity day or on the exercise/assignment day of the options position.

3.4.2 Determination of the Variation Margin for Eurex Products

Position accounts are grouped by product currencies. The variation margin is calculated for each position account and OTC Flexible Fixed Income Options transaction of an exchange member. The calculation of the variation margin for the positions of an exchange member in a futures or options contract is effected by means of the first three of the four steps described below.

In the first step, for mathematical reasons, all of the position movements are valued. In the second step, the positions from the previous day are valued as if all of the open positions on the previous day were still open. In the third step, the valuations of step 2 (previous day open positions closed on trading day) are netted against the valuations of step 1. The result is the net variation margin of a contract. In the fourth step, all of the variation margins of various contracts that must be settled by a clearing member are settled.

The calculation of the variation margin are divided into the four calculation steps listed below and are explained in more detail in the following sections:

- **Step 1**: Calculation of the variation margin for transactions carried out during the trading day.
- **Step 2**: Calculation of the variation margin of the open positions from the previous days.
- **Step 3**: Calculation of the net variation margin for the positions of a contract.
- **Step 4**: Calculation of the total net variation margin of a clearing member.

**Note**: For details of the calculation of Total Net Variation Margin for Clearing Members who offer Client Asset Protection to their clients, please refer to section 4 "Client Asset Protection" on page 152.
3.4.2.1 Calculation of Variation of Transactions Carried Out During Trading Day

Step 1 - Calculation of the variation margin for transactions carried out during the trading day

Each position transaction (trades, trade adjustments, position adjustments) of the trading day is adjusted to the daily settlement price by the “mark-to-market” procedure. Liquidation positions are valued here as well, because in “Step 2 - Calculation of the variation margin of the open positions from the previous days” the positions that are closed during the trading day are also valued as open positions. The daily variation margin of a newly opened position is calculated by multiplying the number of contracts by the difference between the daily settlement price and the buying price of the contract, in ticks, multiplied by the value per tick.

Calculation:

"mark-to-market" for BUY in ticks = (daily settlement price - buying price) / tick size

"mark-to-market" for SELL in ticks = (selling price - daily settlement price) / tick size

Trade variation margin = "mark-to-market" in ticks * contract quantity * value per tick

Example 1a:
Exchange member A buys 10 futures contracts on a notional government bond (German bond in EUR) at the price of 115.30. The daily settlement price of the contract amounts to 115.45. The “mark-to-market” corresponds to an increase of 15 ticks and the profit amounts to 1,500 EUR.

"mark-to-market" for BUY in ticks = + 15 = 115.45 - 115.30
variation margin (profit) = + 1,500 EUR = + 15 * 10 * 10 EUR

Example 1b:
Exchange member B sells 20 futures contracts on a notional government bond (similar contract and expiration month as in example 1a) at the price of 115.70. The daily closing price is, as in example 1a, 115.80. The “mark-to-market” corresponds to a fall of 10 ticks and the loss amounts to 2,000 EUR.

"mark-to-market" for SELL in ticks = - 10 = 115.7 - 115.8
variation margin = - 2,000 EUR = - 10 * 20 * 10 EUR
Step 2 - Calculation of the variation margin of the open positions from the previous days

All of the open positions opened before the trading day are adjusted to the daily settlement price by the “mark-to-market” procedure. Even the positions that are closed during the trading day are valued at the daily closing price. This valuation is made in step 1, where all transactions of the day, even the closing of positions, are valued. In order to calculate the variation margin in step 2, the previous day net long/net short positions are determined and valued using the difference between the previous day and the trading day settlement price.

Calculation:

"mark-to-market" for net long positions (ticks) = (daily settlement price on trading day - daily settlement price on previous day) / tick size

"mark-to-market" for net short positions (ticks) = (daily settlement price on previous day - daily settlement price on trading day) / tick size

variation margin for net position = "mark-to-market" in ticks * contract quantity * value per tick

Example 2a:

Exchange member A has, at the end of the previous day, a net long position of 25 FGBL (BUND Futures) contracts. The previous day daily settlement price amounted to 115.60. The daily settlement price on the trading day amounts to 115.80 (as in examples 1a and 1b). The “mark-to-market” corresponds to an increase of 20 ticks and the profit amounts to EUR 5,000.

"mark-to-market" for net long positions in ticks = + 20 = \[ \frac{115.80 - 115.60}{0.01} \]

variation margin for net positions = + 5,000 EUR = + 20 * 25 * 10 EUR
Example 2b:
Exchange member B has, at the close of market on the previous day, a net short position of 10 BUND futures contracts. The previous day daily closing price is 115.60 and the trading day closing price is 115.80. The “mark-to-market” corresponds to a reduction of 20 ticks and the loss is EUR 2,000.

"mark-to-market" for net short positions in ticks

\[
\text{variation margin} = -20 = \frac{115.60 - 115.80}{0.01}
\]

"mark-to-market" for net positions (loss)

\[
\text{variation margin} = -2000 = -20 \times 10 \times 10 \text{ EUR}
\]

Step 3 - Calculation of the Net Variation Margin for the Positions in a Contract
At this stage, the variation margin of trades carried out during the trading day (position variations) are balanced with the variation margin of the positions in the same contract that still existed at the market close on the previous day.

Calculation:

net variation margin in a contract = daily variation margin of the previous day's net position + daily variation margin of the trades (position variations) on trading day

Example 3a:
For exchange member A, the addition of the variation margins of the position variations (example 1a) and of the net positions of the previous day (example 2a) results in a net variation margin of EUR 6,500.

\[
6500 = 5000 + 1500
\]

Example 3b:
For exchange member B, the addition of the variation margin of the position variations (example 1b) and of the net position of the previous day (example 2b) results in a net variation margin of EUR -4,000.

\[
-4000 = -2000 + -2000
\]
Step 4 - Calculation of the Total Net Variation Margin of a Clearing Member

The net variation margin for the positions in all of the futures or options contracts are combined for the accounts of the clearing member, and for the accounts of the associated non-clearing members. The total net variation margin is booked on the cash account of the clearing member as a debit/credit.

Example 4:
Exchange members A and B settle their futures trades through clearing member C. The total net variation margin of clearing member C is the sum of the net variation margins of exchange members A and B (see examples 3a and 3b) and amounts to a EUR 2,500 gain, which is credited to the clearing member cash account.

3.4.3 Determination of the Variation Margin for Energy Products

Energy futures are subject to a daily settlement of profits and losses according to the “mark-to-market” concept. Profits and losses that arise due to the price fluctuations of open positions are offset by the daily use of variation margin.

The difference between this and other types of margin is that here it is not a matter of depositing collateral, but rather one of offsetting in cash the daily profits and losses in an account.

With the “mark-to-market” procedure, the owner of a long position that was purchased at a lower price than the daily closing price (settlement price) is credited with the difference between the two prices; the owner of the related short position must pay that difference.

The “mark-to-market” procedure ensures that each position is revalued at the daily settlement price. The difference between the previous day’s closing price and that of the following trading day is offset by daily compensating payments.

The primary effect of marking positions to market is the “extraction” of potential liquidation profits or losses, so all that must be done on the final settlement day is to value all open positions at their respective final settlement prices.

In the following sample calculation of variation margin, the base load future is used for the sake of illustration. The same procedure applies for other futures contracts.

Contract: Base Load March 01
Tick size: 0.01 EUR

Tick value: 12: 31 days x 24h x 0.01EUR/Tick = EUR 7.44

Position: Long 10 contracts

Buy at: EUR 16.72

<table>
<thead>
<tr>
<th></th>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Settlement Price</td>
<td>EUR 17.82</td>
<td>EUR 17.38</td>
<td>EUR 18.15</td>
</tr>
</tbody>
</table>

---

12. For physically settled energy monthly contracts, the remaining delivery days are used for calculating the tick value during the delivery month.
Variation margin

Day 1

<table>
<thead>
<tr>
<th>Bought at</th>
<th>Settlement Price Day 1</th>
<th>Tick Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>EUR 16.72</td>
<td>EUR 17.82</td>
<td>110</td>
</tr>
</tbody>
</table>

Tick Difference | Tick value | Variation margin
110 ticks | EUR 7.44/tick | x 10 contracts | = EUR 8,184.00

Day 2

<table>
<thead>
<tr>
<th>Settlement Price Day 1</th>
<th>Settlement Price Day 2</th>
<th>Tick Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>EUR 17.82</td>
<td>EUR 17.38</td>
<td>-44</td>
</tr>
</tbody>
</table>

Tick Difference | Tick value | Variation margin
-44 ticks | EUR 7.44/tick | x 10 contracts | = EUR -3,273.60

Day 3

<table>
<thead>
<tr>
<th>Settlement Price Day 2</th>
<th>Settlement Price Day 3</th>
<th>Tick Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>EUR 17.38</td>
<td>EUR 18.15</td>
<td>77</td>
</tr>
</tbody>
</table>

Tick Difference | Tick value | Variation margin
77 ticks | EUR 7.44/tick | x 10 contracts | = EUR 5,728.80

3.4.3.1 Variation Margin for Energy Contracts on Expiration Day

On the expiration day for a long-term contract, variation margin is required for all open long and short positions in that contract as well as in the open long and short positions resulting from the cascading settlement (for a description of “cascading” settlement see section 3.13.1 “Cash Settlement of Energy Futures” on page 147).

This must be done to realize the “mark-to-market” principle that is used to compensate the daily profits and losses. When a position in a contract is finally settled at the settlement price, the compensation of the daily profits and losses assures that the holders of a long position pay in total the amount that corresponds to their trade price.
3.5 Assignment Procedure

3.5.1 Assignment Procedure in the Exercise of Options (Eurex only)
This chapter only applies to Eurex.

3.5.1.1 General Description

Description of the Assignment Procedure
Eurex members with long positions in an options series can exercise this option before its expiration day. Depending on the type of option, exercise is possible at any time before and including the last trading day (“American Exercise Style”), or exclusively on the last trading day (“European Exercise Style”). Contract exercises are collated during the trading day by options series and exchange member. Before running the random assignment process, Eurex performs an internal assignment. The assignment procedure is the same for regular and LEPO series. The algorithm used by Eurex for this assignment is described in the following pages and explained with a detailed example.

Note: Exchange members are not obliged to use this algorithm when assigning exercises to their clients. However, should an algorithm other than Eurex's be used for random assignment, approval by Eurex is needed.

Assignment of OTC Flexible Options Transactions
Eurex performs the same assignment for exercised OTC Flexible Options trades as performed for trades in standard option series. During assignment, only subtrades of the same trade are considered, i.e. a subtrade with the same contract specification but from a different trade is not assigned.

If the quantity to be assigned to a subtrade is less than its full quantity, Eurex separates it into two subtrades, one with the quantity to be assigned and another with the remaining quantity.

Description of the Assignment Algorithm
The assignment algorithm first includes all contracts to be assigned in a series, i.e., all the exercises entered into the system by exchange members during the day. Before running the random assignment process, Eurex performs an internal assignment. The number of long positions to be exercised is compared with the total number of open short positions in the series. The assignment interval, the value of the interval between the individual assignments, is calculated by dividing the number of open contracts by the number of exercises.

In order to guarantee a random (non-sequential) execution of all the remaining open contracts, the assignment algorithm needs a random starting point for the first assignment of an exercise. A number, calculated by the random procedure (“pointer”), is used to determine the starting point for random assignment.

The assignment interval is added to the value of the pointer to determine the next contract to assign. This procedure is used until all assignments are performed.

Whenever members exercise a long position in one of the proprietary accounts (P1, M1, P2, M2), the Assignment Algorithm ensures existing short positions in these accounts are assigned first. The remaining positions are assigned randomly.
3.5.1.2 Description of the Assignment Procedure

The steps involved are:

**Step 1 - Internal Assignment**

Eurex receives exercise instructions from its members all day. The exercises are accumulated at the end of the day. Exercised long and open short positions within all P and M accounts per member are first assigned internally, that is, if a member with open short positions in a series also has exercised positions, as many open short positions as possible are assigned internally. If exercised long positions still exist after this internal assignment, they are randomly assigned to the remaining open short positions of the same series. The assignment is done for the same clearing member who exercised the positions.

Internal assignments are allocated in the following order: P1, P2, M1, M2.

**Step 2 - Calculation of the Remaining Number of Exercises to be Assigned by Random Assignment**

The remaining number of exercise position after the internal assignment is the basis of the interval calculation for the assignment within a series. The assignment is done for the same clearing member who exercised the positions.

**Step 3 - Calculation of the Assignment Interval**

The total number of open contracts of all the short positions in each series is divided by the total number of exercises in that series on that day. The result is the size of the assignment interval, calculated to exactly five decimal places.

**Step 4 - Determination of the First Contract to Assign from the Remaining Exercised Long Positions**

The computer generates a random number between 0 and 1 (bigger than 0 and smaller than 1) and multiplies this number by the assignment interval. If the difference between the number of open contracts and the number of exercises is small, the result is increased by 1 to reduce the probability of selecting the first contract. Cancelling the decimal provides an integer giving the place of the first contract to be assigned in the sequence of all the contracts.

The pointer receives the same value but keeps all five decimal places.

**Step 5 - Assignment of the First Contract**

The contract in the position calculated in step 4 is assigned.

**Step 6 - Addition of the Interval and Assignment of the Next Contract**

The pointer is increased by the value of the interval. The resulting number (after canceling the decimal) gives the position of the next assigned contract.

**Step 7 - Processing the Remaining Assignments**

Repeat step 6 until all assignments are processed.
Example

Step 1
Six exercises of Siemens April 500 calls are declared during the day. First two contracts and two open short positions are assigned internally against two open short positions within a P account.

Step 2
Four remaining contracts must be assigned.
ASSIGNMENTS = 4

Step 3
There are 5 open short positions with a total of 90 contracts for the Siemens April 500 call.
OPEN CONTRACTS = 90

The assignment interval equals the number of contracts of all the open short positions (open interest) divided by the number of contracts to be assigned.
OPEN INTEREST/EXERCISES = ASSIGNMENT INTERVAL
90 / 4 = 22.50000
ASSIGNMENT INTERVAL = 22.50000

Step 4
The computer determines a random number between 0 and 1, in this example 0.236541. The system multiplies the assignment interval by this random number, adds 1 to it and obtains the address of the first contract to be assigned.
ASSIGNMENT INTERVAL* RANDOM NUMBER+ 1 = STARTING ADDRESS
22.50000 * 0.236541 + 1 = 6.32217
STARTING ADDRESS = 6
(decimal points ignored)
POINTER = 6.32217

Step 5
Input of the first of 5 open short positions, 14 contracts in this case. Assignment of contract 6
Number of contracts assigned so far = 1

Step 6
Addition of the interval and assignment of the next contract.
ASSIGNMENT POINTER NEXT
INTERVAL+ VALUE = CONTRACT TO BE ASSIGNED
22.50000+ 6.32217= 28.82217
Continued reading of the positions until contract 28 is found.
Assignment of contract 28
Number of contracts assigned so far = 2

Step 7 (Repetition of Step 6)
Addition of the interval and assignment of the next contract.
ASSIGNMENT POINTER NEXT
INTERVAL+ VALUE = CONTRACT TO BE ASSIGNED
22.50000+ 28.82217= 51.32217
Continued reading of the positions, until contract 51 is found.
Assignment of contract 51
Total number of assignments so far = 3

Step 8 (Repetition of Step 6)
Addition of the interval and assignment of the next contract.
ASSIGNMENT POINTER NEXT
INTERVAL+ VALUE = CONTRACT TO BE ASSIGNED
22.50000+ 51.32217= 73.82217
Continued reading of the positions, until contract 73 is found.
Assignment of contract 73
Total number of assignments so far = 4
End of the assignment process, since the total number of contracts to assign is reached.
3.5.2  The Allocation Procedure with Bonds
This chapter only applies to Eurex.

3.5.2.1  Purpose of the Procedure
The purpose of the allocation procedure is to randomly determine which one of the debt instruments notified for delivery the holders of long positions in the corresponding futures contracts receive. This means that all the exchange members with open long positions have an equal probability of receiving debt instruments of a determined issue, and guarantees a fair distribution of deliverable debt instruments. As soon as the random procedure has assigned the securities of an issue to a long position, the system tries to cover the entire position with securities of this issue (block allocation). However, if the position is larger than the number of deliverable securities of this issue, other securities are allocated with the same method, until the entire long position is completely covered.

The procedure used by Eurex, the block allocation method, is described in detail below.

3.5.2.2  Description of the Block Allocation Method
On the last day of trading of the expiring delivery month, the exchange members can trade their positions until 12:30 p.m. Positions can be closed by clearing transactions until 20:00 p.m. on the last day of trading.

When trading ends, bonds must be notified for delivery for all the open short positions listed on the Futures Deliverable Position Overview window. The clearing member is obliged to notify all open short positions and can select any bonds from the deliverable securities contained in the “Deliverable Bonds report” (RPTCE038) for notification. If this obligation is not fulfilled, Eurex determines the deliverable securities.

In the allocation procedure, two tables are set up by the system during the overnight batch processing, one for short positions and one for long positions.

The table of the long positions contains all the open long positions with information concerning clearing members, exchange members, account type and position size. The table of the short positions contains all the debt instruments notified for delivery, arranged by issues (security code number) and total number of government bonds notified for delivery per issue.

In the allocation procedure, a position is selected from the table of the long positions. One bond issue from the table of the short positions is then allocated to this long position. The system tries to cover the entire long position with the allocated bond issue. Only when fewer instruments are notified for delivery in this issue than are necessary to cover the long position is another issue allotted to the position. This method of block allocation is repeated until the entire long position is completely covered.

When the first long position is processed, the system selects the second long position from the table and allocates the necessary number of bonds of one or more issues with the method described above. This allocation procedure is repeated until all of the open long positions are allocated to bonds of one or more issue.
3.5.2.3 Example of Allocations

The following example shows a simplified form of tables of long and short positions in the BUND future:

Table of the long Positions

<table>
<thead>
<tr>
<th>Clearing Member</th>
<th>Exchange Member</th>
<th>Position Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABCFR</td>
<td>ABCFR</td>
<td>14</td>
</tr>
<tr>
<td>ABCFR</td>
<td>BCDFR</td>
<td>10</td>
</tr>
<tr>
<td>BDFFR</td>
<td>BDFFR</td>
<td>20</td>
</tr>
<tr>
<td>CDEHH</td>
<td>CDEHH</td>
<td>5</td>
</tr>
<tr>
<td>JKLFN</td>
<td>MKLMU</td>
<td>7</td>
</tr>
<tr>
<td>JKLFN</td>
<td>OPQDD</td>
<td>9</td>
</tr>
<tr>
<td>JKLFN</td>
<td>RSTMU</td>
<td>12</td>
</tr>
</tbody>
</table>

Sum of the Positions: 77

Table of the cumulative short positions per issue

<table>
<thead>
<tr>
<th>ISIN</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>DE0001234003</td>
<td>12</td>
</tr>
<tr>
<td>DE0001234011</td>
<td>6</td>
</tr>
<tr>
<td>DE0001234052</td>
<td>33</td>
</tr>
<tr>
<td>DE0001230650</td>
<td>26</td>
</tr>
</tbody>
</table>

Sum of the 77 Government bonds

By means of the allocation procedure, the government bonds are allocated to the following long positions:

<table>
<thead>
<tr>
<th>Exchange Member</th>
<th>Position Size</th>
<th>Allocated Government Bonds</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISIN</td>
<td>Number</td>
<td></td>
</tr>
<tr>
<td>ABCFR</td>
<td>14</td>
<td>DE0001234011 6</td>
</tr>
<tr>
<td>BCDFFR</td>
<td>10</td>
<td>DE0001234052 10</td>
</tr>
<tr>
<td>BDFFR</td>
<td>20</td>
<td>DE0001234003 12</td>
</tr>
<tr>
<td>CDEHH</td>
<td>5</td>
<td>DE0001234052 8</td>
</tr>
<tr>
<td>MKLMU</td>
<td>7</td>
<td>DE0001230650 7</td>
</tr>
<tr>
<td>OPQDD</td>
<td>9</td>
<td>DE0001234052 9</td>
</tr>
<tr>
<td>RSTMU</td>
<td>12</td>
<td>DE0001230650 11</td>
</tr>
</tbody>
</table>
Consequently, the BUND allocation method decides which holders of long positions receive which BUNDS at delivery.

3.5.3 Allocation of EEX Futures Contracts

This chapter only applies to EEX.

The holder of short positions in EEX futures are required to deliver the underlying commodity to members with long futures contract positions after futures expiration. The clearing department tracks the delivery and payment of all the transactions.

During the expiration month of the futures contract, until the last trading day, members have the option of closing open positions through closing transactions. Trading of expiring EEX futures contracts closes at 15:00 on the last trading day. This allocation is done manually by the clearing department during the overnight batch outside the Eurex system. Allocations do not depend on the type of membership or on the type of position account. The positions are allocated randomly. Clearing members are informed of the allocations on the following day.
3.6 Capital Adjustments/Recapitalization

The following sections provide descriptions and examples of the different capital adjustment/recapitalization measures. For the approach applied in case of a dedicated capital adjustment/recapitalization measure, please refer to the provided Eurex circular. This section and its sub-sections only apply to Eurex.

3.6.1 Introduction

The approach formula of the algorithm that calculates the new contract size after a capital adjustment in stock options is:

\[
\text{new contract size}^* = \frac{\text{old contract size}}{r\text{-factor}} \quad \text{rounding after four decimal places for contract size}
\]

The following chapters give a short description of the various types of capital adjustments. These descriptions are followed by a discussion of the effects of the capital adjustment on options contracts and futures products by way of examples. The capital adjustment does not affect the LEPO exercise price. The rules for the incrementing of the version number of a LEPO series are identical to those for a regular series. The existing rules for regular series apply to LEPO series concerning the splitting of the contract size into cash fraction and share fraction.

The effects of capital adjustments on OTC Flexible Option series are identical to those on regular option series. The handling of capital adjustments on regular options, described in the following sessions also applies to them.

Capital adjustments for single stock futures are explained in the section 3.6.5 "Capital Adjustment Procedure for Single Stock Futures" on page 120.

The following formulas are used in the calculation of the examples:

\[
\begin{align*}
R &= \frac{N_0}{N_n} \times \left(1 - \frac{E}{S_o}\right) + \frac{E}{S_o} \\
X_n &= X_o \times R \\
C_{S_n} &= \frac{C_{S_o} \times X_o}{X_n} \quad \text{(after rounding)} \\
C_1 &= C_{S_n} - C_{S_o} \times (S_n - X_n) \\
C_2 &= F \times (S_n - X_n) \\
R &= \text{capital adjustment ratio} \\
X &= \text{exercise price} \\
C_S &= \text{contract size} \\
C_1 &= \text{cash settlement amount per contract with subscription rights} \\
C_2 &= \text{cash settlement amount per contract with other capital adjustments} \\
S &= \text{share price} \\
E &= \text{issue price of the new shares} \\
N &= \text{number of shares issued} \\
F &= \text{fraction of the new contract size} \\
n &= \text{new} \\
o &= \text{old}
\end{align*}
\]
Note:

- During a capital adjustment, the same capital adjustment ratio applies to option and futures products of the same underlying.
- The handling of capital adjustments on pending deliveries is performed by the CCP.
- For OTC Flexible Contracts transactions, the change of expiration date in case a holiday or annual general meeting is newly scheduled to this date is treated like a capital adjustment.

3.6.2 Increases of Share Capital

3.6.2.1 Increase of Capital by Issue of New Shares with Full Dividends Rights (Rights Issue)

Description of the procedure

If a quoted company wishes to increase its base capital, it can issue extra shares in an approved capital increase. The new shares issued are described as young shares. To allow the existing shareholders to keep their proportion of the capital of the company, they are guaranteed the right to purchase new shares. This right is called purchase right. The purchase right expresses the relation of the previous basic capital to the amount of capital increase.

Example:

A quoted company would like to increase its basic capital of EUR 40 million by EUR 10 million. This gives a relation of 4:1, i.e. a shareholder obtains one new share for four old ones. The price of the old share is EUR 349.--. The issue price of the new share is EUR 275.--.

The value of the purchase is calculated as follows:

4 old shares cost 4 * EUR 349.--=EUR 1,396.--
1 new share costs EUR 275.--=EUR 275.--
therefore
5 shares cost

Each share costs on average EUR 334.20.

The value of the purchase per share corresponds to the difference between the price of the old share and the average price calculated above, i.e.

EUR 349.-- EUR 334.20= EUR 14.80

The formula used for the calculation reads as follows:

\[
\text{value of the new share} = \frac{\text{price of the old share} - \text{price of the new share}}{\text{purchase relation} + 1}
\]

\[
= \frac{349 - 275}{4 + 1} = EUR 14.80
\]

Since the purchase rights are treated independently from the share, the price of the share is, in theory, reduced by the mathematical value of the purchase right, i.e. from EUR 349.-- to EUR 275.-- + (4*EUR 14,80) = EUR 334.20.
### Effects on Options Contracts

**Example:**
- **Price of the old share:** EUR 349.--
- **Issue price of the young share:** EUR 275.--
- **Purchase relation:** 4:1

<table>
<thead>
<tr>
<th>Currently Traded Options Series</th>
<th>Contract Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basis Price</td>
<td>Contract Size</td>
</tr>
<tr>
<td>340</td>
<td>100</td>
</tr>
<tr>
<td>360</td>
<td>100</td>
</tr>
<tr>
<td>380</td>
<td>100</td>
</tr>
</tbody>
</table>

First, the capital variation ratio ($R$) is calculated:

\[
R = \left( \frac{\text{No}}{\text{Nn}} \right) \times \left( 1 - \frac{E}{S_0} \right) + \frac{E}{S_0} \\
= \left( \frac{4}{5} \right) \times \left( 1 - \frac{275}{349} \right) + \frac{275}{349} \\
= 0.9576
\]

With the help of $R$, the options series currently traded are adjusted:

- **Xn1** = 340 \times 0.9576 = 326.--
- **CSn1** = \frac{100}{0.9576} = 104.4277
- **Xn2** = 360 \times 0.9576 = 345.--
- **CSn2** = \frac{100}{0.9576} = 104.4277
- **Xn3** = 380 \times 0.9576 = 364.--
- **CSn3** = \frac{100}{0.9576} = 104.4277

New options series are entered into the system.

- **The basis prices are:**
  - EUR 320.--
  - EUR 340.--
  - EUR 360.--

All new series have a standard size of 100 shares.

For a LEPO series with an exercise price of 1 unit of currency, the new contract size is determined by taking the new theoretical underlying value into account and applying the following calculations:

- **New theoretical underlying value:** $R \times S_0 = 349 \times 0.9576 = 334.2024$
- **Amount paid for LEPO before capital adjustment:** $S_0 - 1 = 349 - 1 = 348$
- **Amount paid for LEPO after capital adjustment:** $334.2024 - 1 = 333.2024$
- **New contract size for LEPO:** \( 100 \times 0.9576 \) = 104.4277

Since the standard contract size with Eurex is of 100 shares, only 100 shares are deliverable at the exercise of adjusted contracts. For the first contract in the example, 100 shares are deliverable and 4.4277 are subject to a cash settlement. For the LEPO contract, 100 shares are deliverable and 4.4277 are settled in cash.

**Note:** Identical rules for determining cash fraction and share fraction for both regular and LEPO series.

The cash settlement amount is calculated as follows:

\[
C = (CS_n - CS_0) \times (S_n - X_n)
\]

With an exercise price of EUR 326.-- and a current share price of EUR 340.--, the cash settlement amount is calculated as follows:

\[
C = (104.4277 - 100) \times (340 - 326) \\
= EUR 61.99
\]

This method also prevents the holder of an option from having to buy extra shares in order to fulfill his delivery obligations.
3.6.2.2 Increase of Capital by Issue of New Shares without Full Dividends Rights

Description of the Procedure

A quoted company can also, besides what has been described in section 3.6.2.1 "Increase of Capital by Issue of New Shares with Full Dividends Rights (Rights Issue)" on page 112, provide new shares with different rights than the old shares. This is primarily used when the capital increase is carried out in the second half of the business year. Since the new capital is available only for part of the business year, and the new shares must not be better than the old ones, this is done in the form of a lower dividend payment for the current business year. This dividend loss has an effect on the mathematical value of the purchase right and on the share price.

Example: see Increase of Capital by Issue of New Shares with Full Dividends Rights (Rights Issue)

Dividend of the old share: EUR  20.--
Dividend of the new share: EUR  10.--

The issuing price of the new share is therefore:
EUR 275.-- + EUR 10.-- = EUR 285.--

To calculate the purchase right, the formula for the mathematical value is widened by subtracting the dividend loss from the price of the old share.

\[
\text{value of the purchase right} = \frac{\text{price of the old share} - (\text{price new share} + \text{dividend loss})}{\text{purchase ratio} + 1}
\]

\[
= \frac{349 - (275 + 10)}{4+1}
\]

\[
= EUR 12.80
\]

The share price is then, in theory, reduced to the price of the old share plus the price of 4 purchase rights.
Effects on the Options Contracts

In this case, the issue price of the new young shares is corrected by the dividend loss.

Example:
A dividend of EUR 20.-- is expected for the old share.
The new share has a dividend loss of EUR 10.--.

The higher issue price of EUR 10.-- in comparison with the example of 3.6.2.1 makes clear the smaller value of the purchase right.

The capital variation leads to the following adjustments:

Price of the old share: EUR 349.--
Price of the new share: EUR 285.--

Purchase ratio: 4:1

First, the capital variation ratio (R) is calculated:

\[
R_n = \left( \frac{N_o}{N_n} \right) \times \left( 1 - \frac{E}{S_o} \right) + \frac{E}{S_n} \\
= \left( \frac{4}{5} \right) \times \left( 1 - \frac{285}{349} \right) + \frac{10}{349} \\
= 0.9633
\]

The currently traded options series are corrected using R.

### Currently Traded Options Series

<table>
<thead>
<tr>
<th>Basis Price</th>
<th>Contract Size</th>
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<tbody>
<tr>
<td>340</td>
<td>100</td>
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<tr>
<td>360</td>
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<td>380</td>
<td>100</td>
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</tbody>
</table>

### Options Series After Adjustment

<table>
<thead>
<tr>
<th>Basis Price</th>
<th>Contract Size</th>
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<tbody>
<tr>
<td>340</td>
<td>100</td>
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<tr>
<td>360</td>
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<tr>
<td>380</td>
<td>100</td>
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</tbody>
</table>

New options series are entered into the system.

Their basis prices are:
- EUR 320.--
- EUR 340.--
- EUR 360.--

All the series have a standard contract size of 100 shares.

For LEPO, the new contract size is calculated as follows:

New theoretical underlying value: \( R \times S_0 = 349 \times 0.9633 = 336.1917 \)

Amount paid for LEPO before capital adjustment: \( S_0 - 1 = 349 - 1 = 348 \)

Amount paid for LEPO after capital adjustment: \( 336.1917 - 1 = 335.1917 \)

New contract size for LEPO: \( 100 / 0.9633 = 103.8098 \)

If an adjusted contract is exercised, a new cash settlement amount is calculated for the part of the contract that exceeds the standard size of 100 shares. For the LEPO contract, 100 shares are deliverable and 3.8098 are settled in cash.

\[
C_{1,1} = (CS_{n,1} - CS_o) \times (S_{n,1} - X_n)
\]

With an exercise price of EUR 328.-- and a current share price of EUR 340.--, the cash settlement amount is:

\[
C_{1,1} = (103.8098 - 100) \times (340 - 328) \\
= 45.72 \text{ EUR}
\]
3.6.2.3 Capital Increase by Issue of Correction Shares

Description of the Procedure

If a joint-stock company carries out a capital increase by converting reserves into basic capital, the shareholders are offered correction shares in a determined ratio. Since the conversion of reserves into capital is a purely passive exchange, the share price is, in theory, reduced proportionally to the basic capital increase.

Example:

Price of the old share: EUR 362.--
Purchase ratio: 5:1
5 * EUR 362.-- = EUR 1,810.--
EUR 1,810.-- : 6 = EUR 301.67 = Price of the share after the issue of the correction shares.

Effects on the Options Contracts

Example:

Price of the old share: EUR 362.--
Price of the new share: EUR 301.67
Purchase ratio: 5:1
First, the capital variation ratio (R) is calculated:

\[ R = \left( \frac{N_S}{N_f} \right) \times \left( 1 - \frac{E}{S_0} \right) + \frac{E}{S_0} \]

\[ = \left( \frac{5}{6} \right) \times \left( 1 - \frac{0}{362} \right) + \frac{0}{362} \]

\[ = 0.8333 \]

Currently Traded Options Series

<table>
<thead>
<tr>
<th>Basis Price</th>
<th>Contract Size</th>
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<tbody>
<tr>
<td>340</td>
<td>100</td>
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<td>360</td>
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<td>380</td>
<td>100</td>
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</table>

Options Series After Adjustment

<table>
<thead>
<tr>
<th>Basis Price</th>
<th>Contract Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>X_{n1} = 340 * 0.8333 = 283.--</td>
<td>CS_{n1} = 100/0.8333 = 120.0048</td>
</tr>
<tr>
<td>X_{n2} = 360 * 0.8333 = 300.--</td>
<td>CS_{n2} = 100/0.8333 = 120.0048</td>
</tr>
<tr>
<td>X_{n3} = 380 * 0.8333 = 317.--</td>
<td>CS_{n3} = 100/0.8333 = 120.0048</td>
</tr>
</tbody>
</table>

New options series are entered into the system.
The basis prices are:
EUR 280.--
EUR 300.--
EUR 320.--

All the series have a contract size of 100 shares.

For LEPO, the new contract size is calculated as follows:

New theoretical underlying value:
\[ R \times S_0 = 362 \times 0.8333 = 301.6546 \]

Amount paid for LEPO before capital adjustment:
\[ S_0 - 1 = 362 - 1 = 361 \]

Amount paid for LEPO after capital adjustment:
\[ 301.6546 - 1 = 300.6546 \]

New contract size for LEPO: 100 * 0.8333 = 120.0048

For the LEPO contract, 120 shares are deliverable and 0.0713 are settled in cash.

If an adjusted contract is exercised, a new cash settlement amount is calculated for the part of the contract that cannot be balanced with valid shares.

\[ C_{2,1} = F \times (S_{n1} - X_n) \]

With an exercise price of EUR 283.-- and a share price of EUR 302.--, the cash settlement amount is:

\[ C_{2,1} = (120.0048 - 120) \times (302 - 283) = 0.09 \]

In this case, the original contract size is changed for the calculation of the cash settlement, since the holder of options is automatically credited with the correction shares. In the above example, only the fractional part must be settled in cash.
3.6.2.4 Increase of Capital by Issue of Correction Shares without Full Dividend Rights

Description of the Procedure

If a quoted company increases its base capital by issuing new correction shares, it can choose whether these new shares have the same rights as the old ones. In most cases a lower dividend is paid. This affects the share price and the amount of shares.

Example: see 3.6.2.3

Dividend of the old share: EUR 20.25
Dividend of the new share: EUR 10.25

The issuing price of the new share is:
issuing price of the new share + dividend loss
EUR 0.25 + EUR 10.25 = EUR 10.50

Effects on Options Contracts
Price of the old share: EUR 362.25
Price of the new share: EUR 10.25

Purchase ratio: 4:1

First, the capital variation ratio (R) is calculated:

\[ R = \frac{4}{5} \times (1 - \frac{10}{362}) + \frac{10}{362} \]

\[ = 0.8055 \]

Currently Traded Options Series

<table>
<thead>
<tr>
<th>Basis Price</th>
<th>Contract Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>340</td>
<td>100</td>
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<tr>
<td>360</td>
<td>100</td>
</tr>
<tr>
<td>380</td>
<td>100</td>
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</tbody>
</table>

Option Series After Adjustment

<table>
<thead>
<tr>
<th>Basis Price</th>
<th>Contract Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xn1 = 340 x 0.8055 = 274.25</td>
<td>CSn1 = 100 / 0.8055 = 124.1465</td>
</tr>
<tr>
<td>Xn2 = 360 x 0.8055 = 290.25</td>
<td>CSn2 = 100 / 0.8055 = 124.1465</td>
</tr>
<tr>
<td>Xn3 = 380 x 0.8055 = 306.25</td>
<td>CSn3 = 100 / 0.8055 = 124.1465</td>
</tr>
</tbody>
</table>

New options series are entered into the system.
The basis prices are:

| EUR 280.25 | EUR 300.25 | EUR 320.25 |

All the series have a standard contract size of 100 shares.

If an adjusted contract is exercised, a new cash settlement amount is calculated for the part of the contract that exceeds the standard size of 100 shares.

\[ C = F \times (S - X) \]

With an exercise price of 274.25 and a current share price of 290.25 the cash settlement amount is:

\[ C = (124.1465 - 100) \times (290 - 274) \]

\[ = 386.34 \]

In this case, in contrast to the increase of capital by issuing new correction shares with full dividend rights, only the standard contract size of 100 shares is delivered, because the correction shares have different dividend rights.

For LEPO, the new contract size is calculated as follows:

New theoretical underlying value: \( R \times S_0 = 362 \times 0.8055 = 291.5910 \)
Amount paid for LEPO before capital adjustment: \( S_0 - 1 = 362 - 1 = 361 \)
Amount paid for LEPO after capital adjustment: \( 291.5910 - 1 = 290.5910 \)

New contract size for LEPO: \( 361 \times 100 / 290.5910 = 124.2296 \)

For the LEPO contract, 100 shares are deliverable and 24.2296 are settled in cash.
3.6.3 Reductions in Capital

3.6.3.1 Description of the Simplified Reduction in Capital

In the case of a simplified reduction of capital, the capital reduction caused by losses is spread equally over the shares. This is accomplished by reducing the nominal value of the shares by the amount of proportional reduction. This procedure is known as “stamp cancellation”. If the nominal value is diminished by “stamp cancellation”, the consolidation of shares is only possible in a determined proportion.

3.6.3.2 Description of the Ordinary Reduction in Capital

Besides the simplified reduction of capital described in section 3.6.3.1 “Description of the Simplified Reduction in Capital” on page 118, an ordinary reduction of capital can be effected. Unlike the simplified capital reduction, this can refund basic capital. If there are several classes of shares, the decision must be approved by the shareholders of each class. According to § 222 sect. 4 AktG (Aktiengesetz = law on shares) and art. 732 Swiss OR (Schweizer Obligationenrecht, comprises Swiss law on shares), the basic capital can be reduced by a decrease in the nominal value or by a consolidation of the shares. The condition for consolidation is that the minimum nominal value of the share is diminished in the case of a capital reduction.

3.6.3.3 Effects of a Reduction in Capital on Options Contracts

The effects of a capital modification on options contracts in the case of a reduction in capital are as follows: Since the value of the shares traded on Eurex nominally amounts to EUR 1 or another respective value in Euro, capital reductions can only be carried through by consolidation of the shares, which makes the following example valid for simplified and ordinary reductions alike.
Example:
A quoted company would like to reduce the basic capital by 1/3 by consolidation of the shares.
First, the capital variation ratio (R) is calculated:
\[ R = \left( \frac{N_o}{N_n} \right) \times (1 - \frac{E}{S_o}) + \frac{E}{S_o} \]
\[ = \left( \frac{3}{2} \right) \times (1 - \frac{0}{1}) + \frac{0}{1} \]
\[ = 1.5 \]

The currently traded options series are corrected using R.

<table>
<thead>
<tr>
<th>Currently Traded Options Series</th>
<th>Basis Price</th>
<th>Contract Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>340</td>
<td>100</td>
<td></td>
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<tr>
<td>360</td>
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<td>380</td>
<td>100</td>
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</table>

<table>
<thead>
<tr>
<th>Options Series After Adjustment</th>
<th>Basis Price</th>
<th>Contract Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xn1 = 340 * 1.5 = 510.--</td>
<td>CSn1 = 100/1.5 = 66.6667</td>
<td></td>
</tr>
<tr>
<td>Xn2 = 360 * 1.5 = 540.--</td>
<td>CSn2 = 100/1.5 = 66.6667</td>
<td></td>
</tr>
<tr>
<td>Xn3 = 380 * 1.5 = 570.--</td>
<td>CSn3 = 100/1.5 = 66.6667</td>
<td></td>
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</tbody>
</table>

Supposing that the share price increases to EUR 490, new series is entered into the system.
The basis prices are:
EUR 480.--
EUR 500.--
EUR 550.--

All the series have a standard contract size of 100 shares. For LEPO, the new contract size is calculated as follows:

New theoretical underlying value: \( R \times S_0 = 362 \times 1.5 = 543 \)
Amount paid for LEPO before capital adjustment: \( S_0 - 1 = 362 - 1 = 361 \)
Amount paid for LEPO after capital adjustment: \( 543 - 1 = 542 \)
New contract size for LEPO: \( \frac{361 \times 100}{542} = 66.6051 \)

If an adjusted contract is exercised, a new cash settlement amount is calculated for the part of the contract that cannot be balanced by real shares. For the LEPO contract, 66 shares are deliverable and 0.6051 are settled in cash.
\[ C_{2,1} = F \times (X_n - S_{n,1}) \]

With an exercise price of EUR 510, and a share price of EUR 490, the following cash settlement amount is calculated with a PUT.
\[ C = (66.6666 - 66) \times (510 - 490) = 13.33 \text{ EUR} \]

3.6.4 Share Split

3.6.4.1 Description of the Procedure

In a share split, the base capital is divided (the nominal value is decreased). A share which represents EUR 50.- of the capital stock is divided into \( X \) shares (old nominal value/new nominal value).
The share price is decreased to: the price of the old share/\( X \).
3.6.4.2 Effects on Options Contracts

Example:
A quoted company wants to decrease the nominal value of its shares from EUR 50.-- to EUR 5.--. This means one old share is now ten new shares.

"Purchase ratio": 1 : 10
Issuing price of the new share: EUR 0.--

First, the capital variation ratio (R) is calculated:

\[
R = ((N_o / N_n) \times (1 - (E/S_0))) + (E/S_0)
\]

\[
R = ((1/10) \times (1 - 0)) + 0
\]

\[= 0.1\]

The currently traded options series are corrected with R.

<table>
<thead>
<tr>
<th>Currently Traded Options Series</th>
<th>Contract Size</th>
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</thead>
<tbody>
<tr>
<td>Basis Price</td>
<td>50</td>
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<tr>
<td>340</td>
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<td>380</td>
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<table>
<thead>
<tr>
<th>Option Series After Adjustment</th>
<th>Contract Size</th>
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<tbody>
<tr>
<td>Basis Price</td>
<td>500</td>
</tr>
<tr>
<td>340</td>
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<td>360</td>
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</table>

In an exercise, all "full" shares have to be delivered, 500 in our example. Fractional parts must be settled in cash.

For LEPO, the new contract size is calculated as follows:

New theoretical underlying value: \(R \times S_0 = 36.2\)
Amount paid for LEPO before capital adjustment: \(S_0 - 1 = 362 - 1 = 361\)
Amount paid for LEPO after capital adjustment: \(36.2 - 1 = 35.2\)
New contract size for LEPO: \((361 \times 50) / 35.2 = 512.7841\)
For the LEPO contract, 512 shares are deliverable and 0.7841 are settled in cash.

3.6.5 Capital Adjustment Procedure for Single Stock Futures

3.6.5.1 Special Items of the Processing

- Trading Unit: The R-factor used for calculating the adjusted trading unit is the same as for the corresponding option series. This is explained in the section capital adjustment processing of options on stocks.

  The adapted trading unit is calculated by:

  \[
  \text{Tr. Unit}_{\text{new}} = \frac{\text{Tr. Unit}_{\text{old}}}{R}
  \]

- Previous Settlement Price: In order to simplify the variation margin calculation of the following day, the adjusted previous settlement price is calculated directly during the capital adjustment processing. The previous settlement price is adjusted as follows:

  \[
  \text{Adj. Prv. Stl. Prc.} = \text{Prv. Stl. Prc.}_{\text{old}} \times R
  \]

  This value is used for the calculation of the variation margin for open positions. The position transaction record for creation of the positions in the adapted series includes a match price in order to adjust the variation margin amount correspondingly.
Clearing Calculation and Settlement Procedure

- Invoice Amount: The invoice amount is calculated by:
  \[ \text{invoice amount} = \text{number of contracts} \times \text{number of shares actually to be delivered} \times \text{settlement price} \]

- Mark to Market Ticks: The mark to market ticks are calculated as the difference between the adjusted previous settlement price and the current settlement price:
  \[ \text{mark to market ticks} = \frac{(\text{Curr.Stl.Prc} - \text{Adj.Prv.Stl.Prc.})}{\text{tick size}} \]

- Variation Margin: The Variation Margin must be calculated both for trades executed on the current business day as well as for positions carried forward from the previous business day. For the purpose of variation margin calculation the day after a capital adjustment, the changes to the trading unit have to be taken into account. The variation margin amount per contract must be determined as follows. After rounding it to two decimal places, it is multiplied with the number of contracts:
  \[ \text{Adj.VM} = \frac{(\text{Curr.Stl.Prc.} - \text{Adj.Prv.Stl.Prc.}) \times \text{Tr.Unit}_{\text{new}} \times \text{tick value}}{\text{tick size}} \]
  At the end of the next trading day, the variation margin calculation becomes identical to a trade. Then the variation margin is calculated regularly from the mark to market ticks and the net/movement position:
  \[ \text{Reg.VM} = \text{MarkToMarketTicks} \times \text{net/movement position} \times \text{Value per tick} \times \text{Tr.Unit}_{\text{new}} \]

- Settlement:
  - The settlement of cash settled futures is done by the final variation margin payment on the expiry day.
  - If the futures product is share settled, it may not be possible or not desired to physically deliver the entire trading unit of an expiring contract. Depending on the type of capital adjustment and according to the current procedures defined a cash settlement must be performed for the residual portion of the trading unit. In contrast to stock options, this cash settlement is already part of the last variation margin calculation, therefore the “cash trading unit” is set to zero for the stock futures.

Under special circumstances (e.g. open interest in expiring futures contract exceeds the free float of the underlying share) cash settlement may be necessary. In that case, all processes except the calculation and payment of the last variation margin are suppressed.
3.6.5.2 Example for the Processing

The following example illustrates the capital adjustment procedure for single stock futures. It is based on an increase of the capital.

On the day the Capital Adjustment has been entered, the following values are given:

- **Prv.Stl.Prc.** = 6.8268
- **Curr.Stl.Prc.** = 6.6450
- **Tr.Unit.** = 100.0000
- **Value per tick.** = 0.0001
- **Tick size.** = 0.0001

The calculated capital variation ratio (R) is:

\[ R = \frac{6.8268}{6.6450} \]

The new Trading Unit is adjusted as follows:

\[ \text{Tr.Unit}_{\text{new}} = \frac{100.0000}{6.8268} \times 0.93235294 \]

\[ = 107.2555 \]

The following values are adjusted one day after the capital adjustment has been entered:

- **Adj.Prv.Stl.Prc.** = 6.8268 \(\times\) 0.93235294 = 6.3650

\[ \text{Adj.VM} = (6.6450 - 6.3650) \times 107.2555 \times 0.0001 / 0.0001 \]

\[ = 30.03154 \]

To receive the variation margin, the rounded value 30.03 is multiplied with the number of contracts.

Starting next trading day, calculations are performed as usual.
3.7 Cash Settlement
This chapter only applies to Eurex.

3.7.1 Introduction
This chapter explains the steps taken by the Eurex system when processing cash settlements. The cases below call for a complete or partial cash settlement:

- Cash settlement for products to be settled in cash
- Cash settlement on order of the Eurex Management Board
- Cash settlement of stock options with adjusted contract sizes
- Cash settlement due to late delivery
- Cash settlement due to mergers and takeovers

Examples of Eurex products settled in cash are:

- Options: - Options on registered shares with restrictions on transfer
  - Options on the Swiss Market Index (SMI)
- Futures: - Futures on the Swiss Market Index (SMI)
  - one month EURIBOR-Futures
  - three month EURIBOR-Futures

For futures, “cash settlement”, like liquidation, is identical to the last variation margin on expiration day. For that reason, futures are not included in the following explanations (see section 3.4.1 "General Description" on page 98).

3.7.2 Cash Settlement of Options
Exercised positions of stock options can either be settled by effective delivery of the shares or by a cash settlement. With options on certain nominated shares and options on the stock indices, there is cash settlement.
3.7.2.1 Calculation of the Cash Settlement Amount

Various formulas are used to calculate the cash settlement amount. This depends on whether it is an exercised or an assigned position, and whether a call or a put is being settled. The following formulas are used:

Call option:
- CS exercised long = (CP - EP) * Q * TU * CV
call position
- CS assigned short = (-1) * (CP - EP) * Q * TU * CV
call position

Put option:
- CS exercised long = (EP - CP) * Q * TU * CV
put position
- CS assigned short = (-1) * (EP - CP) * Q * TU * CV
put position

Variable:
- CS = Multi currency cash settlement amount
- CP = The CP is the price resulting from the closing auction in the electronic trading system of the Frankfurt Stock Exchange. The following chapter describes the procedure for German products:
  - If no price in the underlying security is effected on the closing auction, the volume-weighted average of the last three “paid” prices (Bezahlt-Preise) of the respective underlying security effected on the electronic trading system of the Frankfurt Stock Exchange between the close of trading at the Frankfurt Stock Exchange and the close of trading at the Exchange (Eurex) in stock options shall be authoritative.
  - If three prices in the underlying security are not effected on the electronic trading system of the Frankfurt Stock Exchange between the close of trading at the Frankfurt Stock Exchange and the close of trading at the Exchange (Eurex) in stock options, the closing price of the underlying security on the Frankfurt Stock Exchange shall be authoritative.
  - For shares with a restriction of transfer: Volume weighted average price of all matched cum prices during the last minute before 20.00h (If there are not at least 5 prices during the last minute, the last 5 prices after the end of official trading hours of FWB are decisive). The highest and the lowest prices are deleted. If there are not at least 5 matched prices on XETRA between the end of the official trading hours of the FWB (for German products only) and 20.00h, the closing price of the FWB is decisive.
  - In case of Swiss products, there is no calculation procedure involved. Through the SMF interface, the price information is transmitted in real time.
- EP = Basis price of the option (Exercise price)
- Q = Number of the exercised/assigned contracts (quantity)
- TU = Contract size (number of items per contract) (trading unit)
- CV = Value in EUR per price point EUR/point (contract value)
3.7.2.2 Examples

Call Option Shares:
The price of the underlying (CP) on exercise day is 500 EUR. An exchange member exercises five call options with the exercise price of 480 EUR and receives:

\[ 10,000 \text{ EUR} = (500 - 480) \times 5 \text{ contracts} \times 100 \text{ items} \times 1 \text{ EUR} \]

The assigned exchange member with the short call position of five contracts must pay 10,000 EUR.

Put option DAX:
The price (CP) of DAX on exercise day is of 5120.0 points. An exchange member exercises five put options with an exercise price of 5200.0 and receives:

\[ 2,000 \text{ EUR} = (5200 - 5120) \times 5 \text{ contracts} \times 1 \text{ item} \times 5 \text{ EUR} \]

The assigned exchange member with the short put position of five contracts must pay 2,000 EUR.

3.7.2.3 Settlement of Cash Transactions

With cash settled contracts, there are exclusively money transactions between the concerned clearing members. No effective delivery of the items takes place. With the exception of cash settled options on stocks (product type: OSTK), for which cash delivery instructions are provided to the CCP, the cash settlement of exercised and assigned positions is effected within the Eurex system.

The money transactions in a cash settlement are processed in the daily money settlement of Eurex. The net cash settlement amount to be paid or received is booked as a debit or as a credit on the cash account of the clearing member. This money posting increases or decreases the balance of the cash account and influences the calculation of a cash shortfall or excess in the cash account. If the cash account of the clearing member shows a negative balance at the end of the day (cash shortfall), Eurex debits either the central bank account (Eurex currency) or the CBF cash account (foreign currencies) of the clearing member directly.

A credit balance in the clearing member currency after the calculation of the premiums/variation margin receivable/payable is offset against margin requirements in the same currency. Such offsetting of cash credit balances and margin requirements exclusively take place in the clearing member currency. After the security requirement is calculated, if the cash account shows a positive balance, this amount is credited either to the central bank account (Eurex currency) or to the CBF cash account (foreign currencies) of the clearing member.

Depending on the product, the settlement period for cash settlement of stock option contracts corresponds to that of the effective item delivery (e.g. 2 business days after exercise (T+2) for German stocks, T+3 for Swiss, French, Italian, Dutch and US stocks and T+4 for Finnish stocks). The clearing member is credited or debited two days after exercise or one day after assignment. The due date for the cash amount depends on the cash settlement period for the specific currency.

For cash settlement of index options, the cash settlement period is one day.
During product setup, the product settlement period can be defined as equal to or greater than the settlement period of the currency. Additionally, the sending of the cash transactions to the settlement institutions complies with the settlement period of the product.

If a clearing member wants to execute a cash settlement (or a security delivery section 3.10 “Delivery of Stock and Government Bonds” on page 134) in a Eurex currency in which the clearing member does not have an account, the transaction must be performed by a representing correspondent bank holding a cash account at the central bank of that currency. The correspondent bank has the right to limit its risk for each Eurex clearing member account to a maximum daily cash amount. The effective period, for which the limit applies, can be specified. A correspondent bank is not obliged to be a member of Eurex, but in order to get information, a connection to the Eurex network is necessary.

3.7.2.4 Surveillance of the Cash Settlement

Exchange members can follow and check cash settlements on the reports and windows named below.

Windows:

- Exercise Assignment Summary Overview
- Daily Cash Transaction Overview (Debit or Credit)

Reports:

- RPTCB102 - Cash Settled Contracts
- RPTCE070 - Exercise and Assignment Summary
- RPTCD010 - Daily Cash Account CM
- RPTCD070 - Monthly Cash Account CM

3.7.3 Cash Settlement on Order of the Eurex Management Board

The type of settlement of Eurex stock options is determined in the contract specifications, i.e. Eurex calls either for a cash settlement or the effective delivery of the shares. Under certain circumstances, and in order to maintain orderly market conditions, the Eurex Management Board may change the type of delivery and, instead of effective deliveries, order cash settlement. Eurex informs its members immediately if the Eurex Management Board makes this change.

If a cash settlement is ordered in an underlying, all the exercises in this underlying are settled in cash. The delivery instructions generated on the previous day by exercises and assignments are usually not affected by this. The calculation of the cash settlement amount and the settlement process of the money transactions correspond to the pattern roughly described in section 3.7.2 “Cash Settlement of Options” on page 123.

Eurex may also order cash settlement instead of a physical delivery in futures trading on a synthetic government bond in the case of disorderly market conditions.
3.7.4 Cash Settlement of Stock Options with Adjusted Contract Sizes

3.7.4.1 General Points

In the case of a recapitalization of an underlying, the adjustment is also carried out for all the options series of the underlying, to maintain the value of the open positions even after capital modification. The adjustment of the contracts is made based on the capital adjustment factor. This factor is calculated with the help of the exact dates of the capital increase, or decrease, and is used to adjust the basis prices and contract sizes of the individual contracts. Consequently, contract sizes can contain fractional parts (see section 3.6 "Capital Adjustments/Recapitalization" on page 111).

Exercises in these modified contract sizes may call for the cash settlement of part of the delivery. The number of cash settled parts depends on the type of capital adjustment carried out. For example, if a one to one capital modification is effected in an underlying, the contract size increases from 50 to 100.

If the newly issued correction shares have full dividend rights, 100 shares are delivered per exercised contract. If the newly issued correction shares do not have full dividend rights, 50 shares are delivered per exercised contract and 50 settled in cash.

When the contract adjustment creates a contract size with fractional parts, the fractional parts are always settled in cash. The current rules for regular series for dividing the contract size into share and cash fractions are also applied to LEPO series.

The new contract size for LEPO contracts is calculated as follows:

\[ N_1 = \frac{((U-E) \times N)}{((U \times R) - E)} \]

Variables:
- \( N \) = Contract size
- \( U \) = Underlying value
- \( E \) = Exercise price
- \( R \) = Capital variation ratio (see chapter "Introduction")

If, after a capital adjustment, some contract sizes are, after exercise, partly delivered and partly settled in cash, the delivery instructions to the CSD contain the payment amount for the delivery and the cash settlement amount for that part of the delivery to be settled in cash. The payment for delivery and the cash settlement are performed by separate transactions. The cash settlement amount is calculated based on the following formula:

\[ CS = (CP - EP) \times (SC \times Q) \]

Variables:
- \( CS \) = Multi-currency cash settlement amount
- \( CP \) = The CP is the price resulting from the closing auction in the electronic trading system of the Frankfurt Stock Exchange.

The following section describes the procedure for German products:

If no price in the underlying security is effected on the closing auction, the volume weighted average of the last three “paid” prices (Bezahlt-Preise) of the respective underlying security effected on the electronic trading system of the Frankfurt Stock Exchange between the close of trading at the Frankfurt Stock Exchange and the close of trading at the Exchange (Eurex) in stock options shall be authoritative.
If three prices in the underlying security are not effected on the electronic trading system of the Frankfurt Stock Exchange between the close of trading at the Frankfurt Stock Exchange and the close of trading at the Exchange (Eurex) in stock options, the closing price of the underlying security on the Frankfurt Stock Exchange shall be authoritative.

For shares with a restriction of transfer: Volume weighted average price of all matched cum prices during the last minute before 20.00h (If there are not at least 5 prices during the last minute, the last 5 prices after the end of official trading hours of FWB are decisive). The highest and the lowest price are deleted. If there are not at least 5 matched prices on XETRA between the end of the official trading hours of the FWB (for German products only) and 20.00h, the closing price of the FWB is decisive.

In case of Swiss products, there is no calculation procedure involved. Through the SMF interface, the price information is transmitted in real-time.

EP = Basis price of the option (Exercise price)
SC = Number of items to be settled cash.
Q = Number of contracts exercised or assigned (quantity)
TU = Contract size – number of items per contract (trading unit)

The amount to be paid or received for the delivery is calculated as follows:

\[
\text{Receivable or payable amount} = (EP \times Q \times TU)
\]

The number of receivable or deliverable items is calculated as follows:

\[
\text{Receivable or deliverable items} = ST = Q \times TU
\]

In the event of different product and underlying currencies, the settlement amounts are calculated as follows:

\[
\text{Delivery Settlement Amount [CCYS]} = \text{Trade Unit Shares} \times \text{Price [CCYP]} \times \text{ExchRate [CCYS/CCYP]}
\]

\[
\text{Cash Settlement Amount [CCYS]} = \begin{cases} 
0, & \text{for Futures} \\
\text{Trade Unit Cash} \times \text{ITM amount[CCYP]} \times \text{ExchRate [CCYS/CCYP]}, & \text{for Options}
\end{cases}
\]

\[
\text{Converted Trade Price [CCYS]} = \frac{\text{Delivery Settlement Amount[CCYS]}}{\text{Trade Unit Shares}}
\]

where:

- Trade Unit Shares or Trade Unit Cash is the share settled or cash settled part of the trading unit,
- Price is the Exercise Price(Options)/Final Settlement Price(Futures) of the product,
- ITM amount is the amount a contract is in the money.
3.7.4.2 Example of a Cash Settlement with Adjusted Contract Sizes

This chapter gives some examples of the cash settlement, but not the details of the capital adjustments (see section 3.6 “Capital Adjustments/Recapitalization” on page 111).

Issue of new shares (Purchase rights)
The day after a capital modification in the underlying BASF, an exchange member exercises five contracts in the following series:

<table>
<thead>
<tr>
<th>Underlying</th>
<th>Call/Put</th>
<th>Month</th>
<th>Basis Price</th>
<th>Contract Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>BASF</td>
<td>CALL</td>
<td>DEC</td>
<td>3354</td>
<td>101.37</td>
</tr>
</tbody>
</table>

In an issue of new shares with purchase rights, the number of items exceeding the standard contract size of 100 is always settled in cash. In this example, the closing price of the underlying is fixed at 38 EUR.

Cash transaction:
Cash settlement amount = (38 - 33.54) * (1.37 * 5)
= 30.55 EUR

The assigned clearing member is debited by an amount of 30.55 EUR.

Calculation of delivery items:
Receive shares = 100 * 5 = 500
Payable amount = (33.54 * 5 * 100) = 16,770 EUR

The assigned clearing member must deliver 500 BASF shares and receives an amount of 16,770 EUR.

Issue of Correction Shares with Full Dividend Rights

In the following example, BASF issued correction shares with full dividend rights and an exchange member has the following contracts exercised:

<table>
<thead>
<tr>
<th>Underlying</th>
<th>Call/Put</th>
<th>Month</th>
<th>Basis Price</th>
<th>Contract Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>BASF</td>
<td>CALL</td>
<td>DEC</td>
<td>3460</td>
<td>102.5</td>
</tr>
</tbody>
</table>

In the issue of correction shares with full rights, as many shares as possible are delivered when exercising or assigning these adjusted contracts. Only the fractional parts of a delivery notice are settled cash.

Correction shares with full dividend rights call for the following modifications to the formulas shown above:

The cash settlement amount is found in this case as follows:

\[ CS = (CP - EP) \times SC' \]

with \( SC' \) = number of items to be settled cash per contract

The cash settlement amount is calculated per contract and then multiplied by the number of contracts per delivery notice.

The number of receivable or deliverable items (ST) is calculated as follows:

\[ ST = (Q \times TU) - SC' \]

The payable or receivable amount for the delivery is:

\( (EP \times ST) \)
In this example, the delivery requirement is 512.5 shares (5 contracts * 102.5 shares). The fractional part of each contract (5*0.5 = 2.5) is settled in cash. The closing price of BASF shares is fixed at 38 EUR.

Cash transaction:
Cash settlement amount = (38 - 34.60) * (5 * 0.5)
= 8.50 EUR
The assigned clearing member is debited by an amount of 8.50 EUR.

Calculation of delivery items:
Receivable shares = 5 * (102.5 - 0.5) = 510
Payable amount = (34.6 * 510) = 17,646 EUR
The assigned clearing member must deliver 510 BASF shares and receives an amount of 17,646 EUR.

**Issue of Correction Shares without Full Dividend Rights**

In the following example, BASF issued correction shares without full dividend rights. An exchange member has the following five contracts exercised:

<table>
<thead>
<tr>
<th>Underlying</th>
<th>Call/Put</th>
<th>Month</th>
<th>Basis Price</th>
<th>Contract Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>BASF</td>
<td>CALL</td>
<td>DEC</td>
<td>3460</td>
<td>102.5</td>
</tr>
</tbody>
</table>

When correction shares are issued with reduced rights, only the standard contract size is delivered at the exercise or assignment of these modified contracts. The difference to the adjusted contract size is settled in cash, which, in this example, amounts to 2.5 items. The closing price of BASF shares is fixed at 38 EUR:

Cash transaction:
Cash settlement amount = (38 - 34.6) * 2.5 * 5
= 42.5 EUR
The assigned clearing member is debited by an amount of 42.50 EUR.

Receivable shares = 5 * 100 = 500
Payable amount = 34.6 * 5 * 100
= 17,300 EUR
The assigned clearing member must deliver 500 BASF shares and receives an amount of 17,300 EUR.

**3.7.4.3 Surveillance of the Cash Settlement with Adjusted Contract Sizes**

The exchange members can determine the cash settlement amount of exercised or assigned modified contracts by means of the appropriate windows and reports for exercises and assignments. The entire cash amount for a delivery can be found on the Exercise Assignment Summary Overview window or on the report “Exercise and Assignment Summary” (RPTCE070). The following window and report contain information on cash settlement:

Windows:
Exercise Assignment Summary Overview

Reports:
RPTCE070 - Exercise and Assignment Summary
3.7.5 Cash Settlement Due to Late Delivery
The Eurex Clearing house is the legal contractual partner for all deliveries originating from exercises and assignments. It monitors the timely delivery of the underlyings by the CSD. If the delivery is not performed by the deadline, the Eurex Clearing house has the right to perform a buy in transaction or cash settlement.
Cash settlements due to late delivery are performed by the CCP.

3.7.6 Cash Settlement Due to Mergers and Takeovers
In case of mergers or takeovers of companies, the settlement date of the transaction may be before the original expiry date of the respective options contract. The settlement amount in these situations is determined based on the fair value of an option calculated by means of the options price model (Cox-Ross-Rubinstein binomial model).
The calculation is performed for each options series on the settlement day and takes into account the value of the underlying based on the offer, the risk-free interest rate based on the option’s maturity and the estimated dividends accumulating up to the original expiry date of the option. The volatility is determined for each strike price and is calculated based on the following:
The implicit volatility is calculated for each day from the settlement prices of the individual series for the ten days before the first public announcement of a takeover. The average volatility is determined from these values. For the calculation of average volatility, every highest and lowest value of implicit volatility calculated is excluded. For options that are more out-of-the-money than the first option which is settled with the minimal tick (e.g., EUR 0.01), the implicit volatility is considered.
In case of equity futures, settlement is done on the basis of the value of the underlying based on the offer and allowing for the risk-free interest rate of the remaining maturity and, if applicable, estimated dividends.
The same procedure applies for mixed shares/cash compensation offers, for which the cash amount is at least 67 percent at the time the offer is announced.

3.7.7 Cross Currency Setup
In order to keep the currency of the product unchanged, a cross currency setup is applied to standard as well as flexible contracts of Options on Stocks (OSTK) and Single Stock Futures (FSTK) product types.
The currency of a Eurex product is chosen identical with the currency in which the underlying security is traded and settled. During the lifetime of the contract, the underlying and the respective currency may change, e.g., in the event of merger or takeover. In order to keep the currency of the product unchanged, a dummy ISIN is assigned to the underlying security. This cross currency setup is applied to standard as well as flexible contracts of Options on Stocks (OSTK) and Single Stock Futures (FSTK) product types.
3.8 Calculation of the Interest on Cash Margin

Clearing members must be configured to receive interest payments by Market Supervision. There is one interest rate for each valid Eurex clearing currency. The same interest rates apply to all members.

All valid Eurex clearing currencies can earn interest. The interest earned is in the same currency as the cash balance earning the interest; EUR earns EUR interest; CHF earns CHF interest.

Cash amounts exceeding an interest-free limit are used to calculate interest payments. The process of cash deposit/withdrawal requires that a shortfall in margin is made up by a deposit of the amount required, and that the excess margin leads to a payment of the amount which is no longer required. The basis for the payment of interest is the balance in the snapshot taken of the member’s cash balance. If you wish to deposit cash outside the automatic procedure described above, please advise or request the entry of permanent cash balance by using the Collateral Pool Overview window. Following the advice, the cash amount is debited from your usual central bank or payment bank account, as declared to Eurex Clearing, and is credited to your internal collateral account. The use of a different central bank or payment bank account is not permitted.

The deposited cash amount is shown on the RPTCD010 Daily Cash Account CM, RPTCD011 Daily Cash Account AH, RPTCD031 Daily Collateral Valuation, RPTCD070 Monthly Cash Account CM and RPTCD071 Monthly Cash Account AH Reports. The cash amounts can be differentiated from the ‘real’ security collateral by the entry SECU ID = CASH. In addition to the report, this cash collateral can be also found in the Collateral Status Overview Clearing GUI window.

Interest is calculated per Clearer ID and per Pool ID related to the Clearer ID for every calendar day, including official holidays and weekends. Interest payments are made once a month.

3.8.1 Daily Cash Balance

Every trading day the daily balance is calculated, based on the interest-free limit, using the following formula:

\[ DR_{CM,Cr,d} = DB_{CM,Cr,d} - IF_{Cr} \]

Where:
- **DR**: Daily balance exceeding interest-free limit
- **CM**: Clearing Member
- **Cr**: Currency
- **d**: Date
- **DB**: Daily balance of Pool ID
- **IF**: Interest-free limit defined for every currency.
The daily interest calculation is as follows:

\[ DI_{CM,d,Cr} = \frac{IR_{Cr,d} \times DR_{CM,d,Cr} \times D}{365} \]

Where:
- **DI**: Daily Interest
- **CM**: Clearing Member
- **Cr**: Currency
- **d**: Interest Calculation date
- **IR**: Interest Rate
- **DR**: Daily Balance of Pool ID exceeding interest-free limit.
- **D**: number of days used in interest calculation. Weekends and holidays are included in interest calculations. The last daily cash balance before holidays, i.e. Friday’s cash balance for weekends, is used as the basis for interest calculations on holidays. Therefore, this parameter is 3 for weekend interest calculations. If the month ends on Saturday, then interest is calculated for two days, thus this parameter is 2.

In leap years, 366 is used as the denominator (divisor) in the above equation.

### 3.8.2 Monthly Interest

The amount of interest paid to each member configured to receive interest is calculated once each month. Currently, this calculation is performed on the last business day of the month. The following formula is used:

\[ CI_{CM,Cr} = \sum_{i=1}^{d} DI_{CM,Cr,i} \]

Where:
- **CI**: Total interest per month
- **CM**: Clearing Member
- **Cr**: Currency
- **DI**: Daily interest
- **d**: Days of the month for which the interest has been calculated.
3.9 Delivery Payment Versus Payment

This chapter only applies to Eurex.

3.9.1 Settlement of FX Futures

FX futures (product type: FCUR) represent contracts to exchange one currency against another. The face value is defined in terms of the delivery currency, and the price is quoted in terms of the product currency (for example, USD 1.20620/EUR where USD is the product currency, and EUR is the delivery currency).

Daily revaluation of open FX futures positions is performed using the “mark-to-market” procedure (see section 3.4 “Calculation of the Variation Margin” on page 98). The variation margin cash flow occurs through an authorized payment bank in the applicable product currency.

On settlement date, two business days after the last trading day of the futures contract, owners of long positions are credited in the delivery currency, defined by position and face value, and debited by an amount in the product currency, using the last settlement price. Reverse payments apply to owners of short positions.

Final settlement of FX futures positions occurs via payment-versus-payment utilizing a continuous link settlement bank where Eurex and clearing members have either a direct or correspondent bank account. Open FX futures positions on the contract's last trading day are automatically delivered. Results of the settlement procedure are displayed in the report “Expiration Payment-Versus-Payment” (RPTCE050). Positions in nearly expiring FX futures contracts are listed in the report “Settling Futures Positions” (RPTCB031).

The feature of position transfer with cash amount is also supported for FX futures. Payments are settled through payment banks. This functionality is by definition of the concept only supported in the product currency, not in the delivery currency.

3.10 Delivery of Stock and Government Bonds

This chapter only applies to Eurex.

3.10.1 Introduction

This chapter describes the individual processing steps of the delivery of, and payment for, the securities cleared by Eurex Clearing.

Taking part in this process are the exchange members, Eurex, the clearing members, the CSDs, and the central banks.

Physical delivery of securities arise from exercises/assignments of stock options, notifications/allocations of futures with physical settlement, from cash bonds and repo transactions.

The settlement of deliveries and payments resulting from stock options and futures contracts on a government bond is described later.
3.10.2 Trading with Stock Options

3.10.2.1 Exercise

The trigger of the delivery and acceptance process is the “exercise”, when an options holder executes the right to buy or sell shares from a call or put option (see the “Eurex @X-tract Clearing User Guide”, chapter “Exercise and Assignment of Options Contracts”).

Stock options traded on Eurex can be exercised during the business hours of the contract up to and including the third Friday of the exercise month (American style options).

The exchange members can enter exercises into the system on the Exercise Overview window.

The unintended exercise of OTM positions and/or abandonment of ITM positions can be prevented by an optional four eye principle supported by the Eurex system. The audit trail report RPTTT150 OPTIONAL FOUR EYE PRINCIPLE documents the exercises to which the four-eye principle has been applied.

3.10.2.2 Assignment

All exercised options contracts are randomly allocated to the holders during the daily assignment procedure. Members receive assignment information before the batch starts. Please refer to the section 3.5.1 “Assignment Procedure in the Exercise of Options (Eurex only)” on page 105 for information on the processing.

On the same business day all the exchange members can see the results of the assignment process, i.e. the deliveries and payments, on the Exercise Assignment Overview windows as well as on the “Exercise and Assignment” report (RPTCE070).

3.10.2.3 Delivery

The CCP, which receives delivery instructions resulting from exercise/assignment from the Eurex system, performs the delivery processing in cooperation with the CSDs.
3.10.3 Trading with Futures on a Synthetic Government Bond

3.10.3.1 Delivery Notice

The trigger for delivery/acceptance of government bonds is the maturity of the corresponding futures contract.

The last trading day is also the notification day. On this day, clearing members must display the government bonds ready for delivery for all the open short positions, by using the Notification Overview window after the respective contract has expired. The process of the delivery notice is described in the “Eurex @X-tract Clearing User Guide”, chapter “Fulfillment of Obligations from Executed Trades”.

The notification day (the last trading day of the futures contract, when trading in the expired contract ceases at 12.30) is two business days before the delivery day.

3.10.3.2 Allocation

During the trading period, the Eurex system randomly distributes the government bonds notified for delivery to the corresponding long positions in futures contracts (see section 3.5.2 “The Allocation Procedure with Bonds” on page 108). The end of this process for a dedicated product is indicated by an end of assignment/allocation message (transaction type 422). Although the product may still be in state “Trading”, clearing activities related to the expired contract are no longer possible after the end of assignment/allocation message has been sent. An end of assignment/allocation message is also provided per product type and for all products.

The Notification Allocation Summary Overview window and the corresponding “Notification/Allocation Summary” report (RPTCE075), received on the next day, show the clearing member all of the short positions notified for delivery and all of the allocated long positions and the nominal value and service charges for the payment of the current business day. The Futures Deliverable Position Overview window and the Allocation Overview window provide additional information.

The notification/allocation fees are calculated separately for each deliverable bond. The bond invoice amount calculation is shown in section 3.11 “Calculation of the Invoice Amount in the Delivery of Government Bonds” on page 139.
3.10.3.3 Delivery

The CCP, which receives delivery instructions resulting from notification/allocation from the Eurex system, performs the delivery processing in cooperation with the CSDs.

The invoicing amount of deliverable bonds (bund future delivery) is calculated as follows:

\[(\text{final settlement price} \times \text{conversion factor} \times 1000)^a + \text{accrued interest}^b\]

- a: The amount is calculated till second decimal place
- b: The amount is rounded off after the second decimal place

3.10.4 Trading with Cash Market Products

3.10.4.1 Trade - Day T

The delivery process for cash market trades is triggered by the receipt of a transaction from a trading system for which the clearing house provides clearance services as central counterpart. The precise mechanisms by which the clearing house becomes counterpart to transactions from a given trading location vary from one trading location to another, and are set forth in the trading conditions of the trading location and in agreements between the clearing house and the trading location in question.

This document describes the delivery process from the time that the clearing house becomes party to a given cash market transaction and such transaction is recorded in the clearing house systems.

Cash market transactions that are recorded in the systems of the clearing house are referred to as pending trades.

Pending trades that are to be settled on a T+3 or shorter settlement cycle are held in the clearing house system until the batch process on the trade date. At that time, settlement instructions are generated and submitted to the relevant settlement locations. Pending trades that are to be settled and have a longer settlement cycle, are held in the clearing house system until the clearing house batch run on that date, which is the difference between the settlement date and the standard settlement period. Settlement instructions for these trades are created and submitted to the settlement locations at that time. Once the settlement instructions are transmitted to the settlement locations, clearing members are able to see the pending settlement instructions via the standard information channels provided for their accounts by the settlement location.
3.10.4.2 Settlement – Day T+n

The clearing house maintains settlement accounts at multiple settlement locations. It settles transactions at the location chosen by the respective member in the trading location giving rise to the trades. As an example, a member could specify one settlement location for German government bonds and another for Swiss government bonds. The member communicates this choice to the trading location, and the trading location then informs the clearing house of the location for settlement.

The clearing house settles transactions, except for cross border settlement procedures described below, on an internal settlement basis, via its securities clearance account at the settlement location chosen by the member. Settlement is performed on a delivery versus payment basis according to the usual settlement mechanisms applicable at the settlement location in question.

In order to ensure that the clearing house is not short securities at one settlement location and long securities at other settlement locations, the clearing house eliminates such imbalances by creating cross border settlement instructions for some pending trades. The cross border settlement instructions are always cross border deliveries from a clearing member preferred settlement account to the clearing house account at another settlement location. They are assigned to clearing members according to an algorithm that should, over time, impose cross border settlements on all members to the same extent.

In all cases, the clearing house submits settlement instructions to the settlement locations for itself and on behalf of the member. The actions required by the member to ensure settlement in the settlement location shall be as according to the rules of such settlement location. The members are responsible, for example, for having sufficient cash, credit and securities and for performing any releasing of transactions as may be required by the settlement location.

Settlement takes place at the usual times and according to the standard process of the settlement location.

Details on the settlement of cash market products can be found in the “Eurex Rules and Regulations – Clearing Conditions”.

3.10.4.3 Delays in Settlement

If clearing members fail to deliver a security on the settlement date (in full or partial) to the clearing house, the clearing house (i) will not be able to fulfill all of its settlement obligations on the scheduled settlement date and (ii) could, if it took no further action, be forced to carry a long security position from one day to the next. In such a case, the clearing house makes a partial delivery to reduce its long security position to zero. Should there be more than one such clearing member, the partial delivery is assigned on a random basis. The clearing house informs the clearing member of the pending delivery selected for partial settlement and will, for itself, and on behalf of the relevant clearing member, submit instructions to cancel the pending delivery in question, and to replace it with two new settlement instructions in the amount of the desired partial delivery and the resulting remaining amount.
3.10.4.4 **Coupon Compensations**

Should certain members fail to deliver securities to the clearing house timely on the settlement date, and should a coupon payment be made on the security in question, then, under certain circumstances, coupon compensation payments are due from the late seller to the clearing house and from the clearing house to the clearing member that is awaiting delivery of the security in question.

Upon confirmation that the late pending delivery is settled, instructions are sent to the central bank, CBF (i) to debit the account of the clearing member that was late in delivering the security, and to credit the account of the clearing house and (ii) to debit the account of the clearing house and to credit the account of the clearing member to whom late delivery of the security in question was made.

3.11 **Calculation of the Invoice Amount in the Delivery of Government Bonds**

This chapter only applies to Eurex.

3.11.1 **General Description**

The calculation of the invoice amount for government bonds denominated in foreign currencies is described in the contract specification, if it differs from the calculation description below.

Eurex calculates a notification/allocation fee at the maturity of, for example, a FGBL (BUND Future) contract for each deliverable government bond. The bond invoice amount is listed on the “Deliverable Bonds” report (RPTCE038 – see “Eurex XML Report Reference Manual”). The holder of an open long position is obliged, at the expiration of the FGBL contract, to pay this invoice amount when receiving the government bonds.

Since it is not possible, in practice, to deliver government bonds with the same nominal interest rate (6%) and the same duration (8.5 - 10.5 years) as the notional government bonds, conversion factors must be calculated for deliverable government bonds. The conversion factor helps make all the deliverable government bonds comparable concerning the duration and the nominal interest rate.

The invoice amount payable by the holder of the open long position to the holder of the short position at maturity is calculated as follows (Eurex currencies):

\[
\text{invoice amount} = \frac{\text{final settlement price}}{\text{conversion factor}} \times \text{EUR 1,000} + \text{accrued interest}
\]
Example:
Based on a contract size of EUR 100,000, a 4% government bond with running time until 4 July 2009 is to be delivered on the 10th of December 1999. The final settlement price of the futures contract on the 8th December is 116.00; the conversion factor is 0.856929 and the accrued interest amounts to EUR 2,833.60.

\[
\text{invoice amount} = 116.00 \times 0.856929 \times \text{EUR 1,000} + \text{EUR 2,833.60} \\
= \text{EUR 102,237.34}
\]

The conversion factor and the accrued interest from the above example are explained in more detail below.
### 3.11.2 Calculation of the Conversion Factor

The conversion factor serves to make the various deliverable government bonds comparable in their nominal interest rate and maturity dates. Eurex calculates the conversion factor for German government bonds presupposing that the deliverable government bonds have a maturity return of the product-specific notional coupon. The conversion factor is defined as the market price of 1 EUR nominal value that would produce a maturity profit of exactly the notional coupon for the deliverable government bond.

The calculation of the conversion factor for government bonds denominated in foreign currencies is described in the contract specification if it differs from the calculation described below.


The formula for the calculation of the conversion factor (PF) for a gross true yield Euro-denominated government bond is:

$$ PF = \frac{1}{\left(1 + \frac{c_n}{100}\right)^f} \left[ \text{FirstCouponAdj}_{i+1} + \sum_{i=0}^{N} \frac{c_i}{100} \cdot cf \cdot \frac{\text{delay}(c_i)}{\text{cf} \cdot \text{daycount}(\text{pd}(c_i), \text{pd}(c_{i+1}))} \left(1 + \frac{c_n}{100}\right)^{\text{delay}(c_i)} \right] - \text{accr.int.} $$

Where:

$$ f = 1 + \frac{\delta_t}{\text{act}_1} $$

$$ \text{FirstCouponAdj}_{i+1} = \frac{c}{100} \cdot cf \cdot \frac{\delta_t}{\text{act}_2} $$

$$ \text{accr.int.} = \frac{c}{100} \cdot cf \cdot \left( \frac{\delta_t}{\text{act}_2} - \frac{\delta_t}{\text{act}_1} \right) $$

**Note:** accr.int is rounded to seven decimal places to reflect the amount payable per 100,000 euros.
With the date of reference:

- DD = delivery date

Determine the following data:

- LCD = last coupon date (If the bond’s first coupon date is later than the delivery date, the LCD is the start of the accrual period)
- NCD = next coupon date (after the delivery date)
- NCD_{1cp} = one coupon period before the next coupon date
- NCD_{2cp} = two coupon periods before the next coupon date
- \( \delta_e \) = NCD_{1cp} - DD
- \( \delta_i \) = NCD_{1cp} - LCD
- act1 = NCD_{1cp} - NCD_{2cp}, if \( \delta_e < 0 \)
- act2 = NCD_{1cp} - NCD_{2cp}, if \( \delta_e \geq 0 \)
- N = number of full coupon periods between NCD and maturity of the bond
- c = nominal interest rate of the government loan, for example 4% = 4.0
- cn => notional coupon
- cf => coupon frequency (1 = annual, 2 = semi-annual, 4 = quarterly)
- ci => i-th coupon payment after NCD (c0 = coupon payment at NCD)
- pd(ci) => regular payment date of i-th coupon payment
- delay(ci) => number of days between pd(ci) and the actual value date of the i-th coupon payment (adjusts for pd(ci) falling on a weekend or holiday)

Note: If calculating Gross Yield, the delay must be set to zero.

- pd(N) => maturity date = regular payment date of redemption value
- delay(N) => number of days between pd(N) and the actual value date of the redemption payment

Note: If calculating Gross Yield, the delay must be set to zero.

pd(N+1) => pd(N) plus one coupon period

Example:

In the case of a gross yield [gross true yield with all delays = 0] December 1999 delivery of the 4% government bond with maturity of 4 July 2009, this government bond has nine full years to maturity and 206 (365 - 159) days of interest. This gives a conversion factor of 0.856929.

\[
\frac{1}{1.06} \left[ \frac{4}{365} \cdot \frac{100}{365} + \frac{4}{6} \left( \frac{1.06 - 1}{1.06^9} \right) + \frac{1}{1.06^9} - \frac{4}{100} \left( \frac{100}{365} - \frac{-159}{365} \right) \right] = 0.856929
\]

- \( \delta_e = -159 \)
- \( \delta_i = 100 \)
- act1 = 365
- act2 = 365
- n = 9
- c = 4
3.11.3 Calculation of the Accrued Interest

The accrued interest is contained in the service charge of the deliverable government bonds in order to balance the interest loss for the period between the last interest payment and the delivery date, less one day for the member obliged to deliver the government bond. The delivery date of the German government bonds is the tenth calendar day of a delivery month, or the next trading day, when the tenth calendar day is not a business day. The date for calculating the accrued interest corresponds to the delivery date less one calendar day. Eurex calculates the accrued interest based on the actual days per month and the actual days per year.

The calculation of the accrued interest for government bonds denominated in foreign currencies is described in the contract specification if it differs from the calculation description below.

The formula for the calculation of the accrued interest using the same parameters as in section 3.11.2 “Calculation of the Conversion Factor” on page 141 is as follows:

\[
\text{Accrued Interest} = 1,000 \cdot c \cdot \left( \frac{\delta_i}{act_2} - \frac{\delta_e}{act_1} \right)
\]

Example:

Last interest payment (start of interest calc.) : 26. March 1999
Delivery date : 10. December 1999
number of days for calculation of accrued interest from 26. March to 4 July 1999 (\(\delta_i\)) : 100 days
base for this period (act_2) : 365 days
Number of days for calculation of accrued interest from 4. July to 10 December 1999 (\(\delta_e\)) (negative, since NCD1cp < DD) : -159 days
base for this period (act_1) : 366 days

\[
\text{Accrued Interest} = 1,000 \cdot 4 \cdot \left( \frac{100}{365} - \frac{-159}{366} \right) = 2,833.60 \text{ EUR}
\]
3.12 Settlement of Options in the “Future Style” Method (Options on Futures)

This chapter only applies to Eurex.

3.12.1 General Description

Eurex allows options to be settled following two different methods. The options contracts of a product are settled either in the traditional way or following the “futures style” method. The options contract specifies which method to use for all of the series of the product.

Following the traditional style premium posting method, the premium is calculated at the purchase of the option and is received at the sale. Eurex uses this method for stock options and options on an index (for example DAX).

The “futures style” method treats options in the same way as futures. The options premium is not paid (received) at the purchase (sale), but on the exercise (assignment) or on the expiration of the contract. A daily revaluation of an open options position is made using the “mark-to-market” procedure, while this position is held (see section 3.4 “Calculation of the Variation Margin” on page 98). The result of this daily valuation at market price is booked into the premium account at the central bank account of the clearing member. This method is used for options on futures.

3.12.2 Settlement with Exercise of a Position

A long position in an options contract with “futures style” settlement can be exercised on the Eurex Exercise Overview window. The exercises can be entered into the Eurex system until the end of the post-full-trading-period of the last trading day before expiration day. Each exercised long position is assigned to a short position of the same series during the post-restricted trading period (see section 3.5 “Assignment Procedure” on page 105).

With the exercise or the assignment of an option on a future, a position is created in the relevant futures contract. For example, the exercise of a long call June position leads to a long position in the underlying June futures contract. This assignment triggers the creation of a short position in the June futures contract.

During the assignment processing, the Eurex system processes the exercises entered by taking the following steps:

1. For the option position, the daily revaluation is made according to the “mark-to-market” procedure and is booked to the premium account.
2. Short positions are assigned to the exercised long positions in the assignment procedure (see section 3.5 "Assignment Procedure" on page 105).
3. The residual payable or receivable premium is calculated for the exercised and assigned positions and is booked to the premium account. This residual premium corresponds to the settlement price in the exercised contract.
4. The system generates the corresponding futures positions.

- **Exercise:**
  - call position leads to long future position
  - put position leads to short future position

- **Assignment:**
  - call position leads to short future position
  - put position leads to long future position
(5) The daily variation margin is calculated and booked for the new futures positions. The amount is the difference between the strike price of the option and the settlement price of the futures contract.

Example of settlement with exercise

On day T, exchange member A buys 10 option contracts on the FGBL contract, expiration June 99, strike price 116.00, at a price of 0.65.

Daily valuation of the options position, settlement price of the option 0.95.

\[
(0.95 - 0.65)/0.01 = 30 \text{ ticks}
\]

\[
30 \text{ ticks} \times 10 \times 10 \text{ EUR/tick} = 3,000 \text{ EUR}
\]

During the trading day, the value of the long position has risen by 3,000 EUR. This amount is credited to the Eurex premium account.

Exchange member A exercises the long position on Day T + 1. On this trading day, the settlement price of the option is 1.10. The settlement price of the underlying future is 116.85, i.e. the option is 85 ticks "in-the-money".

a) Daily evaluation of the option position

\[
(1.10 - 0.95)/0.01 = 15 \text{ ticks}
\]

\[
15 \text{ ticks} \times 10 \times 10 \text{ EUR/tick} = 1,500 \text{ EUR}
\]

This amount is credited to the Eurex premium account of the member.

b) Payment of the residual premium in the size of the settlement price

\[
1.10/0.01 = 110 \text{ ticks}
\]

\[
110 \text{ ticks} \times 10 \times 10 \text{ EUR/tick} = 11,000 \text{ EUR}
\]

The Eurex premium account is debited 11,000 EUR.

c) Calculation of the variation margin for the newly generated long futures position.

\[
(116.85 - 116)/0.01 = 85 \text{ ticks}
\]

\[
85 \text{ ticks} \times 10 \times 10 \text{ EUR/tick} = 8,500 \text{ EUR}
\]

This credit of 8,500 EUR is booked as variation margin.

Summary of the Results of the Example

The following amounts are booked on the premium account:

\[
3,000 \text{ EUR} + 1,500 \text{ EUR} - 11,000 \text{ EUR} = -6,500 \text{ EUR}
\]

This amount corresponds exactly to the agreed purchase price, the difference to the traditional method being the time of payment.

The valuation of the futures position gives a variation margin of 8,500 EUR; if the premium due is subtracted from this amount, the unrealized profit of the exercise is obtained.

\[
8,500 \text{ EUR} - 6,500 \text{ EUR} = 2,000 \text{ EUR}
\]
3.12.3 Settlement on Expiration of a Contract

An option position expires if not exercised before its maturity day. In the case of options settled by the “futures style” method, the Eurex system calculates the residual premium amount payable or receivable on expiration day. This premium amount corresponds to the final settlement price of the option contract.

Example of Settlement on Expiration:
A month ago exchange member A bought 10 call options on the FGBL, expiration June 99, strike price 116.50, at a price of 0.32. The final settlement price of the option is 0.02.

On expiration day, the following calculation is effected:

\[
\frac{0.02}{0.01} = 2 \text{ ticks}
\]

\[
2 \text{ ticks} \times 10 \text{ contracts} \times 10 \text{ EUR/tick} = 200 \text{ EUR}
\]

These 200 EUR are debited from the premium account. This amount only represents the residual premium payable; the rest is paid during the last month with the daily position valuations, and is booked to the Eurex premium account.

3.13 Delivery and Settlement of EEX Products

This chapter only applies to EEX.

Market Supervision creates and tracks delivery and settlement for the underlying commodity based on the result of the allocation process. Delivery confirmations from the exchange member are received and tracked by the clearing department.

Pending deliveries are not technically tracked in the Eurex system, as open positions are reduced in the Eurex system after the allocation.

There is a period between the contract expiration and the start of the delivery period. During this period, the clearing department handles Amendments to Standard Delivery (ASD) and Alternative Delivery Procedures (ADP) outside of the Eurex system.

The payment of the futures contracts is done at the end of the delivery period via the clearing member and is initiated by the clearing department.
3.13.1 Cash Settlement of Energy Futures
Quarterly and annual energy futures are settled through cascading and not via cash settlement. Cascading of an annual futures contract entails exchanging an annual future for three monthly futures (January to March) and three quarterly futures (2nd to 4th calendar quarter). Cascading of quarterly futures entails exchanging a quarterly future for three monthly futures. Cascading on the final trading day comprises three steps:
- Expiration and final profit and loss balancing of the quarterly/annual futures according to the final settlement price.
- Booking of the new futures contracts at the final settlement price of the expired quarterly/annual futures in the trader’s position account. This booking corresponds to a trade in these futures contracts at the final settlement price of the quarterly/annual futures.
- Preliminary profit/loss balancing of the newly created positions according to the daily settlement price of the futures contracts they have replaced.

Monthly energy futures are settled through cash settlement. The final profit and loss is calculated according to the final settlement price and booked to the cash account.

3.13.1.1 Depositing Margin
The clearing participants can satisfy all margin requirements by depositing the appropriate amount of cash. Cash collateral can be paid into the account in various currencies. The EEX AG board of directors stipulates which currencies are permitted for the deposit of cash collateral. For additional margin, participants may deposit securities instead of cash. EEX AG does not pay interest on cash deposited as collateral, so depositing securities that the clearing participant legally owns offer the benefit that those instruments continue to provide returns.

It is essential that coverage of variation margin (i.e. the daily settlement of profits and losses), as well as margin calls, are paid in cash.

3.13.1.2 Intraday Margin
EEX AG, based on its own risk assessment, carried out during the course of a given trading day, at all times reserves the right to demand from the clearing member a higher, or additional, amount of either cash collateral or those securities or rights to securities that are accepted by EEX AG. Additional collateral must be deposited immediately in the appropriate currency into the TARGET2 or SNB account or, as the case may be, into the collateral account of CBF or SIS (SegaIntersettle).

The same right exists with respect to a general clearing member or a direct clearing member vis-à-vis any non-clearing members with which they are associated.
3.13.1.3 Procedure in Cases of Default

If a market participant is no longer able to fulfill these obligations, EEX AG closes out all open positions of that participant. All liquidation gains or losses are offset against each other, and any remaining debit balance is covered from the deposited margin.

If, thereafter, an uncovered debit balance still exists, the next step will be to liquidate the cash and securities collateral of the clearing institution that is in arrears, and, if necessary, a claim will be made against the clearing guarantee of that clearing institution. If any surplus remains, it will be paid out.

If uncovered debit balances still exist, however, then a pro-rata claim will be made against the clearing guarantees which have been deposited in the guarantee fund by those institutions which are not in default. This will occur when the reserves, which EEX AG has set aside for such purposes, are also insufficient to cover the remaining amounts due.

This procedure guarantees that the fulfillment of all contracts traded via EEX AG can be unconditionally ensured.

3.13.2 Settlement of EEX Options on Electricity Futures

EEX options on electricity futures are “European” style. Positions in these products can only be exercised on the expiration day.

The options are set up with “derivative style” settlement, i.e. exercise of a position by the buyer results in a respective underlying futures position for buyer and seller of the option. The futures positions are automatically opened on the position accounts of buyer and seller of the option during the nightly batch. The difference between strike price and settlement price of the future is itemized in the respective reports which are generated during batch on the options expiration day and the respective cash amount is credited and debited by a cash settlement on the day after expiration.

3.13.3 Physical Settlement of EEX Electricity Futures

Quarterly and annual futures are settled through cascading as for regular future contracts.

For the regular physically settled monthly futures contract, the settlement starts two trading days before the delivery period. The settlement is executed as a daily DvP (Delivery versus Payment). If there are any Exchange holidays (including weekends), delivery payment for that period is calculated along with the delivery day processing for the day after the holiday/weekend period. The physical settlement results in a linear decrease of the trading unit during the delivery period. The Eurex system calculates the amount to be paid/received for delivery and instructs the cash flow on a (business) daily basis.

The complete physical energy delivery process and delivery failure management is covered by EEX.
3.13.4 Settlement of EEX EUA Futures
EEX members are able to trade futures products on EUA (European Union Emission Allowances) at EEX Derivative Exchange on the Eurex platform. The underlying EUA is traded at the EEX Spot Market.

EEX EUA Futures are single stock futures (product type: FSTK) with European Emission Allowances as the underlying security.

The EUA Futures products support an “Alternative style” settlement. This settlement is similar to settling only the cash part of a physical delivery. The delivery versus payment, the applicable VAT calculations and the security settlement are performed by Eurex and available in the report RPTCE120 ECC Delivery.

3.13.5 VAT for EEX Deliveries
The delivery of energy or of European emission allowances is subject to VAT.

VAT payments are associated with the payment on energy delivery or on European emission allowances and are handled by the Eurex system. The VAT is charged as a percentage of the amount paid/received for the delivery. In the members proprietary account (PP account), the VAT payments for each contract is calculated based on net positions. For delivery payments associated with a members agent account, the VAT payment is calculated based on the gross positions held for each contract.

The Eurex system is able to handle different VAT parameters depending on the member, the product, the member's account and on buy or sell.

3.13.6 Reporting of Cash Transactions and VAT
Cash transactions are reflected in the reports “Daily Cash Account CM” (RPTCD010), “Monthly Cash Account CM” (RPTCD070) and “Daily Cash Transactions” (RPTCD009). VAT amounts for delivery of energy are reported as transaction type 281 and 283 and VAT amounts for delivery of European emission allowances are reported as transaction types 282 and 284 in the report “ECC Delivery” (RPTCE120).

3.14 **Automatic Exercise for Options**

This chapter only applies to Eurex.

Automatic exercise is available for all option products, including cash and physically settled options.

The automatic exercise enables members to define the minimum in-the-money amount individually, so that every open option position with a defined minimum in-the-money amount may be exercised automatically on expiration day.

Additionally, every option position can be abandoned (excluded) from automatic exercise by the member.

The unintended abandoning of in-the-money positions from automatic exercise can be prevented by an optional four eye principle supported by the Eurex system. The NCM audit trail report RPTTT150 OPTIONAL FOUR EYE PRINCIPLE documents the abandoning of positions to which the four-eye principle has been applied.

Members can define an additional product or product type specific setting which is used as a default (standard) value for all new products created for that product or product type. If the member deletes the in-the-money amount for a product or product type, the default values are applied. Market Supervision defines a default value for the in-the-money amount. The member may keep the pre-set value or define a new value, which may either be a new minimum ITM amount or the high value (which is entered as “99.99”). The minimum ITM amount may also be entered as a percentage.

Note that the maximum (high) value for the minimum in-the-money amount for Great Britain pence (GBX) products is 9999.99.

The following example illustrates the calculation of the minimum in-the-money amount:

- **Strike Price = 30**
- **Trading Unit = 100 Shares**
- **Tick Size: 0.01**
- **Tick Value: 0.01**
1. Absolute Value

With member input of an ITM Minimum Amount of 50 €, exercise limits are calculated as follows:

\[
\text{ITM Minimum Amount} \times \frac{\text{Tick Size}}{(\text{Tick Value} \times \text{Trading Unit})}
\]

\[
50 \, \text{€} \times \frac{0.01}{(0.01 \times 100)} = 0.5 \, \text{€}
\]

Thus, Call options are exercised when the Closing Price of the underlying is greater than or equal to 30.5 €.

Put options are exercised when the Closing Price of the underlying is less than or equal to 29.5 €.

The option is therefore only exercised when the “InTheMnyPerUnit” amount, displayed on the Exercise Overview window exceeds the defined ITM Minimum Amount.

2. Percentage Value

With member input of an ITM Minimum Amount of 1%, the exercise limits are calculated as follows:

\[
\text{ITM Minimum Amount} \times \text{Strike Price}
\]

\[
1\% \times 30 \, \text{€} = 0.3 \, \text{€}
\]

Thus Call options are exercised when the Closing Price of the underlying is greater than or equal to 30.3 €.

Put options are exercised when the Closing Price of the underlying is less than or equal to 29.7 €.

For example, in order to exercise DAX (or DTE) options only when they are in the money by an amount at least equal to the Eurex exercise fees of 0.75 € (or 0.20 €), the “ITM Minimum Amount” parameter must be set to 0.75 (or 0.20).

Clearing members can check the values defined by their non-clearing members by entering the Member ID of their NCMs in the Exchange Member field of the Automatic Exercise Parameter Maintenance window.

For physically settled options, the high value is set as the default value.

Automatic exercise is performed on expiration day only, regardless of whether the options are European or American style.

For further details on automatic exercise for ITM cash settled option products see the “Eurex @X-tract Clearing User Guide”.
4 Client Asset Protection

4.1 Introduction

With the implementation of the Client Asset Protection (CAP) Solution, Eurex Clearing has proactively addressed the requirements of asset segregation and timely portability. Eurex Clearing's goal is to give Clearing Members and their clients the choice to individually negotiate the level of protection they want – depending on their risk-cost profile. In co-operation with many leading market players, a legal concept has been put in place that will offer the provision of client collateral to Eurex Clearing.

In addition to the concept of client position/collateral portability, CAP has been designed to allow margin collateral of clients to be held at Clearing House level, segregated from the Clearing Member's assets, and thereby allowing a high recoverability for clients should the Clearing Member go into default. The approach of timely transferring or returning client positions/collateral supports operational efficiencies while maintaining economic attractiveness for Clearing Members in an overall environment generally marked by increasing regulatory scrutiny of European financial players.

Client Asset Protection is an optional solution offered by Eurex Clearing and the level of client asset protection can be agreed between the Clearing Member and its customers, Registered Customers (RCs) or NCMs. First the CM decides which CAP solution it offers to its clients. Clients then decide which solution they prefer. It is worth mentioning that different levels of client asset protection can be offered by Clearing Members. That is, one Non Clearing Member or Registered Customer of a Clearing Member can choose the Individual Clearing Model (ICM), another Non Clearing Member of the same Clearing Member can select the Net Omnibus Model while a third Non Clearing Member/Registered Customer can decide not to participate in the Client Asset Protection offering at all, i.e. to opt for Elementary Clearing Model (ECM).

![High-Level Account Structure](image)

Direct customers held in an agent account of the Clearing Member can only be treated as net omnibus segregated customers (by keeping the position in the A9 account) or as non-segregated customers (by keeping the position in the A1 account or in the A2-A9 if needed). In addition, direct customers of the Clearing Member that do not have a trading license for Eurex or for EEX

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13. Direct customers of the Clearing Members are CM’s agent clients that do not have a trading license.
cooperation products can become Registered Customers to benefit from Client Asset Protection using the Individual Clearing Model. For details please refer to Eurex Clearing Circular 092/12. The treatment of non-segregated, individually segregated and net omnibus segregated customers is described in the course of this chapter. Eurex Clearing has designed the Client Asset Protection solution and collateral pool maintenance in the most straightforward way possible since the introduction of CAP requires the Clearing Member to manage the collateral of his own and his client positions in parallel.

4.1.1 Activation of CAP
The Client Asset Protection solution of Eurex Clearing was technically implemented with Eurex Release 13.0 on November 15, 2010. The CAP service for the Individual Clearing Model for NCMs was functionally activated in August 2011, for details please refer to Eurex Clearing Circular 059/11. The CAP service for the Individual Clearing Model for Registered Customers was activated in November 2012, for details please refer to Eurex Clearing Circular 092/12. The CAP service for the Net Omnibus Clearing Model was activated on January 14, 2013, for details please refer to Eurex Clearing Circular 118/12.

Details of the setup and usage of the pool concept and the additional agent accounts can be found in the Eurex @X-tract Clearing User Guide.

4.2 Functional CAP Solutions
Eurex Clearing offers different segregation mechanisms to protect the NCM, RC and/or agent client positions and collateral in case of default of a Clearing Member. Each of the offered segregation mechanisms is described in the following chapters.

4.2.1 Elementary Clearing Model (ECM)

4.2.1.1 General Setup
With the implementation of Release 13.0, all Clearing Members and their clients are set up by default under the Elementary Clearing Model. Clearing Members can then decide whether they wish to offer individual or net omnibus segregation to their customers. The clients of a Clearing Member, on the other hand, can decide whether they would like to participate in one the segregation solutions or remain within the existing setup.

In general, for members who remain within the existing setup, the position, risk and collateral management remained unchanged following the introduction of Eurex Release 13.0.

Treatment of Non-Segregated Customers Following a Default
German Exchange Law and the Exchange Rules of Eurex dictate that customer trades must be separately booked from proprietary trades. These transactions must therefore be posted on a dedicated client position account which enables these transactions to be identified as client transactions.

If an agent client or NCM chooses to be treated as a non-segregated customer, the protection of their assets must be ensured by the Clearing Member and cannot benefit from the Eurex Clearing segregation privileges should the Clearing Member default. The margin requirement resulting
form the non-segregated client positions would be covered with the Clearing Member’s own (proprietary) collateral.

4.2.1.2 Securities Collateral Management

Deposits of Securities

- Members can inquire as to the acceptability of any given security via the Collateral Security Information window in the @X-tract Clearing GUI.

- The Clearing Member delivers the securities to the relevant account directly within the system of the relevant CSD (Clearstream Banking AG Frankfurt (CBF) or SegalInterSettle Zurich (SIS)).

- All deposits are credited near-time in the Eurex System, and Clearing Members can receive an up-to-date overview of their securities via the Collateral Transaction Overview window in the @X-tract Clearing GUI. To receive this information they must subscribe to the respective broadcast stream.

- If a deposit is unacceptable, Eurex instructs a deposit reversal (back to the member's main account) near-time.

Withdrawal of Securities

- Initial withdrawals are made using the Collateral Transaction Entry window. Once confirmed by Eurex Market Supervision that margins can be met without the securities requested, the securities are immediately transferred from the respective account into the Member's main account.

- If a withdrawal request leads to an under-collateralization in the Member's account, the transfer of the requested securities is postponed until the next business day, or until the appropriate amount of funds is in the account to fully fund the margin requirements.

4.2.1.3 Cash Collateral Management

New for Eurex Release 14.0:

- Intraday cash collateral deposits and withdrawals no longer need to be announced to Eurex by sending a fax. With the introduction of Eurex Release 14.0, Clearing Members can use the Collateral Transaction Entry window in the @X-tract Clearing GUI to enter such a transaction.

- Deadlines for deposits/withdrawals per currency are displayed on the Exchange Rate Overview window in the @X-tract Clearing GUI.

Deposit of Cash Collateral - Eligible Currencies and System Deadlines for Cash Deposit

Eurex Clearing accepts the following four currencies as cash collateral: EUR, CHF, GBP and USD. In general, overnight margin calls only take place in EUR and CHF. All four currencies, however, may be used for covering intraday margin calls and overnight margin requirements. Only EUR and CHF may be deposited in central bank accounts at the Deutsche Bundesbank or Schweizerische Nationalbank (SNB). GBP and USD are also accepted at international payment
banks. The deadlines for cash collateral deposit and withdrawal per currency can be inquired via the Exchange Rate Overview window in the @X-tract Clearing GUI.

**Note:** The activation of CAP does not affect the accounts used for cash deposit and release.

In order to safeguard the Clearing House and its Clearing Members, Eurex Clearing follows a restrictive investment policy for cash deposits:

- Cash investment only takes place on a short term basis (overnight).
- Cash investment takes place mostly as secured investment.
- Securities for deposit must have a first-class credit rating.
- Cash investment only takes place at counterparties with high creditworthiness.

The following rules apply:

- Cash collateral in the non-segregated pool that is not required to cover the margin requirements is always released on the next business day except for when the Permanent Cash Balance (PCB) is used, or an intraday release of cash collateral has been requested.
- The Permanent Cash Balance functionality allows maintaining a constant cash balance in collateral pools for the Clearing Member (non-segregated, i.e. “default” type pool). For this purpose, the Clearing Member can set PCB values for each currency in the Eurex @X-tract Clearing GUI.
- Unless a PCB value is set by the Clearing Member, the following rules currently apply for cash deposited with Eurex Clearing to cover margin requirements:
  - Excess cash collateral at Clearing Member level is automatically paid back the next day in the morning (based on the previous end-of-day processing)
  - As of 10 October 2012, the procedure for maintaining the cash balance in cash collateral pools for segregated clients with pool type “Omnibus Segregated” and “Fully Segregated” has changed so that it will no longer be possible to use the PCB functionality. All cash deposited in a segregated pool will remain until its withdrawal is requested by the Clearing Member. Therefore, cash in the segregated pools will not be automatically returned to the Clearing Members the next day in the morning (based on the previous end-of-day processing).
  - However, the change in maintaining the cash balance of cash collateral pools for segregated clients will not disable the PCB functionality in the Eurex @X-tract Clearing GUI. Clearing Members will still have access to this functionality in the system, but the values entered for the PCB will be ignored and no booking (i.e. deposit or withdrawal) will be initiated by the
system. Therefore, all cash will remain in the segregated pools until it is withdrawn by the Clearing Member, regardless of the values entered for the PCB.

- The new procedure will be applied to all currencies (Swiss franc, euro, British pound, U.S. dollar) in segregated client pools.
- Clearing Members will be able to perform cash deposits and withdrawals only as a standard procedure in the Eurex @X-tract Clearing GUI (through Collateral Transaction Entry window in the @X-tract Clearing GUI).
- There will be no change in the maintenance of cash balances of non-segregated (i.e. “Default” type) collateral pools.
- Cash collateral must be deposited from cash accounts that Clearing Members have communicated to Eurex Clearing as relevant cash settlement accounts. If a Clearing Member wishes to use a different account, or if an account for U.S. dollar and/or British pounds has not been communicated to the Clearing House, members must include detailed account information on their faxes.

**Deposit of Cash Collateral**

Clearing Members not participating in the Client Asset Protection can deposit cash collateral with Eurex Clearing by the following two methods. A third method, describing (intraday) margin calls, is listed for the sake of completeness:

(a) Cash Deposit Triggered per Usage of Permanent Cash Balance:
- Clearing Members are able to maintain their permanent cash balances in the Collateral Pool Overview window in the @X-tract Clearing GUI. The permanent cash balance is independent of an under- or over-collateralization, represents the requested permanent cash holding in each individual currency and might lead to an appropriate cash call or withdrawal on the next day.
- Report CD042 DAILY SETTLEMENT STATEMENT shows the overnight collateralization with the Permanent Cash Balance values, whereas report CD020 SECURITY MOVEMENT AND COVERAGE shows the deposited values.

(b) Intraday Cash Deposit (Eurex only):
- Deposit of cash collateral is triggered through the Clearing Member only.
- The Clearing Member announces the planned provision of cash collateral to Eurex Clearing (Market Supervision) by entering a cash deposit transaction in the Collateral Transaction Entry window in the @X-tract Clearing GUI.
- Eurex Clearing (Market Supervision) debits the announced amount via SWIFT from the deposited account of the respective payment infrastructure.
- As soon as the payment has been received, the amount is credited to the member as margin and is henceforth considered in the Intraday Margining and in the batch processing.

(c) (Intraday) Margin Call
Intraday margin calls are issued against the Clearing Member 'default' pool only. As a result, cash collateral deposits to meet the intraday margin call are credited in the Eurex clearing system in favour of the 'default' pool of the Clearing Member.
Release of Cash Collateral
While any cash collateral in excess that is not needed for covering the actual margin requirement is transferred back to the Clearing Member cash accounts on the next business day, Clearing Members have the following intraday alternatives for cash collateral release:

(a) Clearing Member Cash Release Triggered per Usage of Permanent Cash Balance:
   - Provided sufficient collateral is available, all cash deposits can be released automatically overnight to the appropriate and registered accounts via the Collateral Pool Overview window in the @X-tract Clearing GUI.

(b) Intraday Cash Release (Eurex only):
   - The release of cash collateral is triggered through the Clearing Member only.
   - In order to release the deposited cash collateral, the Clearing Member can enter a cash withdrawal transaction in the Collateral Transaction Entry window in the @X-tract Clearing GUI.
   - Provided the Clearing Member's remaining collateral is sufficient, Eurex Clearing (Market Supervision) transfers the respective amount by SWIFT to the deposited account of the respective payment infrastructure.

4.2.1.4 Cash Flows and Interest Payments
Eurex Clearing passes on the interest from cash investments to its Clearing Members, although a deduction from the return is withheld by the Clearing House.

- For clearing currencies euro and Swiss francs, the deduction is 20 basis points.
- For margin currencies U.S. dollar and British pounds, a deduction of 50 basis points is applied.

4.2.1.5 Risk Management
Handling Collateral Surpluses/Shortfalls
For non-segregated Members, Client Asset Protection does not affect the handling of collateral surpluses and shortfalls. Refer to chapter 3.3 “Cross Currency Margining” on page 88 for further information on surpluses and shortfalls.
### 4.2.2 Individual Clearing Model for NCMs and Registered Customers

#### 4.2.2.1 General Setup

The Individual Clearing Model provides NCMs and RCs with the highest degree of client position and collateral segregation. Margin requirements for a given NCM/RC are covered by a dedicated collateral pool holding only the collateral of one specific NCM/RC, while margin requirements that were aggregated on Clearing Member level are now aggregated on pool level.

The segregation of NCM and RC positions is applied via transactions and positions recorded in the Eurex system under the specific member ID of the NCM/RC using a range of available accounts. From a legal point of view, Eurex Clearing has a relationship with the Clearing Member only and these positions are client positions of the Clearing Member. On a position level, the NCM/RC uses separated position accounts, while on a collateral management level, the NCM/RC also has their own dedicated collateral pool holding its securities and cash collateral.

The following diagram provides an overview of segregation models offered by Eurex Clearing showing position, risk calculation and collateral levels:

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Segregation Models of Eurex Clearing

The individually segregated NCM/RC is generally considered to be a customer with exactly one segregated NCM/RC collateral pool. Even cash flows resulting from the NCM/RC positions are to be segregated from the Clearing Member cash flows.
4.2.2.2 Securities Collateral Management

For individually segregated NCMs/RCs the following principles for securities collateral management apply:

- The only approved Central Security Depository for use with the ICM model is Clearstream Banking Frankfurt (CBF)
- At CBF, one (sub)account per individually segregated NCM/RC is used.
- As soon as a security is delivered into the collateral account, the collateral is credited near-time to the segregated NCM/RC pool in the Eurex system.
- Collateral releases are requested via the Eurex Clearing GUI. If sufficient collateral is available, Eurex Clearing releases the collateral and instructs delivery back to the main account.

4.2.2.3 Cash Collateral Management

In order to allow segregation of assets on an individual NCM/RC level, the pool concept as described in the @X-tract Clearing User Manual is applied.

Deposit of Cash Collateral - Eligible Currencies and System Deadlines for Deposit

The currencies (Euro, CHF, GBP, and USD) are accepted by Eurex Clearing as cash collateral for the ‘default’ and ‘segregated’ pools. Cash collateral, however, must be deposited from the cash accounts that Clearing Members have communicated to Eurex Clearing as relevant cash settlement accounts. Clearing Members offering Individual Clearing Model have two methods of depositing cash collateral with Eurex Clearing, as follows.

Note the third item, referring to (intraday) margin calls is listed for the sake of completeness. For a list of system deadlines for cash collateral deposit, please refer to the cash collateral deposit table in the non-segregation section above.

(a) Permanent Cash Balance

In order to deposit cash collateral, the Clearing Member can maintain the ‘Permanent Cash Balance’ for its non-segregated pool using the Collateral Pool Overview window in the Eurex @X-tract Clearing GUI.

Report CD042 DAILY SETTLEMENT STATEMENT shows the overnight collateralization with the Permanent Cash Balance values, whereas report CD020 SECURITY MOVEMENT AND COVERAGE shows the deposited values.

- Currently, the Permanent Cash Balance (PCB) functionality allows maintaining a constant cash balance in segregated collateral pools for the Clearing Member. For this purpose, the
Clearing Member can set PCB values for each individual currency in the Eurex @X-tract Clearing GUI.

- Unless a PCB value is set by the Clearing Member, the following rules currently apply for cash deposited with Eurex Clearing to cover margin requirements:
  - Excess collateral at Clearing Member level is automatically paid back the next day in the morning (based on previous end-of-day processing)
  - As of 10 October 2012, the procedure for maintaining the cash balance in cash collateral pools for segregated clients with pool type “Omnibus Segregated” and “Fully Segregated” has changed so that it will no longer be possible to use the PCB functionality. All cash deposited in a segregated pool will remain until its withdrawal is requested by the Clearing Member. Therefore, cash in the segregated pools will not be automatically returned to the Clearing Members the next day in the morning (based on the previous end-of-day processing).
  - However, the change in maintaining the cash balance of cash collateral pools for segregated clients will not disable the PCB functionality in the Eurex @X-tract Clearing GUI. Clearing Members will still have access to this functionality in the system, but the values entered for the PCB will be ignored and no booking (i.e. deposit or withdrawal) will be initiated by the system. Therefore, all cash will remain in the segregated pools until it is withdrawn by the Clearing Member, regardless of the values entered for the PCB.
  - The new procedure will be applied to all currencies (Swiss franc, euro, British pound, U.S. dollar) in segregated client pools.
  - Clearing Members will be able to perform cash deposits and withdrawals only as a standard procedure in the Eurex @X-tract Clearing GUI (through the Collateral Transaction Entry window).
  - If the Clearing Member intends to deposit client cash collateral with Eurex Clearing, it must request the deposit of cash to the segregated pool in the Eurex @X-tract Clearing GUI.
  - There will be no change in the maintenance of cash balances of non-segregated (i.e. “Default” type) collateral pools.

(b) Intraday Cash Deposit (Eurex only)
The following steps apply for Clearing Members intending to deposit client cash collateral intraday:

- The Clearing Member announces the planned provision of cash collateral in favour of the segregated NCM/RC pool to Eurex Clearing (Market Supervision) by entering a cash deposit transaction in the Collateral Transaction Entry window in the Eurex @X-tract Clearing GUI.
- Eurex Clearing (Market Supervision) debits the announced amount via SWIFT from the deposited account of the respective payment infrastructure.
- As soon as the payment has been received, the amount is credited to the Member as margin and is considered in the Intraday Margining and in the batch processing
(c) (Intraday) Margin Call

(Intraday) margin calls are issued against the Clearing Member ‘default’ pool regardless of which pool caused the under-collateralization. As a result, cash collateral deposits to meet the (intraday) margin call are credited in the Eurex System in favor of the ‘default’ pool of the Clearing Member unless the Clearing Member has specifically requested, via Eurex Market Supervision, to credit cash collateral to an individually segregated pool.

Release of Cash Collateral

Release of cash amounts can be requested by the Clearing Member for the non-segregated business (‘default pool’) either via Permanent Cash Balance or Intraday Cash Release (below). If the segregated client pool is at the same time under collateralized, the Eurex system adds the shortfall for the segregated client positions of the over/under-collateralization amount of the Clearing Member. If, in addition, the non-segregated pool is under-covered, a margin call is issued against the Clearing Member.

As of 10 October 2012, the procedure for maintaining the cash balance in cash collateral pools for segregated clients with pool type “Omnibus Segregated” and “Fully Segregated” has changed so that it will no longer be possible to use the PCB functionality. All cash deposited in a segregated pool will remain until its withdrawal is requested by the Clearing Member. Therefore, cash in the segregated pools will not be automatically returned to the Clearing Members the next day in the morning (based on the previous end-of-day processing).

(a) Permanent Cash Balance

If the ‘Permanent Cash Balance’ is used for non-segregated pool, the amount of cash collateral deposited can be reduced by amending the ‘Permanent Cash Balance’ in the Collateral Pool Overview window in the Eurex @X-tract Clearing GUI. The specific pool ID must be indicated.

(b) Intraday Cash Release (Eurex only)

A Clearing Member must follow the steps below to request the release of cash collateral intraday:

- In order to release the deposited cash collateral, the Clearing Member can enter a cash withdrawal transaction in the Cash Collateral Transaction Entry window in the Eurex @X-tract Clearing GUI.
- Eurex Clearing (Market Supervision) transfers the respective amount by SWIFT to the deposited account of the respective payment infrastructure, provided the Clearing Member’s has remaining sufficient collateral.

4.2.2.4 Cash Flows and Interest Payments

All cash flows resulting from daily payment obligations, such as premiums, variation margin and cash settlement amounts, are segregated in the Eurex System according to the enhanced pool concept and displayed on the respective Eurex reports and in respective Eurex @X-tract Clearing GUI windows.
Clearing Member has to instruct one net payment for segregated client business and one net payment for non-segregated (proprietary) business. Clearing Members are able to use separate external cash accounts to separate the cash instructions.

Cash flows originating from DVP Transactions, including payments resulting from the offsetting block, and fees, are not segregated.

If an individually segregated NCM/RC provides cash collateral to Eurex Clearing, the Clearing House calculates interest on the cash collateral separately per pool ID applying the principles outlined for the non-segregated solution. The interest is calculated daily per collateral pool and settled monthly. The interest amounts are displayed per pool ID on the respective Eurex reports, e.g. CD230.

### 4.2.2.5 Risk Management

#### Collateral Surpluses

Margin surplus of a segregated client collateral pool cannot be used to cover a shortfall of the non-segregated (proprietary) collateral pool or any other segregated collateral pool. Eurex Clearing will generally release any NCM/RC collateral surpluses when the Clearing Member has addressed a formal request for collateral release with Eurex Clearing.

#### Collateral Shortfalls

An overall margin shortage (including intraday margin calls) must be covered by the Clearing Member. If there is a shortfall in the individually segregated client pool, Eurex Clearing checks whether non-segregated collateral surplus could cover for the shortfall, otherwise a margin call is issued to the Clearing Member. The coverage of the margin call is booked against the proprietary pool unless the Clearing Member instructs Eurex Clearing (Market Supervision) otherwise.

### 4.2.3 Net Omnibus Clearing Model Solution

#### 4.2.3.1 General Setup

The Net Omnibus Clearing Model is offered to agent clients and NCMs of the respective Clearing Member.

The Net Omnibus Clearing Model offers segregation of customer positions and margin on an omnibus basis and is available for Eurex Transactions and Transactions in EEX cooperation products cleared with Eurex Clearing AG. The model allows UK CMs to apply UK CASS rules in relation to their customers or NCMs. Note this model is not available for Registered Customers (RC).

Eurex Clearing segregates the positions the Clearing Member and holds them on behalf of net omnibus segregated agent clients on the A9 account in the Eurex System.

In order to optimize the process, it is required to use the A9 account as the net omnibus segregated account per Clearing Member.

For risk calculation purposes, the margin requirement for positions in the A9 account of the Clearing Member, and the margin requirement resulting from net omnibus segregated NCMs are added to the overall margin requirement for non disclosed net omnibus clients (A9).
The aggregated margin requirement of all net omnibus clients per Clearing Member is checked against the net omnibus pool’s collateral, and an over- or under-collateralization is calculated and processed accordingly.

The collateral held for open positions of net omnibus clients is displayed within the Eurex system in the net omnibus pool. The following diagram provides an overview of position accounts, risk management and collateral pools that are set up on Eurex Clearing side for the Net Omnibus solution:

### 4.2.3.2 Cash and Securities Collateral Management

For net omnibus segregated clients (i.e. net omnibus pool), the following principles for collateral management apply:

- The margin requirements resulting from net omnibus positions can be covered by cash and/or securities collateral.
- As soon as the security is delivered into the net omnibus collateral account, the collateral is credited near-time in the Eurex system for the net omnibus pool.
- Collateral releases are requested via the Eurex collateral GUI. If sufficient collateral is provided, Eurex Clearing releases the collateral and instructs delivery back to the Clearing Member.
- (Intraday) margin calls are issued against the proprietary collateral pool.
4.2.3.3 Cash Flows and Interest Payments

All cash flows resulting from daily payment obligations, such as premiums, variation margin and cash settlement amounts are segregated in the Eurex System according to the enhanced pool concept and displayed on the respective Eurex reports and GUI windows.

Clearing Member can instruct one net payment for segregated client business and one net payment for non-segregated (proprietary) business. The Clearing Member has optionality, i.e. 1) to use separate instructions with one cash account or 2) to use two different external cash accounts to separate the cash instructions.

Cash Flows arising from DVP Transactions, including payments resulting from the offsetting block, and fees, are not segregated.

If cash collateral has been deposited on an account with Eurex Clearing, the interest is calculated and paid on a pool ID level. The interest is calculated daily per collateral pool and settled monthly. The interest amounts are displayed per pool ID on the respective Eurex reports, e.g. CD 230.

4.2.3.4 Risk Management

Collateral Surpluses

Margin surplus of the net omnibus segregated client collateral pool cannot be used to cover a shortfall of the non-segregated (proprietary) collateral pool or any other segregated collateral pool.

Within the net omnibus segregated solution, Eurex Clearing releases any net omnibus collateral surpluses to the respective Clearing Member once the Clearing Member has addressed a formal request for collateral release to Eurex Clearing.

Collateral Shortfalls

An overall margin shortage (including intraday margin calls) must be covered by the Clearing Member. That is, a margin shortfall of a net omnibus segregated client collateral pool can be covered with a surplus of the non-segregated collateral pool, or, if the non-segregated collateral surplus could not cover the shortfall in the net omnibus segregated collateral pool, a margin call is issued to the Clearing Member.

4.2.4 Client Asset Protection - Multi-Market Setup

For a multi-market setup, the following limitations apply:

- NCMs which clear through the same Clearing Member in several markets supported by Eurex Clearing have the same Client Asset Protection for the Individual Clearing Model setup in all markets cleared by that Clearing Member.

- The Net Omnibus Clearing Model is only available for Eurex Transactions and Transactions in EEX cooperation products cleared with Eurex Clearing AG. The model allows Clearing Members located in the United Kingdom (UK) to apply UK CASS rules in relation to their customers or Non-Clearing Members. An NCM that clears through the same Clearing Member in
several markets will have to use a separate member ID for the Eurex market to utilize the Net Omnibus Clearing Model.

- Only the derivatives clearing system allows Clearing Members to distinguish segregated agent clients from non-segregated agent clients.
- Participation in the General Clearing Member netting for Xetra International Markets may restrict participation in the Individual Clearing Model on Clearing House level. The detailed setup and the resulting restrictions for GCM netting and CAP will be reviewed and discussed on a case by case basis with the applying Clearing Member.

### 4.3 Usage of Additional Agent Accounts

The usage of the agent accounts will depend on the selected Client Asset Protection solution and internal preferences of the Clearing Member.

As outlined above, independent of the Client Asset Protection solution, Clearing Members can request the assignment of additional agent accounts to their Eurex Derivatives Member ID. The table below provides an overview of how the additional accounts must be used depending on the setup applicable:

<table>
<thead>
<tr>
<th>General Clearing Member Setup</th>
<th>Description</th>
<th>A Account Usage</th>
<th>Collateral Pool Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Clearing Member does not offer net omnibus solution to any clients</td>
<td>• Only A1 account</td>
<td>• A1 = Non-segregated client business</td>
<td>• Non-segregated collateral pool</td>
</tr>
</tbody>
</table>
### General Clearing Member Setup

<table>
<thead>
<tr>
<th>Description</th>
<th>A Account Usage</th>
<th>Collateral Pool Coverage</th>
</tr>
</thead>
</table>
| • Clearing Member does not offer net omnibus solution  
  • Clearing Member has requested assignment of additional agent account to their Eurex derivatives member ID | • A1 - A9 accounts are available for Eurex derivatives  
  • Differentiation of different client types possible, e.g. to differentiate affiliated business | • A1-A9 = Non-segregated client business; accounts can be differentiated as needed by the CM | • Non-segregated collateral pool |
| • Clearing Member offers Net Omnibus segregation | • A1 - A9 accounts are available for Eurex derivatives  
  • Differentiation of different client types possible, e.g. to differentiate affiliated business | • A1-A8 = Non-Segregated client business | →Non-segregated collateral pool |
| | | • A9 = Net-Omnibus segregated client business | →Net Omnibus collateral pool |
5 Eurex/ISE Link

The Eurex/ISE Link is subject to the receipt of all required regulatory approvals. Therefore, all changes for the introduction of the Eurex/ISE Link included herein may be subject to further amendments.

5.1 Introduction

The Eurex/ISE Link is a transatlantic trading and clearing link between Eurex, the International Securities Exchange (ISE) and the Options Clearing Corporation (OCC). It allows Eurex Members to access the world’s largest equity options market through their existing Eurex membership. The Eurex/ISE Link provides Eurex Members with full and seamless access to the ISE’s options market, making available approximately 430 of the following products:

- US Equity Options
- Options on Exchange Traded Funds (ETFs)
- Equity Index Options
- US Cash-settled Foreign Exchange (FX) Options

Eurex Members do not have to become members of the ISE to trade nor open accounts at OCC. In order to participate in the Eurex/ISE Link, Members need to sign an agreement between Eurex Clearing AG and, if they are not a Eurex Clearing Member themselves, their Eurex Clearing Member.
5.2 Timeline

The trading and clearing days of the ISE products available in the Eurex/ISE Link are the common Eurex and ISE trading and clearing days. Trading hours are those of ISE, listed in CST and EST, as shown in the diagram below:

ISE Trading/Clearing Hours, Listed in CET/CST/EST

The OCC operating hours are Monday - Friday from 06:00 - 19:00 CST (07:00 - 20:00 EST/13:00 - 02:00 CET) plus "Expiration Saturdays" when OCC exercises all in-the-money (ITM) positions automatically.

Note: Expiration at OCC is performed on Saturdays. The resulting exercise and assignment for share-settled products are incorporated at Eurex on the morning of the following business day. Exercises and assignments are finalized during the Eurex system startup.

5.3 Trading Procedure

With Eurex Clearing AG acting as an intermediary and Eurex Members enjoying sponsored access to the ISE, members are able to trade options contracts directly in the ISE system via one of the following front ends:
All orders are matched solely in the ISE order book, but while monthly options can be traded, weekly and quarterly options are out of scope. Members using the sponsored access to ISE do not have market maker rights, and are therefore unable to enter quotes.

Note: In this context, the term “sponsored access” is used to describe the direct access a Eurex member gets to trade at the ISE without becoming a member of the ISE. This status in principle is comparable to Eurex’s offer of making Eurex trading screens available at a member’s branch office outside the country of the exchange participant’s admission.

5.4 Clearing Procedure

The Eurex Clearing/OCC clearing procedure is as follows:

1. All orders entered by Eurex members will be forwarded via a US broker/dealer and the ISE, where they will be processed and forwarded to the OCC.

2. OCC calculates the resulting positions and forwards them, in the form of the original trades, to Eurex.

   Note: Exercises and assignments relating to ETF and share settled stock options are sent to Eurex Clearing AG in the end-of-day stream, then published on the next business day.

3. Eurex Members are then able to maintain their trades and positions using the Eurex @Xtract Clearing GUI.

4. Exercises and trade and position adjustments are forwarded to the OCC by the Eurex system. Eurex Members must enter all their Eurex/ISE Link trade/position adjustments on the @Xtract Clearing GUI. Note, however, that ‘M’ accounts are not available for Eurex/ISE Link products.
The Eurex/ISE Link is illustrated in the diagram below:

![Diagram of the Eurex/ISE Link]

### 5.5 Member Setup

Member General Information window, via the ISETradingAllowed and OCCClearingAllowed checkboxes, allows to identify those Eurex Members who participate in the trading and/or clearing part of the Eurex/ISE Link:

![Member General Information window]

**Member General Information window**
If the member’s:

- ISETradingAllowed flag is checked, they are able to trade on the ISE.
- OCCClearingAllowed flag is checked, they are able to clear their, and their NCM’s, link-related positions at Eurex.

Trading on ISE is only possible for NCMs if their GCM’s OCCClearingAllowed flag is checked.

5.6 Product Assignment

Eurex Clearing Members participating in the Eurex/ISE Link need to have a product assignment in the respective products. Each Eurex Trading Member participating in the Eurex/ISE Link holds the trades and positions in their standard position accounts on the Eurex system. The products must therefore be assigned to the trading participant.

5.7 Product Setup and Contract Mapping

The OCC product and contract ID structure differs from the Eurex ID structure. Therefore, when transactions are received from OCC, OCC product and contract IDs are mapped to Eurex product IDs (and vice versa) to translate the OCC/ISE product/series information into Eurex product/series information. Mapping is also used when instructions are sent from the Eurex system back to OCC.
All contract mappings can be viewed and inquired via the Contract Mapping window, accessible via the Info menu of the Clearing GUI. Furthermore, it is possible to receive the intraday series updates via the Back Office (BOF) message idayCntrTrnPubBcastT.

The Position Detail Overview, Give-Up Overview and Take-Up Overview windows display the original trade symbol used at ISE/OCC in the OrigContrId column.

5.8 Account Mapping

Eurex Members trading at ISE/OCC use either their ISE/OCC ‘C’ or ‘F’ account. The ‘C’ account at ISE/OCC is mapped to the ‘A’gent account at Eurex, and the ‘F’ account at ISE/OCC is mapped to the P1 ‘P’roprietary accounts at Eurex. Since Eurex Members with Exchange type Market Maker don’t have an ‘A’gent account at Eurex, their trades are always mapped to their Eurex ‘P’roprietary account, regardless which account they used at ISE/OCC.
5.9 Series Generation

All common ISE contracts have an equivalent contract in the Eurex online system. ISE contracts are added to the Eurex system during Eurex start-of-day processing and not during the nightly batch run. They are therefore not listed in the RPTTA110 CONTRACT MAINTENANCE report (or the Ref.dat file), but are distributed via broadcast. Furthermore, new contracts may be added during the Eurex online day.

5.10 Incoming Trades

The Trade ID from ISE is displayed in the OriginOrdID field of the Eurex position transaction records, while the OCC TranID is be displayed in the OriginTranID field.

5.11 Position and Trade Adjustments

Eurex Trading Members are able to enter all their position and trade adjustments on the @X-tract Clearing GUI, including any contracts introduced intraday. Furthermore, position account transfers between A1 - A9 and P1/2 are supported for Eurex Members. ‘M’ accounts are not available for OCC trades.

5.11.1 Trade Adjustments and Give-up/Take-up

All trade adjustments available in the Eurex system, including give-up/take-up, are also available for ISE trades. Give-up/take-up, however, are only available if both give-up and take-up member are Eurex Members with appropriate OCC product assignments.

5.11.2 Position Adjustments

All position adjustments available at Eurex (Position Closing/Re-opening, Account Transfer, and Position Transfer) apply to products on OCC, although Position Transfers are only available if source and destination member are Eurex Members with the assignment of the respective OCC product. All usual Eurex Position Transfers are supported.

5.12 Matched Transfers

Eurex Members participating in the Eurex/ISE Link who wish to transfer positions to a member of the OCC who is not a member of Eurex can do so by way of a ‘Matched Transfer’. Furthermore, OCC Members who are not members of Eurex are also able to transfer positions to Eurex Members participating in the Eurex/ISE Link using the same ‘Matched Transfer’ procedure. Matched Transfers can be processed at trade price (including premium movement) or as a pure Position Transfer. They should, however, only be used for the initial setup of a Eurex Clearing AG sub-account, trading via other brokers on Eurex holidays, or in emergency situations. Eurex Members must send a fax to Eurex should they wish to transfer their US positions at other OCC Clearing Members to the Eurex account and be able to maintain them on the @X-tract Clearing GUI. Position Transfers affecting non-Eurex Members are only allowed as Matched Transfers.
5.13 Exercise/Assignment

Members are able to exercise their USD ISE option positions as usual via the Exercise Overview window in the @X-tract Clearing GUI. The Exercise/Assignment procedure of US options in Eurex can be divided into the following three categories:

- **Manual Exercise of Options on Equities and ETFs prior to Expiration Day**
  American style US options can be exercised daily in the Exercise Overview window. The exercised positions are visible in the Position Overview, Position Detail Overview and Exercise Overview windows where the affected positions are marked as exercised.
  
  **Note:** No exercise is possible for Eurex/ISE Link products on OCC holidays because no assignment takes place on these days.

- **Exercise of Options on Equities and ETFs on Expiration Day**
  Manual exercise can be performed at Eurex on the Friday prior to Expiration Saturday. OCC exercises all ITM positions automatically in a special “Expiration Saturday” processing. The RPTCE090 OCC EXPIRATION SATURDAY REPORT shows additional information on the “Expiration Saturday” processing. This report is available for Clearing and Trading Members.

- **Exercise of Index and FX Options on Expiration Day**
  There is no change for cash-settled products.

It is not possible to set automatic exercise parameters for ISE products because automatic exercise is processed at OCC and not at Eurex. Therefore, if positions should be excluded from automatic exercise, they need to be abandoned.

Final exercises/assignments are broadcast to members, are visible on the respective exercise/assignment windows and are reported in the following reports:

- **RPTCE070 EXERCISE AND ASSIGNMENT SUMMARY**
  Manual exercises are marked as preliminary on the Friday prior to the Expiration Saturday, and the series is EXPIRATION PENDING. Exercises on (share settled) ISE products are always marked as preliminary.
  
  **Note:** For exercises/assignments with a cash component in a so-called basket product, the relevant cash component/amount is populated in the RPTCE070 EXERCISE AND ASSIGNMENT SUMMARY report.

- **RPTCE077 START-OF-DAY EXERCISE/ASSIGNMENT SUMMARY**
  This report is created on a daily basis and is sent to both Clearing and Trading Members intraday.

Assignments for physically settled contracts are listed and broadcast on the day the respective OCC data is received and processed by Eurex.

Eurex/ISE Link products are excluded from the End of Assignment process, meaning no End of Assignment messages is sent.
5.14 **Home Market Settlement of US Equities at the DTCC**

The Eurex back end does not trigger delivery processing for exercised and assigned equity options. Instead, deliveries and cash payments are processed by OCC in connection with the Depository Trust and Clearing Corporation (DTCC) and Eurex Central Counterparty (CCP). This avoids the need for Cross-Border Deliveries.

During the delivery process, DTCC becomes the central counterparty and acts as CSD (replacing OCC as counterparty for OCC Clearing Members).

![Diagram showing the process of value chain including DTCC](image)

5.15 **Corporate Actions**

OCC sends out batch reports at approximately 5:30 a.m. CET containing, among other things, information about contracts and position changes due to Corporate Actions. This data is processed by Eurex during the system startup and, where necessary, forwarded to members.

**Note:**

- Corporate Actions for US option products are processed by Eurex during system startup in the morning.
- Eurex simply copies the data received from OCC. It processes no autonomous calculations, in particular with regard to conversion factors.
- All master data and position changes are distributed via broadcast to the members, but the related reports are created only in the nightly batch run.
- A special capital adjustment type, “External Capital Adjustment” is used for the reporting.

Corporate Actions may lead to the introduction of new symbols.
5.16 Strike Price Multiplier

The “Strike Price Multiplier” is used as a multiplier instead of the trade unit for the strike price of the contract in case of in-the-money calculations:

- A call option contract is in the money if the following relation is true: \( SP \times SPM < UP \times TU \)
  
  Where:
  
  \( SP \) = Strike Price
  
  \( SPM \) = Strike Price Multiplier
  
  \( UP \) = Underlying Price
  
  \( TU \) = Trade Unit

- A put option contract is in the money if the following relation is true: \( SP \times SPM > UP \times TU \)
  
  Where:
  
  \( SP \) = Strike Price
  
  \( SPM \) = Strike Price Multiplier
  
  \( UP \) = Underlying Price
  
  \( TU \) = Trade Unit

The strike price multiplier is always identical to the “Trade Unit” for Eurex products, but replaces the “Trade Unit” for in-the-money, premium and variation margin calculations.

While the “Trade Unit” and “Strike Price Multiplier” are usually equal, they may differ for Eurex/ISE Link products after certain types of corporate actions, for example, stock dividends, or stock splits, which would result in fractional strike prices (3 for 2 splits, 4 for 3 splits, but not 2 for 1 splits).

5.17 Report RPTCB194 ECAG CONNECTIONS

The fee report RPTCB194 ECAG CONNECTIONS contains details of connection fees applicable to the Eurex/ISE Link. The report is available for both Trading and Clearing Members.

5.18 Eurex Holidays

European and US exchange holidays occasionally differ. The following table displays the limitations that result out of differing holidays:

<table>
<thead>
<tr>
<th>Holiday</th>
<th>Open/Closed</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>US Exchange</td>
<td>• Open: Eurex Clearing, CCP and Eurex Risk Management System &lt;br&gt; • Closed: ISE and OCC</td>
<td>• US positions/trades may be adjusted at Eurex Clearing. No exercise possible.</td>
</tr>
<tr>
<td>Eurex</td>
<td>• Open: ISE, OCC and DTCC &lt;br&gt; • Closed: Eurex Clearing and Settlement Facilities</td>
<td>• Eurex Members are not able to trade at ISE via the Eurex/ISE Link. &lt;br&gt; • Eurex Members are not able to clear any products at Eurex Clearing, including US products traded at ISE. &lt;br&gt; • Eurex Clearing processes the OCC/DTCC files on the next European business day.</td>
</tr>
</tbody>
</table>

US products have product state “HOLID” on non-business OCC dates.
6 Eurex/KRX Link

6.1 Introduction

The Eurex/KRX Link enables Eurex Members to trade and clear daily futures on the KOSPI 200 Option. The KOSPI 200 Option, listed at the Korea Exchange (KRX), is the most heavily traded options contract in the world.

A “Daily Futures on the KOSPI 200 Option” (the “Eurex KOSPI Product”) is tradable in the Eurex system. The product is set up and traded as a futures-style option in the Eurex system. Legally it is a futures contract which expires daily into a KOSPI 200 Option position at KRX prior to the KRX market opening. Technically, however, the product is set up and traded as an option. The KOSPI 200 Option listed on KRX legally is the underlying for the “Eurex KOSPI Product”, although technically, the underlying (option series) is actually traded itself.

The product enables international investors and traders to access the KOSPI 200 Option market during core European trading hours when the KRX market is closed.

6.2 Product Setup

The “Eurex KOSPI Product” has four active maturities: the three consecutive near months, with a strike price interval of 2.5 points, plus the next month from the March quarterly cycle with a strike price interval of 5 points. The option cannot be exercised/assigned or submitted for give-up/take-up, and the trading of flexible options, automatic series generation and position transfers are disabled. Over-the-counter (OTC) block trading and all trade adjustment types, however, are available. Its:

- Product type is “Option on Index”.
- Product currency is Korean Won (KRW).
- Settlement type is “Cash”.
- Margining style is “Future”.

Eurex Clearing AG calculates a daily profit/loss based on the difference between the traded price and settlement price (variation margin) which appears in the Eurex system as premium. This cash flow is paid/received in South Korean Won (KRW) through an account with a payment bank in Korea. Eurex Clearing Members must have established an accounting connection at Shinhan Bank in Korea in order to be able to settle cash obligations resulting from the trading of the Eurex KOSPI Product.

When entering an order, quote or trade adjustment, Eurex Members must enter a three-digit KRX Member ID and maximum nine character identification number in the free format text field TEXT. The TEXT field determines whether the KRX Member ID has a valid relationship with the Eurex Member entering the request. It also determines whether at least one of the remaining nine characters is entered.
If the KRX Member ID entered in the TEXT field is:

- Valid and at least one character for the identification number is entered, the request is accepted.
- Invalid, or the identification number is not entered, the request is rejected. The Eurex Member is, however, able to re-enter this required information in the TEXT field.

**Note:** Market making for the “Eurex KOSPI Product” is only available via the Enhanced Transaction Solution interface.

### 6.3 Preconditions for Product Assignment

The “Eurex KOSPI Product” can only be traded by Eurex Members who have at least one associated KRX Member and whose Clearing Members can facilitate variation margin payments in Korean Won.

Eurex Members must provide Eurex with the KRX Member ID(s) and firm name(s) of the KRX Member(s) that establish the respective KOSPI 200 Option position(s) on KRX on the following trading day. Clearing Members need to:

- Establish either their own account at Shinhan Bank or an account with a corresponding agent in Korea in order to be able to settle obligations resulting from trading the “Eurex KOSPI Product”.
- Make an additional contribution to the Clearing Fund.

### 6.4 Eurex Holidays

Eurex and KRX holidays may not always coincide, hence the product can only be traded if both Eurex and KRX have an exchange day on the relevant trading day.

### 6.5 Trade Settlement

The daily futures on the KOSPI 200 Option is traded at Eurex through Eurex Members and is initially cleared at Eurex Clearing AG for daily settlement (of profits/losses).

Positions are sent to KRX on a net basis. Settlement information, which is needed to open the respective KOSPI 200 Options positions in the KRX system, is transferred from Eurex Clearing to KRX after each trading day. KRX transfers the settlement information to the respective KRX Member for entry of the respective KOSPI 200 Options in the KRX system via the OTC block trade functionality at KRX prior to the market opening at KRX. Settlement is therefore performed at KRX.

Because positions are fully settled in Eurex and Eurex Clearing AG does not hold the positions overnight, there is no additional margin requirement in place nor is additional margin being calculated. Only the variation margin (mark to market) is required, and is to be paid/received in Korean Won in Korea.
6.6 RPTCB430 KRX Position Report

The RPTCB430 KRX POSITION report displays the end-of-day position in the products affected by the Eurex/KRX Link. The report is created on a daily basis, is available for both Eurex Clearing and Trading Members when Eurex starts in the morning and is sent to members intraday.

6.7 Timeline

The introduction of the “Eurex KOSPI Product” creates to a 24-hour trading cycle for KOSPI 200 Options:

- The “Eurex KOSPI Product” is excluded from the End of Assignment process, therefore no End of Assignment messages are sent.
- Eurex pre-trading and trading hours and KRX trading hours always remain fixed. Time changes are due to the observation of daylight savings in Germany, but not in Korea.
7 Trade Adjustments and Trade Reversals

7.1 Number of Trade Adjustments

The Eurex clearing system allows up to 49,999 trade adjustments. Therefore, the system supports a sufficient number of trade adjustments from a functional point of view. The Suffix ID is a numeric field containing 5 digits and is increased by 1 with each adjustment (from 1 to 49,999).

To reproduce the sequence of adjustments the original parent suffix ID is stored with the transaction. The parent suffix ID always contains the suffix ID of the transaction it is adjusting. For a historical trade transfer (HITT), this means that the suffix ID of a record from the business day the transaction was conducted is taken as the parent suffix ID of this HITT record. A parent adjustment cannot be adjusted further; this is indicated by the adjustment/reverse indicator (A/R), where "A" indicates an "adjusted" record, "R" indicates a "reversed" record and "N" indicates that this record is neither adjusted nor reversed. Further adjustments are only possible on records with an adjustment/reverse indicator of "N".

Another flag (HIT) shows if the adjusted transaction results from a historical trade transfer (HITT) or from a historical give-up. This flag is set to "Y" for both types of historical adjustment and stays "Y" for all further adjustments with this position transaction record. If a position transaction record is based on a trade of the current business day, the HIT flag is set to "N" (non-historical). Historical trade adjustments based on a trade of the previous business day cannot be reversed by a trade reversal. Note that the flags "Y" and "N" are only sent in the trade confirmations and inquiries in Values API. On all windows and reports the historical transactions are shown with a value of “H”, current transactions are shown with “ “. This allows an easier identification of historical transactions.

7.2 Position Transfers

Partial position transfers on futures or option products, where the premium is settled in futures-style, are executed with previous day's settlement price. The variation margin for transferred positions is calculated as the difference between previous day's settlement price and current settlement price. This is done, irrespective of whether the transferred positions result from trades of the previous business day or the current business day.

Partial position transfers for newly created series are rejected and an appropriate error message is displayed. The member is able to enter a give-up/take-up transaction instead.

7.3 Trade Reversals

In case of a trade reversal (mistrade) on a trade that is already adjusted, all trade adjustments of the tree have to be considered for possible reversal bookings. If one of the trade adjustments of the tree is designated for give-up, first the designation must be cancelled and broadcast. For open/close-adjustments and trade separations no reversal trade adjustments are written, since these types of transactions do not change the net position, so nothing must be changed back. The adjustment indicator for these transactions is set from “N” to “A”, so that it is not available for further adjustments.
Trade Adjustments and Trade Reversals

For trade account transfers and give-up/take-up transactions additional reversal trade adjustments have to be written, the net positions are then re-posted to the original account. These trade reversal adjustments have the transaction type “007” and adjustment/reverse indicators of “R” for the negative side of the re-posting transaction and “A” for the positive side of the transaction. The parent suffix is filled with the same parent suffix as the adjustment it is reversing, so the adjustments and their reversals are grouped together under the same parent suffix ID.

7.4 Examples

The following examples detail how the changes to the position transaction dataset (“Increased number of trade adjustments”) impact on trade adjustment operations. In addition, a description of the trade reversal functionality is provided.

In these examples, **bold type** indicates values that are changed as a result of a particular transaction. The last two columns of the example records are not part of the position transaction record data but are intended to indicate whether the data is broadcast as either a “Trade Confirmation” broadcast (TC Bcast) or as a ‘Giveup-Takeup’ broadcast (GUTU Bcast).

**Note:** A range of eight additional agent accounts (A2 - A9) are available for Clearing Members who offer the Omnibus Client Asset Protection Solution to their clients to hold Eurex Derivatives Products. See section 4.3 Usage of Additional Agent Accounts on page 165 for more details.

### Example 1: Initial Trade Posting

<table>
<thead>
<tr>
<th>Date</th>
<th>ClgMbr</th>
<th>Acct</th>
<th>OrderId</th>
<th>Tran ID</th>
<th>Suffix ID</th>
<th>Parent Suffix ID</th>
<th>HIT</th>
<th>A/R/N</th>
<th>B/S</th>
<th>O/C</th>
<th>Tran Type</th>
<th>GU Status</th>
<th>Long Qty</th>
<th>Short Qty</th>
<th>TC Bcast</th>
<th>GUTU Bcast</th>
</tr>
</thead>
<tbody>
<tr>
<td>15.11.</td>
<td>ABCFR</td>
<td>P1</td>
<td>277163393</td>
<td>000030</td>
<td>00000</td>
<td>00000</td>
<td>N</td>
<td>B</td>
<td>O</td>
<td>000</td>
<td>+100</td>
<td>0</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

... 

<table>
<thead>
<tr>
<th>Date</th>
<th>ClgMbr</th>
<th>Acct</th>
<th>OrderId</th>
<th>Tran ID</th>
<th>Suffix ID</th>
<th>Parent Suffix ID</th>
<th>HIT</th>
<th>A/R/N</th>
<th>B/S</th>
<th>O/C</th>
<th>Tran Type</th>
<th>GU Status</th>
<th>Long Qty</th>
<th>Short Qty</th>
<th>TC Bcast</th>
<th>GUTU Bcast</th>
</tr>
</thead>
<tbody>
<tr>
<td>15.11.</td>
<td>TSTFR</td>
<td>A9</td>
<td>277163394</td>
<td>000030</td>
<td>00000</td>
<td>00000</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>000</td>
<td>0</td>
<td>+100</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A ‘Buy to Open’ order by ABCFR (P1 account) is matched by a ‘Sell to Open’ order from TSTFR (A9 account). Both of the resulting positions are broadcast via the ‘Trade Confirmation’ broadcast stream. The ‘Transaction Id Suffix’ is initialized to 00000 for both sides of the trade.
**Example 2: Trade Account Transfer**

<table>
<thead>
<tr>
<th>Date</th>
<th>Client</th>
<th>Account</th>
<th>Order No</th>
<th>Trade ID</th>
<th>Suffix ID</th>
<th>Parent Suffix ID</th>
<th>HIT</th>
<th>A/R/N</th>
<th>B/S</th>
<th>C/C</th>
<th>Tran Type</th>
<th>GU Status</th>
<th>Long Qty</th>
<th>Short Qty</th>
<th>TC Bcast</th>
<th>GUTU Bcast</th>
</tr>
</thead>
<tbody>
<tr>
<td>15.11.</td>
<td>ABCFR</td>
<td>P1</td>
<td>277163393</td>
<td>000030</td>
<td>00000</td>
<td>00000</td>
<td>A</td>
<td>B</td>
<td>O</td>
<td>000</td>
<td>+100</td>
<td>0</td>
<td>No</td>
<td>No</td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>15.11.</td>
<td>ABCFR</td>
<td>P1</td>
<td>277163393</td>
<td>000030</td>
<td>00001</td>
<td>00000</td>
<td>R</td>
<td>B</td>
<td>O</td>
<td>004</td>
<td>-100</td>
<td>0</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>15.11.</td>
<td>ABCFR</td>
<td>A1</td>
<td>277163393</td>
<td>000030</td>
<td>00002</td>
<td>00000</td>
<td>N</td>
<td>B</td>
<td>O</td>
<td>004</td>
<td>+100</td>
<td>0</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td>No</td>
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<tr>
<td>……</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15.11.</td>
<td>TSTFR</td>
<td>A1</td>
<td>277163394</td>
<td>000030</td>
<td>00000</td>
<td>00000</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>000</td>
<td>0</td>
<td>+100</td>
<td>No</td>
<td>No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ABCFR executes a ‘Trade Account Transfer’ adjustment to transfer his position from the P1 to the A1 account. The ‘Adjustment Status’ (A/R/N) of the original position is set to ‘A’ and two new transactions are created. The first new position record removes the position from the P1 account. This position has an ‘Adjustment Status’ of ‘R’ indicating that it is reversing a previous position. The second record increases the position in the A1 account. This position has an ‘Adjustment Status’ of ‘N’ indicating that further adjustments are allowable. The new position records are sent as ‘Trade Confirmation’ broadcasts. An updated trade confirmation for the original record (Suffix 000000) is not published again via broadcast. However this can be easily identified using the ‘Reversal’ record and reference back to the original trade using the parent suffix ID.

**Note:** Positions marked with an ‘Adjustment Status’ of ‘A’ or ‘R’ are not available for further adjustment. This is a general rule applied by the Eurex system. Whenever an adjustment to a trade position occurs, the ‘Suffix ID’ of the originating position is loaded into the ‘Parent Suffix ID’ field of all newly created position records. This link provides a relationship between ‘parent’ and ‘child’ positions.
Example 3: Trade Separation

<table>
<thead>
<tr>
<th>Date</th>
<th>ClgMbr</th>
<th>Acct</th>
<th>OrderNo</th>
<th>Tran ID</th>
<th>Suffix ID</th>
<th>Parent Suffix ID</th>
<th>HIT</th>
<th>A/R/N</th>
<th>B/S</th>
<th>O/C</th>
<th>Tran Type</th>
<th>GU Status</th>
<th>Long Qty</th>
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<tr>
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<td>P1</td>
<td>277163393</td>
<td>000030</td>
<td>00000</td>
<td>00000</td>
<td>A</td>
<td>B</td>
<td>O</td>
<td>000</td>
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<td>0</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>15.11.</td>
<td>ABCFR</td>
<td>P1</td>
<td>277163393</td>
<td>000030</td>
<td>00001</td>
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ABCFR separates the position in the A1 account (Suffix ID 00002) into four parts. The 'Adjustment Status' (A/R/N) of the original position is set to 'A' and new positions are created for the separated parts. The first new position record reverses the original position movement and is marked with an 'Adjustment Status' of 'R'. New position records are created (with an 'Adjustment Status' of 'N') for the requested separated amount. The new position records are sent as 'Trade Confirmation' broadcasts.
Example 4: Give-up

Note: This example shows one possible scenario for a full Give-up/Take-up transaction only. Other ‘GU Status’ state transitions are possible however these are beyond the scope of this explanation.

ABCFR gives up one of the separated trade positions to member XYZFR. At this stage XYZFR has not accepted the ‘given-up’ trade. The position is marked as ‘Adjusted’ and the ‘Give-up Status’ is set to ‘M’ (Give-up Accepted). No new ‘Trade Confirmation’ broadcasts are sent however the change in the ‘Give-up Status’ of the position is reported via the ‘Give-up/Take-up’ broadcast stream.
XYZFR takes up the trade into his A1 account. The original position (belonging to ABCFR) is marked with a ‘Give-up Status’ of ‘T’ (Take-up Accepted) and two new positions are created. The first position reverses ABCFR’s position. This position is marked with an ‘Adjustment Status’ of ‘R’ and a ‘Give-up Status’ of ‘T’. The second record completes the movement of the position into XYZFR’s A1 account. This position has an ‘Adjustment Status’ of ‘N’ thus allowing further adjustments to be made. The two new records are broadcast via the ‘Trade Confirmation’ broadcast stream and also result in broadcasts to the ‘Give-up/Take-up’ stream.

**Example 5: Open/Close Adjustment**
ABCFR carries out an ‘Open/Close Adjustment’ operation on the position marked as Suffix ID 00005. The original position is marked with an ‘Adjustment Status’ of ‘A’ and two new positions are created to move the position from the account long quantity to the account short quantity. The first position record reduces the original long quantity and is marked with an ‘Adjustment Status’ of ‘R’. The second new record applies the position movement to the short quantity and is marked with an ‘Adjustment Status’ of ‘N’ thus allowing further adjustments to be made. The two new records are broadcast via the ‘Trade Confirmation’ broadcast stream.

Example 6: Trade Reversal
Market Supervision reverses the original trade (between ABCFR and TSTFR) upon which the example set of trade adjustments is based. The set of position records relating to this trade is checked and any positions that have an ‘Adjustment Status’ of ‘N’ are set to a status of ‘A’ (to prohibit any further adjustments). This activity can be seen for suffix Ids 00006, 00007 and 00011 (ABCFRs trade side), for suffix Id 00000 (TSTFRs trade side), and for suffix ID 00009 (XYZFRs trade side).

Any ‘Trade Account Transfer’ or ‘Give-up/Take-up’ transactions are reversed by the creation of new ‘Transaction Type 007’ records. These records ‘negate’ the position movement that resulted from the original adjustment and they share a common ‘Parent Suffix Id’ with the adjustment records that they are reversing. For instance, suffix Ids 00012 and 00013 (ABCFRs trade side) reverse the ‘Trade Account Transfer’ that resulted in the creation of suffix Ids 00001 and 00002. All four records share the same ‘Parent Suffix Id’ of 00000. The first type ‘007’ record is marked with an ‘Adjustment Status’ of ‘R’ and reduces the position in the target account of the original transaction. The second type ‘007’ record is marked with an ‘Adjustment Status’ of ‘A’ and restores the position back to the original source account.

A similar action is applied to ‘Give-up/Take-up’ transactions. The records identified by suffix Ids 00014 and 00015 reverse the ‘Give-up/Take-up’ transaction that resulted in the creation of suffix Ids 00008 and 00009. The first record reduces the position that was originally taken up by XYZFR (suffix Id 00014) and is marked with an ‘Adjustment Status’ of ‘R’.

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The second record restores the position back to ABCFR (suffix Id 00015) and is marked with an adjustment status of ‘A’.

In addition, to the reversal of adjusted positions, the original trade itself needs to be ‘negated’. This is achieved by the booking of a new trade against the original trade participants (but with opposite movements in positions). This is represented by the new positions created with a ‘transaction ID’ of 00034.

All new position records created by the ‘Trade Reversal’ process are broadcast via the ‘Trade Confirmation’ broadcast stream.

Upon completion of all ‘Trade Reversal’ activity, all position records associated with the original trade are set to an ‘Adjustment Status’ of either ‘A’ or ‘R’. This means that no further adjustments can be carried out upon any part of the trade. The net position movements for all trade participants are zero.

**Note:** When a ‘Trade Reversal’ is carried out, only ‘Trade Account Transfer’ and completed ‘Giveup-Takeup’ transactions result in the creation of ‘reversing’ type 007 transactions. ‘Trade Separations’ and ‘Open/Close’ adjustments do no imply any net position movements and thus they do not require any explicit actions in order to reverse them apart from the change of the ‘Adjustment Status’ from ‘N’ to ‘A’

**Example 7: Historic Trade Transfer (HiTT)**

It is assumed that the following position records exists from the trades conducted over the last two business days:

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A ‘Historic Trade Transfer’ (or HiTT) operation can be carried out to move the position into the current day’s trading window. This results in the following changes to the position data.
Trade Adjustments and Trade Reversals

The original position (in the previous day’s dataset) is marked with an ‘Adjustment Status’ of ‘A’ and two new positions are created (in the current day’s dataset) to make the position available for further operations. The first position record reduces the original quantity and is marked with an ‘Adjustment Status’ of ‘R’. The second new record reapplies the position movement and is marked with an ‘Adjustment Status’ of ‘N’ thus allowing further adjustments to be made. Both records are marked with an ‘Historic Adjustment Indicator’ (HIT) of ‘H’ to show that they were positions transferred from a previous day’s trading. Setting this flag to ‘H’ prohibits any further HiTT or ‘Historic Give-up’ operations on subsequent trading days. The two new records are broadcast via the ‘Trade Confirmation’ broadcast stream.

Note: Reversal of trades that contain historic adjustments (either HiTT or Historic Give-up/Take-up) are not allowed by the Eurex system.
Example 8: Historic Give-up/Take-up

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ABCFR gives up a trade position from the previous day’s dataset to member XYZFR. At this stage XYZFR has not accepted the ‘given-up’ trade. The position is marked as ‘Adjusted’ and the ‘Give-up Status’ is set to ‘M’ (Give-up Accepted). No new ‘Trade Confirmation’ broadcasts are sent, however the change in the ‘Give-up Status’ of the position is reported via the ‘Give-up/Take-up’ broadcast stream.
XYZFR takes up the trade into his A1 account. The original position that belongs to ABCFR (in the previous day’s dataset) is marked with a ‘Give-up Status’ of ‘T’ (Take-up Accepted) and two new positions are created (in the current day’s dataset). The first position reverses ABCFR’s historic position. This position is marked with an ‘Adjustment Status’ of ‘R’ and a ‘Give-up Status’ of ‘T’. The second record completes the movement of the position into XYZFR’s A1 account. This position has an ‘Adjustment Status’ of ‘N’ thus allowing further adjustments to be made. Both records are marked with an ‘Historic Adjustment Indicator’ (HIT) of ‘H’ to show they were positions transferred from a previous day’s trading. Setting this flag to ‘H’ prohibits any further HiTT or ‘Historic Give-up/Take-up’ operations on subsequent trading days.

The two new records are broadcast via the ‘Trade Confirmation’ broadcast stream and also result in broadcasts to the ‘Give-up/Take-up’ stream.

Note: Reversal of trades that contain historic adjustments (either HiTT or Historic Give-up/Take-up) are not allowed by the Eurex system.

### 7.5 Transfer of OTC Flexible Contract Trades to Regular Positions

Eurex Clearing AG offers the opportunity to request the transfer of an OTC Flexible Contracts trade to positions in a regular contract/series with exactly the same parameters as the flexible contract, once such a contract/series is created.

A Eurex member holding one half of a respective OTC Flexible Contracts trade must request the transfer from Eurex Clearing AG by phone. If the current counterparty agrees to the transfer, Eurex performs it on behalf of the involved members.

Currently Eurex does not charge a fee for the transfer. A negative fee, calculated for closing the OTC Flexible Contracts half trade, exactly compensates the fee for opening the position in the regular contract/series. A transfer is indicated by the entry “FLEXTRANSFER” in the free format text field of report RPTCB195 “Flexible Contracts Fee Statement”.

Note: The creation of regular contract/series and the definition of their parameters are the sole responsibility of Eurex and cannot be influenced by its members.
8 Securities Allowed as Deposit

8.1 List of Admissible Securities

Eurex only accepts certain securities as a guarantee for contract obligations. Eurex maintains a list of admissible securities, available on its webpage at http://www.eurexclearing.com/risk/parameters_en.html. All securities, which are valid as collateral, are setup in the Eurex system. The Collateral Security Information window of the @ X-tract clearing GUI displays details of all accepted collateral securities of the clearing house and their respective market value, as well as the amount recognized as cover value by the clearing house.

8.2 Bond Haircut Calculation Method

A haircut calculation method is introduced due to the price sensibility of bonds as function of the shift in the yield to maturity. The used formula is:

\[
\text{Haircut} = \left( \frac{\Delta B}{B} \right) = -D \times \Delta y / (1 + y/k) = \frac{(B(y + \Delta y 	imes d) - B(y))}{B(y)}
\]

$\Delta B$ = Delta B, small absolute change of the Present Bond Price

$B$ = Present Bond Price

$D$ = Duration

$\Delta y$ = Delta Yield, small change of yield to maturity (in % / 100)

$y$ = yield to maturity (in % / 100)

$k$ = number of coupons per year

$d$ = late price date factor, if the price is from a previous business date (1 day late: 1.4, 2 days late: 1.8, 3 days late: 2.0, 4 or more days late: 2.3)

The term $D/(1+y/k)$ is called Modified Duration

$\Delta B/B$ is the relative change of the present bond value and therefore the searched haircut.

The collateral value after haircut is the market value of the bond multiplied by the Collateral evaluation factor (1 - Haircut).

- The calculated Haircut, rounded to three digits, is taken for the calculation if it is greater than or equal to the value published on the internet.

- Otherwise, the value published on the internet is taken.

Example:

It is assumed that an EUR-denominated government bond with a market value of 1,000,000 € has a modified duration of 3.5 years. The Yield Shift for this class of bonds shall be 0.8%.

Given this, the calculated Collateral evaluation factor (=1- Haircut) is approximately $(1 - (3.5*0.8/100)) = 0.972$ (97.2%).

In this example the haircut rate applied to the bond is 2.8%, because it is higher than the minimum haircut rate of 2% (minimum haircuts per bond class are published in the internet: www.eurexchange.com).

The value of the collateral after haircut is $0.972 \times 1,000,000 \text{ } € = 972,000 \text{ } €$.

The field AutoCalcEvalPct of the Collateral Security Information window displays whether the calculation method is applied to the respective bond.
8.3 Equity Haircut Calculation Method

A haircut calculation method is introduced which is applicable to equities used as collateral. The evaluation of the haircut is based on the Exponentially Weighted Moving Average (EWMA) Volatility of the equity. The haircut is calculated according to the following formula:

\[
\text{Haircut} = \text{RF} \times \text{LF} \times \max(\text{Vola}30, \text{Vola}250)
\]

- \(\text{RF}\) = Risk Factor
- \(\text{LF}\) = Liquidity Factor
- \(\text{Vola}30\) = EWMA Volatility for the last 30 days
- \(\text{Vola}250\) = EWMA Volatility for the last 250 days

The collateral value after haircut is the market value of the equity multiplied by the Collateral evaluation factor (1 - Haircut).

- The calculated Haircut, rounded to two digits, is taken for the calculation if it is greater than or equal to the value published on the internet.
- Otherwise, the value published on the internet is taken.

8.4 Specific Equity Collateral

Clearing members may designate certain deposited securities as specific equity collateral. For this purpose, the deposited securities are assigned to exchange members' agent or proprietary accounts, using the Specific Equity Collateral Assignment Overview window of the @X-tract Clearing GUI.

The value of the assigned specific equity collateral is considered when calculating the margin requirement resulting from positions of the given member in the given account for all series belonging to a margin class based on that equity title. See section 3.2.5.7 “Margin Requirement of a Margin Class” on page 75 for more details.

Any excess or non-matching securities assigned as specific equity collateral are valued and used as normal (bulk) collateral. The clearing member is responsible for assigning specific equity collateral in an efficient way for its trading members.

In case a relationship of a non-clearing member to a clearing member is terminated, we strongly recommend the clearing member to check and remove all remaining specific equity collateral allocations for this non-clearing member in order to guarantee optimized collateral usage.

8.5 Collateral Management

The main principle that enables client asset segregation within the Eurex Systems is the ‘multiple pool’ concept. By introducing a pool ID, Clearing Members are able to maintain multiple collateral pools, each assigned to an external securities collateral account and grouping the appropriate cash transactions reflecting the cash collateral balances. Collateral assets, both securities collateral and cash collateral balances, can only be assigned to one collateral pool, as such allowing the Clearing Member to segregate its proprietary collateral assets from its client.
collateral assets. Furthermore, with the introduction of the enhanced master data and the pool ID, cash payments are segregated.

Confirmed collateral transactions are evaluated real-time. Clearing members can use multiple collateral accounts per usage (margin, clearing fund and company capital) on different CSDs (Central Security Depositories). The Collateral Management Engine processes security collateral, cash collateral as well as guarantees to calculate the collateral balance for margin, clearing fund and company capital.

Using a pool ID, Clearing Members are able to maintain multiple collateral pools, each assigned to an external securities collateral account and grouping the appropriate cash transactions reflecting the cash collateral balances. Collateral assets, both securities collateral and cash collateral balances, can only be assigned to one collateral pool, as such allowing the Clearing Member to segregate its proprietary collateral assets from its client collateral assets. Furthermore, owing to the enhanced master data and pool ID, cash payments are segregated.

Clearing members can enter collateral release requests real-time using the @X-tract Clearing GUI. Members are informed about the result of security deposit and cash collateral transactions on a transactional basis by a broadcast.

All commonly used collateral is stored in the Eurex system. Members can inquire them on the Collateral Security Information window.
Limits and Spreads

This functionality is available only for Eurex.

The maximum spreads currently valid in Eurex options trading can be found on www.eurexchange.com under: www.eurexchange.com/trading/products/EQU_en.html.

A position limit is the maximum number of contracts that can be held by an exchange member or a client for his own account. The Board of Directors, to guarantee an orderly market, may set a position limit for each underlying in options trading and for each security in futures trading.

The position limits for trading are set according to § 4.7 of the Exchange Regulations for Eurex Deutschland and Eurex Zürich. The Board of Management of Eurex Deutschland or Eurex Zürich may set position limits in order to ensure orderly options and futures trading and to avoid risks for the cash markets (Kassamärkte). A position limit is a maximum number of contracts that may be held by one Exchange Participant or one customer for its own account. Exchange Participants shall be notified of such determination of position limits allowing for a reasonable period of time.

This functionality is available only for EEX.

A position limit is the maximum number of contracts that can be held by an exchange member or a customer for his own account. The Board of Directors, in order to guarantee an orderly market, may set a position limit for each underlying in options trading and for each security in futures trading.
10 Appendix

10.1 Glossary of Terms and Abbreviations.

<table>
<thead>
<tr>
<th>Term</th>
<th>Explanation</th>
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</thead>
<tbody>
<tr>
<td>@X-ceed</td>
<td>Front end trading application provided by Eurex.</td>
</tr>
<tr>
<td>@X-tract</td>
<td>Front end clearing application provided by Eurex.</td>
</tr>
<tr>
<td>Account Type</td>
<td>Type of the account in which a trade is carried out. Eurex offers the following account types:</td>
</tr>
<tr>
<td></td>
<td>• P1 and P2 = Proprietary Accounts</td>
</tr>
<tr>
<td></td>
<td>• M1 and M2 = Market Maker Accounts</td>
</tr>
<tr>
<td></td>
<td>• A1 - A9 = Agent Account</td>
</tr>
<tr>
<td></td>
<td>• G1 = Pre-designated Give-up Account (a sub-account of the agent account)</td>
</tr>
<tr>
<td></td>
<td>• G2 = Designated Give-up Account (a sub-account of the agent account)</td>
</tr>
<tr>
<td></td>
<td>Margin calculations are performed by Eurex Clearing for a member’s own house account (P &amp; M accounts) and its customers’ (agent) account.</td>
</tr>
<tr>
<td></td>
<td>Netting and spreading between the house account and customer accounts does not take place.</td>
</tr>
<tr>
<td>Accrued Interest</td>
<td>The interest accrued on a bond from the last interest (coupon) payment date to the valuation date.</td>
</tr>
<tr>
<td>Additional Margin</td>
<td>Additional margin serves to cover the additional liquidation costs that potentially could be incurred. Such possible close-out costs could</td>
</tr>
<tr>
<td></td>
<td>arise if, based on the current market value of a portfolio, the worst case loss were to occur within a 24-hour period. It is used for options</td>
</tr>
<tr>
<td></td>
<td>(also options on futures) and non-spread futures positions, bonds and equity trades. For bonds and equity trades, the additional margin is</td>
</tr>
<tr>
<td></td>
<td>calculated for security positions but not for the corresponding cash positions.</td>
</tr>
<tr>
<td>Administrative Council</td>
<td>The body of Eurex Zürich that adopts important regulations such as the exchange rules and appoints members of the Board of Management of Eurex Zürich.</td>
</tr>
<tr>
<td>Agent Account</td>
<td>Only trades entered into the Eurex system on behalf of clients are recorded in the agent account. Agent accounts are maintained on a gross</td>
</tr>
<tr>
<td></td>
<td>basis, i.e. both long and short positions are recorded for the same option series or futures contract, as specified during order entry.</td>
</tr>
<tr>
<td>Aggregation on Order Level</td>
<td>Grouping of partial executions of an order to one trade. Aggregation on order level is provided optionally for Xetra in the form of a standing instruction.</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Allocated Position</td>
<td>A Long position in fixed income future contracts, which, on the final settlement date, has been assigned the securities which are to be delivered.</td>
</tr>
<tr>
<td>Allocation Process</td>
<td>The process by which holders of long futures position in contracts requiring physical delivery are chosen at random by Eurex Clearing, and informed what they will receive.</td>
</tr>
<tr>
<td>American-Style Option</td>
<td>An option which can be exercised at any time before expiration.</td>
</tr>
<tr>
<td>API</td>
<td>See Application Programming Interface</td>
</tr>
<tr>
<td>Application Programming Interface</td>
<td>An Application Programming Interface is the specific method prescribed by a computer operating system or by another application program by which an application program can make requests of (and receive responses from) the operating system or other application. In the context of Eurex Exchange applications, the VALUES-API is supported.</td>
</tr>
<tr>
<td>Arbitrage</td>
<td>A trading strategy that takes advantage of two or more instruments being mispriced relative to one another. Although in its “pure” form, arbitrage is risk-free, low-risk strategies are also frequently referred to as “arbitrage”.</td>
</tr>
<tr>
<td>Ask</td>
<td>A price in the order book at which an investor can buy a financial instrument</td>
</tr>
<tr>
<td>Assignment</td>
<td>When a long position in options is exercised, the Eurex system randomly selects from among all open short positions of the same options series a writer who is allotted that exercise, i.e. the writer is obliged to fulfill the contractual conditions for delivery or, as the case may be, receipt of the underlying instruments.</td>
</tr>
<tr>
<td>At-the-Money Option</td>
<td>An option whose exercise price is identical to the price of the underlying instrument.</td>
</tr>
<tr>
<td>Automatic Linking</td>
<td>The member may initiate an automatic linking of buy and sell trades by marking the respective trades. The functionality of (manual) linking or automatic linking is only available for trades not marked for gross processing.</td>
</tr>
<tr>
<td>Back End</td>
<td>The back end is the central host system of Eurex.</td>
</tr>
<tr>
<td>Back-Month(s)</td>
<td>All delivery months of a specific futures contract other than the spot-month.</td>
</tr>
<tr>
<td>Term</td>
<td>Explanation</td>
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</tr>
<tr>
<td>Back End Specific Subsystems</td>
<td>Back End Specific Subsystems (BESS) are software components of the Deutsche Boerse common front end which are needed to access the exchange-specific back end from the member front end system e.g. the Eurex BESS is configured for access to the Eurex host.</td>
</tr>
<tr>
<td>Back-Month Spread Margin</td>
<td>The margin rate which is applied prior to the first day of the delivery month on all spread positions, and during the delivery month on those spread positions in which the front contract is not contained. This rate is always less than, or equal to, the spot-month spread margin rate.</td>
</tr>
<tr>
<td>Basis</td>
<td>The difference between the futures price and the price of the corresponding underlying instrument, defined as Cash Price - Futures Price. In the case of fixed income futures, the futures price must be multiplied by the conversion factor.</td>
</tr>
<tr>
<td>Basis Point Value</td>
<td>The change in value of an asset or portfolio resulting from a 0.01% change in yield.</td>
</tr>
<tr>
<td>Batch</td>
<td>A batch is performed at the end of a trading day. During the batch statistical information is updated, reports are generated and data maintenance is performed. The system is prepared for the next trading day.</td>
</tr>
<tr>
<td>BESS</td>
<td>Back End Specific Subsystems</td>
</tr>
<tr>
<td>Bid</td>
<td>A price in the order book at which an investor can sell a financial instrument</td>
</tr>
<tr>
<td>Binomial Model</td>
<td>An option pricing model using a binomial tree (a succession of time periods, such that within each time period only two price movements are possible) to evaluate possible outcomes, and to calculate an option price. It is best suited for American-style options. Also known as the Cox-Ross-Rubinstein Model.</td>
</tr>
<tr>
<td>Black-Scholes Model</td>
<td>An options pricing model best suited for European-style, non-dividend paying stocks. The model was developed in 1973 by Fischer Black and Myron Scholes.</td>
</tr>
<tr>
<td>Blocking</td>
<td>Marking of a trade to indicate that from a member's point of view, settlement is not possible or not desired currently.</td>
</tr>
<tr>
<td>Block Trade</td>
<td>For certain products Eurex provides the opportunity to enter OTC transactions directly into the Eurex Clearing system. OTC Block trades must concern a minimum number of contracts as defined by the Eurex Boards, on a per-product basis.</td>
</tr>
<tr>
<td>Term</td>
<td>Explanation</td>
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</tr>
<tr>
<td>Boards of Management</td>
<td>The bodies that control the organization and business operations of their respective Eurex Exchange.</td>
</tr>
<tr>
<td>BOBL Future</td>
<td>See Euro-BOBL Future</td>
</tr>
<tr>
<td>Bond</td>
<td>An instrument for borrowing funds on the capital market, where creditors' claims are vested/certificated in the form of securities.</td>
</tr>
<tr>
<td>Bonus</td>
<td>Special distribution of a company's funds, which is a one-time special allowance which is paid to the shareholders in addition to the normal dividend payment, either in extremely good business years or in the case of extraordinary profits. These bonus payments are processed for pending trades by Clearstream Banking AG in a similar way to dividend payments and are settled via the Clearing Member's accounts. A bonus payment can also result in an adjustment to option series.</td>
</tr>
<tr>
<td>Broker</td>
<td>A Eurex member that executes business on behalf of clients.</td>
</tr>
<tr>
<td>Broker's Open Transaction</td>
<td>A trade for which a broker is listed as counterparty. When the trade is closed, a CCP-relevant trade is formed.</td>
</tr>
<tr>
<td>BUND Future</td>
<td>See Euro-BUND Future</td>
</tr>
<tr>
<td>BUXL Future</td>
<td>See Euro-BUXL Future</td>
</tr>
<tr>
<td>Call Option</td>
<td>A right to buy an asset at a certain price at, or up to a certain date. In the case of options on Eurex fixed income futures, the contract gives the buyer the right to enter into a long position in the underlying futures contract at a set price, up to a given date. In the case of Eurex cash-settled options, a call option represents the right to receive a cash settlement if the final settlement price is higher than the option's exercise price.</td>
</tr>
<tr>
<td>Capital Adjustment</td>
<td>Adjustments to options series which result from changes in value of the corresponding underlying caused by changes to the respective company’s capital e.g. a stock split. By adjusting exercise prices and/or contract sizes of options series, together with cash settlement of any fractional remainder, Eurex is able to maintain a value neutral result for existing positions in options on securities which are subject to capital a adjustment.</td>
</tr>
<tr>
<td>Capital Market Derivatives</td>
<td>See Fixed Income Derivatives</td>
</tr>
<tr>
<td>Cash Credit</td>
<td>Should the deposited collateral exceeds the risk calculated by the CCP, the excess cash deposit is credited to the clearing member's cash account.</td>
</tr>
<tr>
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<td>Explanation</td>
</tr>
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</tr>
<tr>
<td>Cash Deferral</td>
<td>Cash settlement does not take place for blocked trades contained in the offsetting block. It only takes place once the trades have been released. Thus, the participant is not required to maintain a differences account.</td>
</tr>
<tr>
<td>Cash Settlement</td>
<td>The final settlement of a contract by the payment or receipt of a cash amount instead of the physical delivery of the underlying instrument. In the case of a financial futures contract (for example, the Three-Month EURIBOR Future), final cash settlement is determined on the basis of the Final Settlement Price.</td>
</tr>
<tr>
<td>Cash-and-Carry Arbitrage</td>
<td>The creation of a risk-free or neutral position by simultaneously buying assets and selling the corresponding futures contract, usually entered into in order to exploit mispricing in the cash and/or derivatives markets. The opposite position is called reverse cash-and-carry arbitrage.</td>
</tr>
<tr>
<td>CBF</td>
<td>See Clearstream Banking Frankfurt</td>
</tr>
<tr>
<td>CCP Allocation Algorithm</td>
<td>By means of the CCP allocation algorithm, buy trades are assigned to all blocked sell trades in equal amount.</td>
</tr>
<tr>
<td>Central Counterparty</td>
<td>See Counterparty function of Eurex Clearing</td>
</tr>
<tr>
<td>CFTC</td>
<td>The mission of the Commodity Futures Trading Commission (CFTC) is to protect market users and the public from fraud, manipulation, and abusive practices related to the sale of commodity and financial futures and options, and to foster open, competitive, and financially sound futures and option markets.</td>
</tr>
<tr>
<td>Cheapest-to-Deliver</td>
<td>The bond, deliverable against a futures contract, for which delivery is most attractive in terms of cost.</td>
</tr>
<tr>
<td>Clean Price</td>
<td>The present value of a bond, less accrued interest. Usually, bond prices are quoted as clean prices.</td>
</tr>
<tr>
<td>Clearer</td>
<td>A Eurex member that is either a Direct Clearing Member or General Clearing Member.</td>
</tr>
<tr>
<td>Clearing</td>
<td>The offsetting and settlement of transactions resulting from trading. In particular, duties encompassing the daily balancing of profits and losses (variation margin), the daily calculation of securities (additional margin) and the final settlement once the contract has expired.</td>
</tr>
</tbody>
</table>
### Clearing Fund
The clearing fund serves as a safeguard against unusual price movements not covered by the margin calculation in case of a member default. Each clearing member must contribute to the clearing fund. It consists of clearing members' direct deposited capital or respective third-party bank guarantees. It is used up to a specific percentage for securing the counterparty risk not covered by margin deposits. All clearing members are insured by the clearing fund.

### Clearing Member (CM)
A clearing member is entitled to perform the clearing of securities transactions. In addition, CMs are liable for the timely fulfillment of all payment and delivery obligations stemming from securities transactions. Eurex Clearing makes a distinction between clearing membership types: the GCM (General Clearing Member) and the DCM (Direct Clearing Member). Unlike the GCM, the DCM may only clear proprietary trades, agent trades and trades of own subsidiaries.

### Clearstream Banking Frankfurt
An international CSD with which Eurex Clearing is directly connected for collateral management and settlement of deliveries. Clearstream Banking Frankfurt is a wholly owned subsidiary of Deutsche Börse AG.

### Client Asset Protection
Client Asset Protection addresses the requirements of asset segregation and timely portability by enabling Clearing Members and their clients to individually negotiate the level of protection they want - depending on their risk-cost profile.

### Closeout
An open position is offset (closed out) by the execution of a transaction that is equal but opposite to that which established the open position. This means that a long position can be closed by an offsetting short position, and vice-versa.

### Collateral
Cash or securities such as bonds and shares which are pledged to cover margin requirements determined by Eurex Clearing.

### Collateral Management
Collateral management comprises the administration of collateral and fee accounts and uses Eurex' already existing internal functionality and processes.

### Collateral Pool
There are three ‘types’ of pool for margin:
- Default: Used for proprietary and non segregated collaterals.
- Omnibus: Used for omnibus segregated collaterals.
- Segregated: Used for individually segregated NCM collaterals.

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<td>Explanation</td>
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</tr>
<tr>
<td>Compensation Partner</td>
<td>Should the processing of corporate actions be initiated after a due date that has already passed, a compensation partner is automatically determined and announced for each settled trade in order to assign the respective claims correctly. In addition, it is possible to process corporate actions according to a default process.</td>
</tr>
<tr>
<td>CONF-Future</td>
<td>The CONF-Future is based on a notional long-term debt instrument with a term of 8 to 13 years. It bears a notional coupon rate of 6 percent and is based on debt instruments issued by Swiss Government. The CONF-Future has a contract value of CHF 100,000 and a minimum price change of 0.01 percent, equivalent to a value of CHF 10.</td>
</tr>
<tr>
<td>Continuous Trading</td>
<td>During continuous trading, each new incoming order is checked instantly against the order/quote book to see whether it can be matched. Remaining quantities of partially executed orders that cannot be matched are put into the order/quote book if no execution restriction is applied.</td>
</tr>
<tr>
<td>Contract Size</td>
<td>The quantity of the underlying instrument which one contract represents.</td>
</tr>
<tr>
<td>Contractual Netting</td>
<td>Contract about netting in terms of §§387ff. BGB in combination with the clearing conditions. All claims lapse that can be offset against each other. The remaining balance of claims, that cannot be offset, must be physically fulfilled (also refer to Settlement Netting, Offsetting Block, Net Delivery Obligation).</td>
</tr>
<tr>
<td>Contractual Settlement Day</td>
<td>The contractual settlement day is the value date agreed upon at the trade date. In general, the agreed settlement day for shares is two bank business days after the trading day (i.e. T+2).</td>
</tr>
<tr>
<td>Conversion Factor</td>
<td>The factor used to “equalize” for the difference in issue terms between the notional bond underlying a bond futures contract and the real bonds eligible for delivery. When multiplied with a bond futures price, the conversion factor translates the futures price to an actual delivery price for a given deliverable bond, as at the delivery date of the corresponding contract. An alternative way of explaining the conversion factor is to see it as the price of a deliverable bond, on the delivery date, given a market yield of 6%.</td>
</tr>
<tr>
<td>Corporate Actions</td>
<td>Corporate Actions refer to cash payments (dividends or bonuses) or to the booking of rights (subscription rights, partial rights, splits, mergers).</td>
</tr>
<tr>
<td>Cost-of-Carry</td>
<td>The difference between financing costs and the income received on the cash position (net financing costs).</td>
</tr>
</tbody>
</table>
Counterparty

The opposite party to a financial transaction. Normally the counterparty of the buyer of a contract is the seller of that contract. In the case of Eurex, however, Eurex Clearing acts as the counterparty to each party to a transaction, thereby removing counterparty risk from the members (see below).

Counterparty Function of Eurex Clearing

Eurex Clearing functions as the counterparty for the buyer and for the seller in every transaction and guarantees both parties to the transaction that the open contracts are performed. This division into two separate contracts with the central clearing house enables the parties on both sides of the transaction to make their decisions independently of each other and to concentrate the respective counterparty risks (default and liquidity risks) in a single party to the contract. It should be noted that only Clearing-Members may be parties to the contract with Eurex Clearing. If an order to buy or sell is executed for a Non-Clearing-Member, a transaction takes place between the Non-Clearing-Member and its General-Clearing-Member (GCM) or Direct-Clearing-Member (DCM), as the case may be, and a corresponding transaction between Eurex Clearing and the GCM or DCM. Customers have contractual relationships exclusively with the respective Exchange Participants who handle and process their orders.

Coupon

1. Nominal interest rate of a bond.
2. Part of the bond certificate vesting the right to receive interest.

Cox-Ross-Rubinstein Model

See Binomial Model

Cross Request

The announcement of a cross or pre-arranged trade prior to executing such trade.

Cross Trade

A cross trade is a trade where a member trades against an own order in the order book.

Currency Futures

Futures contracts to exchange one currency against another, in general with payment-versus-payment physical delivery. On settlement date, the owner of the long position is credited in the delivery currency (amount defined by contract face value), and debited in the product currency (amount defined by the last settlement futures price). Reverse payments apply to the short position.

Currency Haircut

Adjustment parameter to take exchange rate risk into account when converting currencies into the clearing currency.
### Term | Explanation
--- | ---
CSD (Central Securities Depository) | The Central Securities Depository is the central depository of securities. The Central Securities Depository for Germany is CBF (Clearstream Banking Frankfurt).
Current Liquidating Margin | The current liquidating margin is paid by the buyer or the seller of bonds. This margin covers losses that would occur if a position were to be liquidated today. The current liquidating margin is adjusted daily similar to premium margin.
Daily Settlement | In order to carry out the daily offsetting of profits and losses, changes in value versus the previous day are determined for each position. This is accomplished on the basis of the daily settlement prices.
Daily Settlement Price | The daily valuation price of futures and options, as determined by Eurex, on which the determination of daily margin requirements is based.
DAX® (Deutscher Aktien Index) | Composed of 30 German blue chips, which are incorporated into the index on the basis of market turnover, free float and recognition of the German Takeover Code. The DAX® is calculated as a performance index, i.e. it is assumed that all dividends and other distributions are reinvested. Eurex offer futures and options on the DAX®.
DBAG | See Deutsche Börse AG
DCM | See Direct Clearing Member
Deferred Contract | A futures contract which becomes due in a back-month (i.e. which is not the front-month).
Delivery Instruction | A delivery instruction, e.g. “Delivery versus Payment” (= DvP) or “Receive versus Payment” (= RvP) or “Free of Payment” (= FoP, due to corporate actions), is generated by the CCP and sent to the Central Securities Depository.
Delivery Instruction File | The file is sent by a member and contains a list of all trades released for delivery by the settlement agent. For CCP relevant trades, this data is transferred to the CCP. For all other trades, processing takes place at the Central Securities Depository.
Delivery Notice | By issuing the delivery notice, the holder of Short positions in government bond futures contracts fulfills his obligation to nominate bonds for delivery via the CSD.
Delta | The change in the option price in the event of a one point change in the underlying instrument.
<table>
<thead>
<tr>
<th>Term</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Derivative</td>
<td>Financial instrument whose value is based on one underlying instrument from which they are derived. Hence the expression 'derivatives'.</td>
</tr>
<tr>
<td>Designated Market Maker</td>
<td>Selected futures products are subject to designated market making to promote liquidity. This occurs for an initial period after a new futures product is introduced. Designated market makers are generally committed to providing quotes for a certain proportion of total trading hours.</td>
</tr>
<tr>
<td>Deutsche Börse AG (DBAG)</td>
<td>Deutsche Börse AG is one of the shareholders of Eurex Zürich.</td>
</tr>
<tr>
<td>Deutsche Bundesbank</td>
<td>The German central bank. Eurex Clearing members are obliged to have a cash account with the Deutsche Bundesbank and the Swiss National Bank for the clearing of cash amounts resulting from derivatives transactions.</td>
</tr>
<tr>
<td>Direct Clearing Member (DCM)</td>
<td>A Eurex member which satisfies the capital requirements of Eurex Clearing and which has applied for, and been granted, a license to clear derivatives traded on Eurex. A DCM may clear its own transactions and those of its clients, as well as those of 100%-owned affiliated market participants that do not hold a clearing license.</td>
</tr>
<tr>
<td>Discounting</td>
<td>Calculating the present value of one or more future cash flows.</td>
</tr>
<tr>
<td>Dividend</td>
<td>Distributed profit of a public limited company, paid per company share (dividend per share). For pending cash securities trades, the dividends are processed by Clearstream Banking AG and settled at Deutsche Bundesbank via the Clearing Member’s accounts.</td>
</tr>
<tr>
<td>Due Trade</td>
<td>A due trade is a trade whose settlement day corresponds to the current business day.</td>
</tr>
<tr>
<td>Duration</td>
<td>Duration is an indicator expressing the weighting of the cash flows from a bond by the time one must wait to receive each cash flow. Duration gives an indication of the sensitivity of a bond to a given change in interest rates.</td>
</tr>
<tr>
<td>Early Exercise</td>
<td>The exercise of an American-style option before its expiration date.</td>
</tr>
<tr>
<td>EDSP</td>
<td>Exchange Delivery Settlement Price - Final Settlement Price for maturing futures contracts - established on the Last Trading Day.</td>
</tr>
<tr>
<td>EDSP Day</td>
<td>Exchange Delivery Settlement Price Day - the day on which the Final Settlement Price for a maturing futures contract is determined and the same day as the contract’s Last Trading Day.</td>
</tr>
<tr>
<td>Term</td>
<td>Explanation</td>
</tr>
<tr>
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</tr>
<tr>
<td>EEX</td>
<td>See European Energy Exchange</td>
</tr>
<tr>
<td>EONIA</td>
<td>European Overnight Index Average – a reference rate calculated by the European Central Bank as the average rate of overnight inter-bank lending transactions undertaken by a panel of declaring banks in the euro area. It is a benchmark rate in the euro money market, and Eurex offers futures based on the monthly average of published EONIA rates.</td>
</tr>
<tr>
<td>Equity Products</td>
<td>Derivatives on individual stocks from various global markets traded at Eurex.</td>
</tr>
<tr>
<td>Equity Index</td>
<td>Derivatives traded at Eurex on major equity indexes.</td>
</tr>
<tr>
<td>Products</td>
<td></td>
</tr>
<tr>
<td>EUA</td>
<td>European Union Emission Allowance</td>
</tr>
<tr>
<td></td>
<td>EEX members are able to trade futures products on EUA (European Union Emission Allowances) at EEX Derivative Exchange on the Eurex platform. The product type of EUA futures is FSTK.</td>
</tr>
<tr>
<td>Eurex</td>
<td>The Eurex Exchanges (Eurex Deutschland and Eurex Zürich) provide a fully automated trading platform for the conclusion of futures and options transactions, in particular standardized futures and options contracts. Eurex is the world's leading futures and options market for European derivative instruments. Its electronic trading platform provides access to a broad range of international benchmark products. Eurex was created in 1998 with the merger of DTB (Deutsche Terminbörse) and SOFFEX (Swiss Options and Financial Futures Exchange), both of which were pioneers in providing access to derivatives markets via electronic trading platforms.</td>
</tr>
<tr>
<td>Eurex Bonds</td>
<td>Eurex Bonds GmbH was founded in October 2000 as a joint initiative of Eurex Frankfurt AG and leading financial institutions. The organization is a private law joint venture with the purpose of establishing and operating an electronic platform for bond and basis trading in debt issues. Eurex Clearing acts as the central counterparty for Eurex Bonds.</td>
</tr>
<tr>
<td>Eurex Clearing</td>
<td>Eurex operates its own clearing house - Eurex Clearing. Eurex Clearing exclusively serves the Eurex futures and options market, as well as the cash market for bonds (Eurex Bonds) and the market for repurchase agreements (Eurex Repo). It also offers clearing services for equities traded on the Frankfurt Stock Exchange. It acts as the central counterparty for every transaction and guarantees that deliveries are performed. Eurex Clearing is a wholly owned subsidiary of Eurex Frankfurt AG.</td>
</tr>
<tr>
<td>Eurex Deutschland</td>
<td>Eurex Deutschland is the German exchange entity of Eurex.</td>
</tr>
<tr>
<td>Term</td>
<td>Explanation</td>
</tr>
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</tr>
<tr>
<td>Eurex Frankfurt AG</td>
<td>Eurex Frankfurt AG is the administrating and operating institution of Eurex Deutschland. It provides the staff, the facilities and premises for the operation of Eurex Deutschland. Eurex Frankfurt AG is a wholly owned subsidiary of Eurex Zürich AG.</td>
</tr>
<tr>
<td>Eurex Market Supervision</td>
<td>The exchange department controlling all trading activities on the Eurex system.</td>
</tr>
<tr>
<td>Eurex Repo</td>
<td>Eurex Repo Euro Market was founded in July 2001. The electronic platform offers general collateral (GC) and special repo trading through Eurex Clearing as the central counterparty.</td>
</tr>
<tr>
<td>Eurex Zürich</td>
<td>Eurex Zürich is the Swiss exchange entity of Eurex.</td>
</tr>
<tr>
<td>Eurex Zürich AG</td>
<td>Besides being the operating and administrating institution of Eurex Zürich, Eurex Zürich AG is a public company and is owned in equal parts by Deutsche Börse AG and the SWX Swiss Exchange. Eurex Zürich AG owns 100% of Eurex Frankfurt AG.</td>
</tr>
<tr>
<td>EURIBOR</td>
<td>The European Interbank Offered Rate (EURIBOR), which is the average interest rate at which a group of 57 banks are willing to lend funds to each other over a set period of time. EURIBOR is widely used as a reference rate for euro cash flows, as well as for derivatives.</td>
</tr>
<tr>
<td>Euro-BOBL Future</td>
<td>The Euro-BOBL Future is based on a notional medium-term debt with a remaining term of 4.5 to 5.5 years. It bears a notional coupon rate of 6 percent and is based on debt instruments issued by the Federal Republic of Germany. The Euro-BOBL Future has a contract value of EUR 100,000 and a minimum price change of 0.01 percent, equivalent to a value of EUR 10.</td>
</tr>
<tr>
<td>Euro-BOBL Option</td>
<td>Option on the Euro-BOBL Future</td>
</tr>
<tr>
<td>Euro-BUND Future</td>
<td>The Euro-BUND Future is based on a notional long-term debt instrument with a remaining term of 8.5 to 10.5 years. It bears a notional coupon rate of 6 percent and is based on debt instruments issued by the Federal Republic of Germany. The Euro-BUND Future has a contract value of EUR 100,000 and a minimum price change of 0.01 percent, equivalent to a value of EUR 10.</td>
</tr>
<tr>
<td>Euro-BUND Option</td>
<td>Option on the Euro-BUND Future</td>
</tr>
</tbody>
</table>
The Euro-BUXL Future is based on a notional long-term debt instrument with a remaining term of 20 to 30.5 years. It bears a notional coupon rate of 6 percent and is based on debt instruments issued by the Federal Republic of Germany. The Euro-BUXL Future has a contract value of EUR 100,000 and a minimum price change of 0.01 percent, equivalent to a value of EUR 10.

The Euro-SCHATZ Future is based on a notional medium-term debt with a remaining term of 1.75 to 2.25 years. It bears a notional coupon rate of 6 percent and is based on debt instruments issued by the Federal Republic of Germany. The Euro-SCHATZ Future has a contract value of EUR 100,000 and a minimum price change of 0.01 percent, equivalent to a value of EUR 10.

Option on the Euro-SCHATZ Future

European Energy Exchange

European Energy Exchange Germany's energy exchange and is located in Leipzig. Preceding companies were LPX Leipzig Power Exchange, located in Leipzig and European Energy Exchange, located in Frankfurt. Eurex Frankfurt is a shareholder of the EEX.

European-Style Option

An option that can only be exercised on the Last Trading Day.

Exchange Council

The body of Eurex Deutschland that adopts important regulations such as the exchange rules and appoints members of the Board of Management of Eurex Deutschland in consultation with the Hessian Exchange Supervisory Authority.

Exchange Delivery Settment Price

See EDSP

Exchange Participant

An enterprise that concludes futures and options transactions for their own account (proprietary transactions), or in their own name for the account of third parties on a commercial basis (customer transactions), and that has been admitted to trading at Eurex. Although in practice, Eurex exchange participants are frequently referred to as “members”, this is the correct term.

Exchange Traded Fund

Exchange traded funds are shares issued by financial institutions that allow you to trade benchmark indexes like a stock. Eurex is the first European exchange to list futures and options on index ETFs.

Exchange Trader

A person who has been authorized to enter into futures and options transactions at Eurex on behalf of an exchange participant.
<table>
<thead>
<tr>
<th>Term</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exclusion</td>
<td>The permanent removal of the admission to trading of an exchange participant or an exchange trader.</td>
</tr>
<tr>
<td>Execution Confirmation</td>
<td>With the execution of an order, an execution confirmation is generated. In contrast to the trade confirmation, no further details are contained concerning counterparty and price.</td>
</tr>
<tr>
<td>Exercise</td>
<td>The option holder’s declaration to either buy (for a call) or sell (for a put) the underlying instruments at the conditions set in the option contract.</td>
</tr>
<tr>
<td>Exercise Price</td>
<td>The price at which the underlying instrument is received or delivered when an option is exercised. Also known as the strike price.</td>
</tr>
<tr>
<td>Exercised Option</td>
<td>A long position in a given options series which the holder of the position has elected to exercise.</td>
</tr>
<tr>
<td>Exercised Position</td>
<td>See Exercised Option.</td>
</tr>
<tr>
<td>Expiration</td>
<td>The date on which the option right expires. Also known as the expiry, or expiry date.</td>
</tr>
<tr>
<td>Extended Inside Market</td>
<td>Up to ten best bid and best ask prices in the order book with accumulated volumes sorted by limit price, excluding Market Orders and Stop Orders.</td>
</tr>
<tr>
<td>EXTF</td>
<td>See Exchange Traded Fund</td>
</tr>
<tr>
<td>Final Settlement Price</td>
<td>The price of a contract on the Last Trading Day, which is determined by Eurex according to specified rules and guidelines.</td>
</tr>
<tr>
<td>Financial Future</td>
<td>A standardized contract for the delivery or receipt of a specific amount of a financial instrument, at a set price, on a certain date in the future.</td>
</tr>
<tr>
<td>Fixed Income Products</td>
<td>Futures and options on short, medium and long term German Government Bonds, also futures (only) on Swiss Government Bonds. Eurex’s Euro-BUND (FGBL), Euro-BOBL (FGBM) and Euro-SCHATZ (FGBS) Futures are the world’s most heavily traded fixed income futures. Eurex also offers options on Euro-BUND-, Euro-BOBL- and Euro-SCHATZ-Futures.</td>
</tr>
<tr>
<td>Term</td>
<td>Explanation</td>
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</tr>
<tr>
<td>Flexible Futures</td>
<td>An OTC Flexible Futures contract is a user defined contract. Eurex offers OTC trading facility for trading these contracts. The following contract specific parameters can be defined: Expiration Date: The expiration date can be any business day (with some special Eurex defined exceptions) starting from the next business day until the longest currently active standard expiration date of the affected futures product. Settlement Type: The settlement type can be chosen from the settlement types available for the product. Note: Products with the settlement type &quot;NOTIONAL&quot; are not supported</td>
</tr>
<tr>
<td>Flexible Options</td>
<td>A flexible option contract is a user defined contract for traditional style (i.e. cash or share settled) or fixed income options. Eurex offers an OTC trading facility for trading of these contracts. With flexible options there is great flexibility in defining the exercise price and expiration day of the traded contract. In case the standard option is of American exercise style, the exercise style of the traded contract can be defined as American or European.</td>
</tr>
<tr>
<td>Forward Contract</td>
<td>A contract obligating the holder to buy or sell an asset, at a predetermined price, at a predetermined time in the future. Forward contracts are usually not exchange traded.</td>
</tr>
<tr>
<td>Forward-Forward Transaction</td>
<td>A term transaction (such as a cash borrowing or lending) that begins at a pre-determined future time. Eurex One-Month and Three-Month EURIBOR Futures are forward-forward transactions.</td>
</tr>
<tr>
<td>Front Contract</td>
<td>Contracts which become due in the spot-month.</td>
</tr>
<tr>
<td>Front End</td>
<td>The Eurex front end is the computer installation at a member site which supports interaction with the Eurex back end. The installation normally consists of one or more MISS servers with a number of connected workstations supporting the Eurex-supplied @Xtract/@X-ceed applications, or other third-party software. The front end is therefore generally a client/server system with a member-specific configuration.</td>
</tr>
<tr>
<td>Future</td>
<td>See Financial Future</td>
</tr>
<tr>
<td>Term</td>
<td>Explanation</td>
</tr>
<tr>
<td>-------------------------</td>
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</tr>
<tr>
<td>Futures Spread Margin</td>
<td>This kind of margin is levied in order to cover those risks associated with a futures spread which could arise between today and tomorrow. It is used when an account contains several futures positions whose risks neutralize each other to a certain extent. In calculating this amount, long and short positions are offset against each other, whereby contracts with different expiration months are deemed comparable to one another (e.g. long Euro-BUND Sept. vs. short Euro-BUND Dec.). Futures spread margin therefore provides protection against the non-perfect price correlation that exists between two contracts (long and short) of differing expirations.</td>
</tr>
<tr>
<td>Futures-Style Premium Posting</td>
<td>The method used by Eurex Clearing to margin options on futures. Option premium is not paid until exercise or expiration. Options are marked-to-market daily, and Variation Margin and Additional Margin are collected or paid out.</td>
</tr>
<tr>
<td>Gamma</td>
<td>The change in an option’s delta that occurs for a one point change in the underlying instrument.</td>
</tr>
<tr>
<td>GATE</td>
<td>Generic Access to Exchanges. A common front end architecture software component for all MISS-based Exchange applications. GATE provides common execution and operations services to Exchange Applications such as Eurex.</td>
</tr>
<tr>
<td>GCM</td>
<td>General Clearing Member. A Eurex member which satisfies the capital requirements of Eurex Clearing and which has applied for, and been granted, a license to clear derivatives traded on Eurex. A GCM may clear its own transactions, those of its customers, and those of market participants that do not hold a clearing license (Non Clearing Members).</td>
</tr>
<tr>
<td>GFD</td>
<td>Good-for-Day (GFD). A restriction applied to an order by a participant when entering the order. A GFD order is cancelled from the order book at the end of the Eurex System trading day.</td>
</tr>
<tr>
<td>Give-up</td>
<td>Give-ups are used to transfer trades from one member to another, usually where one member performs execution and another member performs clearing.</td>
</tr>
<tr>
<td>Greeks</td>
<td>Option risk parameters (sensitivity measures) expressed by Greek letters: i.e. delta, gamma and theta.</td>
</tr>
<tr>
<td>Gross Basis</td>
<td>Describes the single trade view or view on order basis, if aggregation on order basis was selected. Also refer to “Trade Marked for Gross Processing”.</td>
</tr>
<tr>
<td>Term</td>
<td>Explanation</td>
</tr>
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<td>-----------------------------</td>
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</tr>
<tr>
<td>Gross Delivery Instruction</td>
<td>The gross delivery instruction is generated if the underlying trade is marked with a gross processing flag in Gross Delivery Management. The delivery instruction is transferred by the CCP to the Central Securities Depository.</td>
</tr>
<tr>
<td>Gross Delivery Management</td>
<td>Through Gross Delivery Management, the participant has the possibility to track the delivery status of all trades, to (partially) release or block trades for delivery as well as to perform dispositions concerning their individual fulfillment.</td>
</tr>
<tr>
<td>Gross Margining</td>
<td>Applying gross margining means that the gross risk positions, resulting from trades marked for gross processing, are taken as calculation basis for the Current Liquidating Margin and Additional Margin.</td>
</tr>
<tr>
<td>Gross Obligation</td>
<td>Obligation resulting from due or overdue trades, which are marked with an indicator for gross processing.</td>
</tr>
<tr>
<td>Gross Processing</td>
<td>Individual processing of trades, therefore no contractual netting/settlement netting is applicable. Trades that are subject to gross processing have to be collateralized separately. Additionally, separate gross delivery instructions are generated for such trades. (Also refer to Gross Delivery Management).</td>
</tr>
<tr>
<td>Gross Risk Position</td>
<td>Gross risk positions result from trades marked by the participant for processing on a gross basis. As a result, the short and the long side are accumulated separately. The result is a gross risk short position and a gross risk long position.</td>
</tr>
<tr>
<td>GTC</td>
<td>Good-till-Cancelled</td>
</tr>
<tr>
<td></td>
<td>A restriction applied to an order by a participant when entering the order. A GTC order remains valid until execution, until it is cancelled by the exchange participant who entered it, until the contract expires, or until one year from the order entry date.</td>
</tr>
<tr>
<td>GTD</td>
<td>Good-till-Date</td>
</tr>
<tr>
<td></td>
<td>A restriction applied to an order by a participant when entering the order. A GTD order remains valid until the given date (max. one year from the order entry date), until execution, until it is cancelled by the exchange participant who entered it, or until the contract expires.</td>
</tr>
<tr>
<td>GUI</td>
<td>Graphical User Interface</td>
</tr>
<tr>
<td></td>
<td>Graphical User Interface (GUI) is a generic term for a graphical (rather than purely character-based) user interface to a computer. Eurex supports a trading GUI (@X-ceed) and a clearing GUI (@X-tract).</td>
</tr>
<tr>
<td>Term</td>
<td>Explanation</td>
</tr>
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</tr>
<tr>
<td>Haircut</td>
<td>A haircut is a valuation discount on deposited securities, i.e. a deposited security is not assigned a value of 100% as collateral, but a lower lending value.</td>
</tr>
<tr>
<td>Hedge Ratio</td>
<td>The ratio of the size of a position in a hedging instrument to the size of the position being hedged.</td>
</tr>
<tr>
<td>Hedging</td>
<td>Using a strategy to protect an existing portfolio or planned investments against unfavorable price changes.</td>
</tr>
<tr>
<td>HEX25® Index</td>
<td>Capital-weighted price index continuously calculated from 25 blue-chip shares traded on the Helsinki Exchanges (HEX). Eurex offer futures and options on the HEX25®.</td>
</tr>
<tr>
<td>Implied Repo Rate</td>
<td>The implied repo rate is the financing rate implied by the futures price relative to the cash price.</td>
</tr>
<tr>
<td>Implied Volatility</td>
<td>See Volatility</td>
</tr>
<tr>
<td>Individual Segregation</td>
<td>The Individual Segregation Solution is provided for Non Clearing Members where margin requirements for that given Non Clearing Member are covered by a dedicated collateral pool holding only the collateral of that Non Clearing Member.</td>
</tr>
<tr>
<td>Initial Margin</td>
<td>The term “Initial margin” is not used in Eurex terminology because it has the same meaning as additional margin. In international securities industry circles, the expression “initial rate” is used synonymously</td>
</tr>
<tr>
<td>Inside Market</td>
<td>The best bid and best ask prices in the order book with accumulated volumes, excluding Market orders and Stop orders.</td>
</tr>
<tr>
<td>Interval Product</td>
<td>The product within a given margin class which is used by Eurex risk-based margining to determine the projected value of the underlying instrument for that margin class (risk array, theoretical prices). For each margin class, there is only one interval product.</td>
</tr>
<tr>
<td>In-the-Money Option</td>
<td>An option whose intrinsic value is greater than zero.</td>
</tr>
<tr>
<td>Intraday Margin</td>
<td>Additional collateral that must be provided during the trading day in cases of highly volatile market conditions.</td>
</tr>
<tr>
<td>Intrinsic Value</td>
<td>The intrinsic value of an option is equal to the difference between the current price of the underlying instrument and the option’s exercise price. The intrinsic value is always greater than or equal to zero.</td>
</tr>
</tbody>
</table>
### Appendix

<table>
<thead>
<tr>
<th>Term</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invoice Amount</td>
<td>The amount (including accrued interest) that is paid to the holder of a short position in a fixed income futures contract upon delivery of a cash bond against that position.</td>
</tr>
</tbody>
</table>
| IOC        | Immediate-or-Cancel (IOC) Order  
A restriction applied to an order by a participant when entering the order. An IOC order is filled immediately, either completely or to the extent possible, any unexecuted parts of an IOC order are cancelled. |
| IPS        | Inter Product Spread  
In the Eurex system the Inter Product Spread (IPS) is a futures combination type. The buyer of an IPS buys the first and sells the second component in similar fashion to the Time Spread combination, but the components refer to different financial instruments. |
| ISE        | International Securities Exchange |
| ISIN       | International Securities Identification Number  
Financial instruments are identified internationally through the 12-character ISIN Code. It consists of a two-character Country Code, a nine digit national identity number and a single check digit. |
| KRX        | KoRea EXchange |
| LEPO       | Low Exercise Price Option  
A low exercise price option is an option with a low strike price of e.g. EUR 1.00 or CHF 1.00. Eurex offers low exercise price options for all stock options. |
<p>| Leverage Effect | The leverage effect allows participants on derivatives markets to enter into a much larger underlying instrument position using a comparably small investment. The impact of the leverage effect is that the percentage change in the profits and losses on options and futures is greater than the corresponding change in the underlying instrument. |
| Lifetime   | The period from the current day to the expiration date of an option. |
| Limit Orders | Limit orders are carried out at the specified limit or better price. |
| Linked Trades | To link trades in Gross Delivery Management means that, from a member's perspective, a trade is released for delivery only if the securities that have to be delivered are available through the fulfillment of another trade. |</p>
<table>
<thead>
<tr>
<th>Term</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linking</td>
<td>Gross Delivery Management provides the participants with an option to link the delivery of a sell trade to the successful delivery of a buy trade with at least an equal nominal amount. This is considered during the process of settlement netting. Therefore, it is ensured that the sell trade is fulfilled by the buy trade.</td>
</tr>
<tr>
<td>Local Area Network</td>
<td>Local Area Network connects computers in a workgroup, department, or building.</td>
</tr>
<tr>
<td>Long Call</td>
<td>An investor who holds a long call position is entitled but not obliged to buy the underlying asset at the agreed exercise price. The holder of a long call expects a rise in the price of the underlying during the lifetime of the option.</td>
</tr>
<tr>
<td>Long Position</td>
<td>An open position in a contract of a buyer.</td>
</tr>
<tr>
<td>Long Put</td>
<td>An investor who holds a long put position is entitled but not obliged to sell the underlying asset at the agreed exercise price. The holder of a long put expects prices of the underlying to fall during the lifetime of the option.</td>
</tr>
<tr>
<td>Macaulay Duration</td>
<td>An indicator used to calculate the interest rate sensitivity of fixed-income securities, assuming a flat yield curve and a linear price/yield correlation.</td>
</tr>
<tr>
<td>Margin</td>
<td>Margin is collateral which must be deposited by the Clearing Member for contract fulfillment (i.e. additional margin, futures spread margin) and serves to cover the risk of the clearing house. Eurex calculates margin using the Risk-based Margining system.</td>
</tr>
<tr>
<td>Margin Call</td>
<td>If the collateral that has been deposited is no longer sufficient, meaning a lack of coverage exists, then the market participant is called upon to provide additional cash as collateral. This process is known as a “margin call”.</td>
</tr>
<tr>
<td>Margin Class</td>
<td>A grouping of products which show exactly the same risk potential e.g. all products based on the same index can be brought together in the margin class of the underlying index. This allows the offset of margin obligations in products in the same class. A margin class can contain only products with the same currency.</td>
</tr>
<tr>
<td>Margin Group</td>
<td>Portfolio containing different margin classes whose underlying securities show a high positive price correlation and possess generally the same kinds of price risk. A margin group can contain margin classes where the class-related currency is different.</td>
</tr>
<tr>
<td>Term</td>
<td>Explanation</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Margin Interval</td>
<td>An interval which is arrived at for each margin class by addition or, as the case may be, subtraction of the margin parameter from the settlement price of the underlying instrument. The underlying instrument will, with 99 percent probability, not exceed the margin interval within a given one-day trading period. This parameter is used in the calculation of additional margin.</td>
</tr>
<tr>
<td>Margin Parameter</td>
<td>The parameter established by Eurex Clearing that reflects the maximum price fluctuation which the underlying instrument can be expected to make during the next trading day. The margin parameters are used to calculate the margin interval. The basis of this calculation is the historical volatility. Margin parameters are adjusted on a daily basis for a select number of products still to be determined. Other products have their margin parameters adjusted on regular basis. These changes are done by Eurex Clearing and any changes are published.</td>
</tr>
<tr>
<td>Market Order</td>
<td>Market orders have no limit. They are matched immediately at the best available market price.</td>
</tr>
<tr>
<td>Market Risk</td>
<td>See Systemic Risk</td>
</tr>
<tr>
<td>Market Surveillance</td>
<td>The general name for the entities that monitor futures and options trading and settlement activity, collect data, and conduct audits at the Eurex Exchanges.</td>
</tr>
<tr>
<td>Market Maker</td>
<td>Market makers support liquidity in the products for which they apply to become market makers. For option products market makers may elect to take on obligations for 'quote on request, or for permanent quotation (certain products only). A 'quote on request' market maker in a particular product is permitted to enter quotes for contracts for that product and has the obligation to answer quote requests (up to a maximum per day) by supplying bid and ask quotes within a defined time, for a minimum holding period, for a minimum quantity and with a maximum spread. Permanent market makers in a product are obliged to maintain quotes throughout a defined proportion of the trading day averaged over each month. If the obligations are met, a market maker usually pays lower transaction fees.</td>
</tr>
<tr>
<td>Market Maker Accounts</td>
<td>Trades resulting from quotes or orders entered by market-makers in options and quotes by exchange participants in futures trading are recorded on market-maker accounts.</td>
</tr>
<tr>
<td>Mark-to-Market</td>
<td>The expression “mark-to-market” indicates a daily revaluation and settlement of profits and losses (&gt; settlement price yesterday vs. settlement price today) is made.</td>
</tr>
<tr>
<td>Term</td>
<td>Explanation</td>
</tr>
<tr>
<td>---------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Matching Principle</td>
<td>The matching principle defines the mechanism of matching orders to trades. It describes price determination and matching priority. Eurex uses price/time priority for matching all orders except those concerning short-term interest rate products, for which pro rata matching is used.</td>
</tr>
<tr>
<td>Matching Rules</td>
<td>Rules for trade price determination according to the matching principle.</td>
</tr>
<tr>
<td>Maturity Date</td>
<td>The date on which the final obligations (delivery/cash settlement) defined in a contract are due.</td>
</tr>
<tr>
<td>Maturity Range</td>
<td>The classification of deliverable bonds according to their remaining lifetime.</td>
</tr>
<tr>
<td>Maximum Spread</td>
<td>Market-makers must not exceed the defined maximum spread between the bid and the ask prices when entering a quote.</td>
</tr>
<tr>
<td>Member</td>
<td>Eurex offers direct participation to its product range as a member (trading and/or clearing participant).</td>
</tr>
<tr>
<td>MISS</td>
<td>Member Integration System Server                                                                                                                                  The server component of a front end installation. The Member Integration System Server (MISS) allows members access to the trading system via standard interfaces, either the Eurex supplied applications or the VALUES API. The MISS can either run as a stand-alone machine on which the entire set of front end applications are available or as a server for additional workstations.</td>
</tr>
<tr>
<td>Mistrade</td>
<td>A trade which was erroneously entered into, and which deviates from the reference price (related to the market price according to definitions in the Mistrade Regulations) by more than the defined amount.</td>
</tr>
<tr>
<td>Mistrade Regulations</td>
<td>A section of the Eurex Rules and Regulations governing the conditions by which a trade entered erroneously may be adjudged a mistrade, and thereby annulled.</td>
</tr>
<tr>
<td>Money Market Products</td>
<td>One month EONIA Futures, One- and Three-Month EURIBOR Futures, and Options on the Three-Month EURIBOR Future.</td>
</tr>
<tr>
<td>Multilateral Trade</td>
<td>The E-Brokerage Interface (EBI) allows members to register, modify and delete OTC block trades involving several counterparties. The interface is similar to the existing Block Trade Facility and allows registration of block trades for clearing purposes.</td>
</tr>
<tr>
<td>Registration</td>
<td></td>
</tr>
<tr>
<td>Term</td>
<td>Explanation</td>
</tr>
<tr>
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<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| NCM                           | Non Clearing Member  
An exchange participant that does not hold a clearing license. Such a participant must have a clearing agreement in effect with a General Clearing Member or a company-affiliated Direct Clearing Member. |
| Net Delivery Instruction      | After settlement netting, this net delivery instruction is generated as a DvP instruction for the net obligation.                           |
| Net Financing Cost            | See Cost of Carry                                                                                                                             |
| Net-long Position/Net-short Position | When all open long positions and short positions in an account are offset against each other, either a surplus of long or of short positions results. This is referred to as a net-long or net-short position. |
| Net Obligation                | Surplus on the buy or sell side resulting from the settlement netting process in which the unit sides of buy and sell orders are offset against each other. |
| Netting                       | 1. The offsetting of open long positions against open short positions in order to determine the net long or net short position.  
2. The process at market opening (between the Pre-Opening and Trading Periods), during which executable orders are executed at the opening price. |
| Non Segregated Positions      | The proprietary positions of a Clearing Member and of customer who has selected neither the Omnibus or Individual Segregation solution. The Clearing Member uses proprietary collateral to cover client (Non Clearing Members and agent clients) and proprietary business, and is responsible for protecting the client collateral. |
| Non-Spread Futures Position   | Residual long or short positions which remains after deducting opposite positions with a different remaining lifetime, and for which additional margin must be deposited. |
| Non-Systemic Risk             | Proportion of overall risk that cannot be explained by fluctuations on the overall market.                                                     |
| Notification                  | The process of giving notice of delivery against a short fixed income futures position, notification involves the declaration by the holder of the short position which eligible bond he wishes to use for delivery. |
| Notification Day              | The day when the notice of delivery against a short fixed income futures position is given.                                                      |
### Term | Explanation
--- | ---
Notified Position | Position notified for delivery. Short positions of fixed income futures which (at the time of the delivery fulfillment) had been notified for delivery by the seller of the future for delivery.
OCC | The Options Clearing Corporation
Offsetting Block | Buy and sell trades in cash securities with equal nominal amounts (or equal number of units in the case of shares) constitute the offsetting block, which is formed during settlement netting. The cash obligation resulting from the offsetting block, which is the difference in prices for the buy and sell sides, is settled by a cash transaction via Deutsche Bundesbank.
Omega | Omega (also called leverage) compares the percent change in the price of an option to the percent change in the price of the underlying. It is said to measure the elasticity of the option.
Omnibus Segregation | The Omnibus Segregation Solution separates positions and collateral from Clearing Member proprietary positions, and has positions held in a segregated account and/or on the Non Clearing Member account. The margin requirement is calculated on a net level for the Segregated Agent account, and should a Non Clearing Member select omnibus segregation, the Non Clearing Member’s margin requirement is added, and the total margin requirement is covered by the segregated omnibus collateral pool.
Open Interest | The total number of option or futures contracts held by exchange members at a given point in time which have neither expired nor have been delivered nor have been closed out by offsetting transactions.
Opening | Orders are entered and then matched in the Netting process to determine an opening price.
Opening of a Position | The purchase or sale of an options or futures contract which establishes a new position.
Optimization | The process of refining a hedge ratio to improve the match between the profits or losses on the underlying and the offsetting losses or profits from the hedge.
Option | The right (but not the obligation) to buy (“call”) or to sell (“put”) a specific quantity of a specific underlying instrument, at a fixed price, on, or up to, a specified date.
<table>
<thead>
<tr>
<th>Term</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Option Premium</td>
<td>The amount of money that the options buyer must pay the options writer.</td>
</tr>
<tr>
<td></td>
<td>At Eurex Clearing, there exists traditional-style premium posting and</td>
</tr>
<tr>
<td></td>
<td>futures-style premium posting.</td>
</tr>
<tr>
<td>Option Price</td>
<td>See Option Premium</td>
</tr>
<tr>
<td>Options Pricing Model (OPM)</td>
<td>A formula, taking into consideration such things as volatility, interest rate,</td>
</tr>
<tr>
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<td>exercise price, and time to expiration, used to determine a fair value of a</td>
</tr>
<tr>
<td></td>
<td>given options premium. Eurex Clearing uses various options pricing models to</td>
</tr>
<tr>
<td></td>
<td>calculate the “fair” options price for margin calculation.</td>
</tr>
<tr>
<td>Order</td>
<td>Term for the instruction to buy or sell securities.</td>
</tr>
<tr>
<td>Order Book</td>
<td>The order book contains all current orders for a product according to their</td>
</tr>
<tr>
<td></td>
<td>trading restrictions and execution conditions.</td>
</tr>
<tr>
<td>Order Contract Note</td>
<td>In case of aggregation on order level, this is the confirmation of a business</td>
</tr>
<tr>
<td></td>
<td>transaction. It is sent from the trading platform to the participants – it</td>
</tr>
<tr>
<td></td>
<td>is generated on order level.</td>
</tr>
<tr>
<td>OTC</td>
<td>Over-the-Counter</td>
</tr>
<tr>
<td></td>
<td>Transactions in Eurex listed products where the price has been agreed off-</td>
</tr>
<tr>
<td></td>
<td>exchange, and the transaction has been recorded at Eurex for settlement and</td>
</tr>
<tr>
<td></td>
<td>margining purposes.</td>
</tr>
<tr>
<td>Out-of-the-Money Option</td>
<td>A call option where the price of the underlying instrument is lower than</td>
</tr>
<tr>
<td></td>
<td>the exercise price. A put option is OTM if the price of the underlying</td>
</tr>
<tr>
<td></td>
<td>instrument is higher than the exercise price.</td>
</tr>
<tr>
<td>Overdue Trade/Fail</td>
<td>An overdue trade is a trade whose settlement day lies one or more business</td>
</tr>
<tr>
<td></td>
<td>days in the past.</td>
</tr>
<tr>
<td>Partial Execution (of an order</td>
<td>The result of a situation where only a part of the volume of an order or</td>
</tr>
<tr>
<td>or quote)</td>
<td>quote can be executed. The treatment of the remaining part depends on the</td>
</tr>
<tr>
<td></td>
<td>restrictions associated with the order.</td>
</tr>
<tr>
<td>Partial Release</td>
<td>Marking a trade to indicate that a partial settlement of a trade on customer</td>
</tr>
<tr>
<td></td>
<td>level is possible from a member's point of view.</td>
</tr>
<tr>
<td>Payment Order</td>
<td>During end-of-day processing the CCP performs Settlement-Netting and</td>
</tr>
<tr>
<td></td>
<td>creates net delivery instructions as well as payment orders (based on e.g.</td>
</tr>
<tr>
<td></td>
<td>delivery instructions, dividend payments etc.). These are pooled and</td>
</tr>
<tr>
<td></td>
<td>transferred to LZB.</td>
</tr>
<tr>
<td>Physical Delivery</td>
<td>Settlement of a transaction through the delivery of the physical underlying</td>
</tr>
<tr>
<td></td>
<td>instrument against payment.</td>
</tr>
<tr>
<td>Term</td>
<td>Explanation</td>
</tr>
<tr>
<td>----------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>PIN</td>
<td>Personal Identification Number</td>
</tr>
<tr>
<td></td>
<td>To increase Eurex Members’ security against the misuse of “trading-on-behalf” services provided by Eurex, personal identification numbers (PINs) are used to enhance the existing PIN procedure. PINs are codes used by Eurex to verify the identity and authorization of a trader making a request for them to act on their behalf.</td>
</tr>
<tr>
<td>Pool ID</td>
<td>The pool ID enables Clearing Members to maintain multiple collateral pools, each assigned to an external securities collateral account, and group appropriate cash transactions that reflect the cash collateral balances. The pool ID is used to aggregate collaterals according to the selected segregation model and governs the aggregation of margin requirements, again, according to the segregation model.</td>
</tr>
<tr>
<td>Position Limit</td>
<td>The maximum number of contracts in a particular product that may be held by one exchange participant or one customer for its own account.</td>
</tr>
<tr>
<td>Positive Price</td>
<td>A lockstep price relationship between two or more underlying instruments.</td>
</tr>
<tr>
<td>Correlation</td>
<td></td>
</tr>
<tr>
<td>Positive Release</td>
<td>Per default, all trades are included as blocked in Gross Delivery Management and have to be released individually by the member. (also refer to Release Method, Negative Release Method.)</td>
</tr>
<tr>
<td>Method</td>
<td></td>
</tr>
<tr>
<td>Post-Trading Period</td>
<td>This phase is divided into a Post-Trading Full, Post-Trading Late1, Post-Trading Late2, and a Post-Trading Restricted period, in this linear sequence. The Post-Trading Late1 and Post-Trading Late2 periods are optional and may be used or not used for any product on any day. All the inquiry functions are available until the end of the Post-Trading Restricted period. In the periods before Post-Trading Restricted, market, limit, stop orders and quotes may be entered for the next trading day. Exercises of options are only possible before Post-Trading Restricted period starts (unless an earlier deadline is stipulated in the contract specifications). With the end of Post-Trading Late1, no more OTC trades may be entered. With the end of Post-Trading Late2, no more give-ups/take-ups may be performed.</td>
</tr>
<tr>
<td>Pre-Arranged Trade</td>
<td>For pre-arranged trades, previously negotiated orders from at least two members are executed against each other.</td>
</tr>
<tr>
<td>Premium</td>
<td>See Option Premium</td>
</tr>
<tr>
<td>Term</td>
<td>Explanation</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Premium Margin</td>
<td>Collateral that must be deposited by the writer of an option with traditional premium payment, until the option is exercised or expires. It covers the potential costs of liquidation incurred by the writer at the settlement price. Premium margin is continuously adjusted. The buyer of an option with traditional premium payment does not have to deposit a margin, since he or she has acquired a right by paying the option premium but has not entered into an obligation. The buyer's maximum risk consists of letting the contract expire. Options on futures are not subject to Premium Margin, since there is no premium payment involved (See Futures-style premium posting).</td>
</tr>
<tr>
<td>Present Value</td>
<td>The current value of a future cash flow. The present value of a security is determined by its aggregate discounted repayments.</td>
</tr>
<tr>
<td>Pre-Trading Period</td>
<td>This is the pre-phase to Eurex trading. Users can make inquiries on data or can enter orders and quotes as preparation for actual trading.</td>
</tr>
<tr>
<td>Price Differences</td>
<td>Since orders on the floor can be executed via one or more brokers, it is possible that the price for the seller of a given security is different from the price that the buyer pays. The difference in prices and the respective difference in the settlement amount, which results in a profit or loss for the broker(s) involved, is called price difference. This results in a cash risk position that must be taken into account in risk management.</td>
</tr>
<tr>
<td>Price Reasonability Check</td>
<td>Upon entry, the limit of an order is compared to an exchange-defined range around the last traded price. If outside the range, the order is not submitted immediately, but needs to be checked and, where appropriate, resubmitted.</td>
</tr>
<tr>
<td>Price/Time Priority</td>
<td>The price/time matching algorithm conforms to the price and time priority rule. This matching algorithm is used for all Eurex Futures except money market futures. When a new order is entered, the Eurex system first checks the limits of the orders in the electronic order book and executes the orders with better limits before the orders with worse limits.</td>
</tr>
<tr>
<td>Pro Rata Matching</td>
<td>Since the market for money market futures is of low intraday volatility in comparison to other exchange-traded derivative instruments, the price/time matching algorithm is regarded as inappropriate for such products. Instead, the pro rata matching algorithm governs execution priority. When matching against an incoming order, the pro rata matching algorithm takes into account each book order at the inside market price according to its percentage of the overall volume bid or offered at the price, regardless of its time stamp.</td>
</tr>
<tr>
<td>Term</td>
<td>Explanation</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Product Currency</td>
<td>Currency in which a product is set up in the Eurex system. Premiums and Variation Margin amounts are settled in this currency. The currency of the product and the currency of its underlying is always the same.</td>
</tr>
<tr>
<td>Projected Values of the Underlying Instrument</td>
<td>All exercise prices of active options series of the interval product which lie within the margin interval.</td>
</tr>
<tr>
<td>Proprietary Accounts</td>
<td>Only trades for a member's own account are recorded in the proprietary accounts. Proprietary accounts are maintained on a gross basis, i.e. both long and short positions are recorded for the same option series or futures contract, as specified during order entry.</td>
</tr>
<tr>
<td>Proprietary Trader</td>
<td>A trader who does business on a proprietary basis on his own account.</td>
</tr>
<tr>
<td>Put Option</td>
<td>A right to sell an asset at a certain price at, or up to a certain date. In the case of options on fixed income futures, the contract gives the buyer the right to enter into a short position in the underlying futures contract at a set price on, or up to, a given date. In the case of cash-settled options, a put option represents the right to receive a cash settlement if the Final Settlement Price is lower than the option’s exercise price.</td>
</tr>
<tr>
<td>Put/Call Parity</td>
<td>A fundamental relationship that exist between the prices of a call option and a put option having the same underlying instrument, exercise price and expiration.</td>
</tr>
<tr>
<td>Put/Call Ratio</td>
<td>The put/call ratio shows how many puts are traded in relation to the number of traded calls per underlying instrument.</td>
</tr>
<tr>
<td>Quote</td>
<td>Simultaneous entry of a limit buy and a limit sell order.</td>
</tr>
<tr>
<td>Quote Request</td>
<td>A quote request allows traders to request quotes for a specific options series or futures contract.</td>
</tr>
<tr>
<td>Reference Price</td>
<td>In relation to evaluation of a Mistrade, the reference price is usually established as the average of the prices of the transactions effected immediately before and after the erroneous entry. If only one of these prices is available, that price is used as the reference price. In relation to evaluating price reasonability for price/time matched futures, the reference price for “Buy” orders is the lowest available offer price (Best Ask) and the reference price for “Sell” orders is the highest bid price (Best Bid).</td>
</tr>
<tr>
<td>Releasing</td>
<td>Marking of a trade for further processing (settlement netting) as nothing opposes settlement on customer level.</td>
</tr>
<tr>
<td>Term</td>
<td>Explanation</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Release Method</td>
<td>There are two different release methods: the positive release method and the negative release method. The chosen release method defines whether a trade is processed, i.e. forwarded, to the settlement processing according to the default values “released” or “blocked”. The chosen release method is part of the member master data. (also refer to Gross Delivery Management)</td>
</tr>
</tbody>
</table>
| Relevant Trades             | Trades relevant for settlement netting are the trades that  
- are not marked with an indicator for gross processing,  
- have not yet reached the contractual settlement date,  
- have not yet been settled on the level CCP – clearing member,  
- have not been entirely blocked. |
<p>| Remaining Lifetime          | The remaining period of time until maturity/expiration for outstanding futures and options contracts.                                                                                                |
| Repo                        | The process of borrowing money by combining a sale of an asset (usually a fixed-income security) with a repurchase of the same asset at a later time, at a slightly higher price (which reflects the interest rate).                          |
| Reversal                    | An arbitrage strategy comprising the creation of a synthetic long underlying or futures position by buying calls and writing puts with the same exercise price and the same expiration, while simultaneously taking up a “real” short underlying/futures position. The opposite arbitrage strategy is called Conversion. |
| Reverse Cash-and-Carry Arbitrage | The creation of a low-risk or neutral position by simultaneously selling assets and buying the corresponding futures contract, usually entered into in order to exploit mispricing in the cash and/or derivatives markets. The opposite position is called Cash-and-carry arbitrage. |
| Risk Array                  | The matrix of values used to determine the additional margin required for each margin class. On the one hand, it consists of the settlement price, the maximum and minimum extremes of the margin interval and the projected values of the underlying instrument, and on the other, of the theoretical prices of all options and futures contracts that result from this set of values. |
| Risk-based Margining        | Eurex's calculation methodology to determine collateral to cover the risks taken.                                                                                                                             |</p>
<table>
<thead>
<tr>
<th>Term</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk Parameter</td>
<td>By means of margin parameters, it is possible to calculate the margin interval. The historical volatility is the basis of the calculation. Margin parameters are adjusted on a daily basis for a select number of products still to be determined. Other products have their margin parameters adjusted on regular basis. Any changes are published on the internet.</td>
</tr>
<tr>
<td>Risk Positions</td>
<td>These are positions resulting from trades and serve as a basis for calculation in the risk margining process.</td>
</tr>
<tr>
<td>Sector Index Derivatives</td>
<td>Eurex offers a line of products based on STOXX indexes that take the unique development of different market sectors i.e. telecommunications, healthcare into account. This makes it easier for investors to create and implement investment, hedging and trading strategies in the Euro Zone and pan-European region.</td>
</tr>
<tr>
<td>Security Coordinator</td>
<td>The member’s Security Coordinator is responsible for the Eurex security maintenance functions.</td>
</tr>
<tr>
<td>Security Gross Risk Position</td>
<td>Risk positions of a member in securities and/or subscription rights, which serve as a calculation basis for the risk margining process.</td>
</tr>
<tr>
<td>Security Long Risk Position</td>
<td>Buy trade positions of a member in securities and/or subscription rights, which serve as a calculation basis in the risk margining process.</td>
</tr>
<tr>
<td>Security Short Risk Position</td>
<td>Sell trade positions of a member in securities and/or subscription rights, which serve as a calculation basis in the risk margining process.</td>
</tr>
<tr>
<td>Settlement</td>
<td>Processing of the settlement of security buy or sell transactions.</td>
</tr>
<tr>
<td>Settlement Account</td>
<td>The account of a settlement agent at the Central Securities Depository.</td>
</tr>
<tr>
<td>Settlement Cycle</td>
<td>Settlement cycle at the Central Securities Depository CBF for the settlement day S.</td>
</tr>
<tr>
<td></td>
<td>STD “Standard Settlement Cycle” (ca. 7:00 to 9:00 pm on S-1)</td>
</tr>
<tr>
<td></td>
<td>SDS1 “Same Day Settlement Cycle 1” (ca. 10:00 to 10:40 am on S)</td>
</tr>
<tr>
<td></td>
<td>SDS2 “Same Day Settlement Cycle 2” (ca. 12:45 to 1:15 pm on S)</td>
</tr>
<tr>
<td>Settlement Institution (SI)</td>
<td>Settlement institutions perform securities settlement via accounts at CBF. They are responsible for settlement between Eurex Clearing and the clearing member. However, the responsibility towards Eurex Clearing to fulfill trades by means of orderly settlement remains with the clearing member.</td>
</tr>
<tr>
<td>Term</td>
<td>Explanation</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Settlement Instruction Data Carrier</td>
<td>Corresponds in content with the delivery release file, but is different in format (S.W.I.F.T. format).</td>
</tr>
<tr>
<td>Settlement Lending</td>
<td>The lending of securities, arranged by the Central Securities Depository, to fulfill delivery obligations in case of insufficient security supply of the settlement agent.</td>
</tr>
<tr>
<td>Settlement Netting</td>
<td>Settlement Netting is used for trades not marked for gross processing. The result is an offsetting block and a net obligation, where applicable. Settlement Netting is executed per clearing member for the respective securities (ISIN) sorted by settlement account at the CSD. On an optional basis, it is also possible to execute settlement netting per exchange member and trading account type (proprietary trades or agent trades).</td>
</tr>
<tr>
<td>Settlement Netting Unit</td>
<td>Settlement netting is executed separately for each settlement netting unit and per security. A settlement netting unit contains at least a clearing member and a settlement account at the Central Securities Depository. On an optional basis, further differentiation according to Non-Clearing Members and agent/proprietary trades can be made by the clearing member.</td>
</tr>
<tr>
<td>Settlement on CCP/ Clearing Member Level</td>
<td>The contractual obligation of a clearing member towards the CCP is fulfilled. This comprises the cash obligation resulting from the offsetting block or the net delivery instruction of the net obligation, as well as obligations from trades which are marked for gross processing.</td>
</tr>
<tr>
<td>Settlement on Clearing Member/ Customer Level</td>
<td>The delivery takes place under consideration of the release status (released/blocked). From the clearing member’s viewpoint a customer’s blocked trades are regarded as not yet settled.</td>
</tr>
<tr>
<td>Shaping</td>
<td>This term defines the partitioning of a high volume delivery instruction into several delivery instructions of a smaller volume. The purpose of this splitting is to ensure the highest possible volume of a delivery instruction is fulfilled. In other words, this process serves to avoid the total fail of a high volume delivery instruction. Example: Without shaping, a delivery instruction for 1,000,000 shares would fail if only 999,999 shares were delivered. The splitting of this delivery instruction in separate smaller delivery instructions would lead to the fail of just one delivery instruction and the successful delivery of all the others.</td>
</tr>
<tr>
<td>Term</td>
<td>Explanation</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Short Call</td>
<td>An investor who holds a short call position is obliged to sell the underlying asset at the agreed exercise price if the call is exercised. The owner of a short call position expects a decrease in the price of the underlying asset during the lifetime of an option.</td>
</tr>
<tr>
<td>Short Option Compensation</td>
<td>The Short Option Minimum is calculated for every outright Short option position. It leads to exaggerated high margin requirements for almost any type of option combination positions where Long positions are involved. Short Option Compensation takes into account that a major part of the risk of Short option positions embedded in complex option portfolios can be balanced either by Long option positions or by corresponding futures positions.</td>
</tr>
<tr>
<td>Short Option Minimum</td>
<td>Within the calculation of additional margin requirements in option products theoretical values for each option series are calculated under the assumption of “worst case” market moves. Since the calculation process does not consider any increase in implied volatility, an adjustment is made on all Short options positions where the worst case liquidating value is lower than a defined minimum amount. These adjustments are taken into consideration if the entire position of the respective margin class bears its maximum closeout risk at either end of the margin interval.</td>
</tr>
<tr>
<td>Short Position</td>
<td>An open seller's position in a contract.</td>
</tr>
<tr>
<td>Short Put</td>
<td>An investor who holds a short put position is obliged to buy the underlying asset at the agreed exercise price if the put is exercised. The owner of a short put position expects an increase in the price of the underlying asset during the lifetime of an option.</td>
</tr>
</tbody>
</table>
| SIS                         | SegaInterSettle  
Eurex Clearing is directly connected with for collateral management and settlement of deliveries. SegaInterSettle is based in Switzerland. |
| SMI® (Swiss Market Index)   | Capital-weighted equity index based on a basket of shares which are traded permanently. It comprises up to 25 liquid stocks of the most highly capitalized companies in Switzerland. Eurex offer futures and options on the SMI®. |
| SNB                         | Swiss National Bank  
Eurex Clearing members are obliged to have a cash account with Deutsche Bundesbank and the Swiss National Bank for the clearing of cash amounts resulting from derivatives transactions. |
<table>
<thead>
<tr>
<th>Term</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific Equity Collateral</td>
<td>Equity securities pledged to directly offset the unadjusted margin requirement resulting from the positions of a given member in a given account in all series belonging to a margin class based on that equity title. Securities pledged as specific equity collateral are valued using the margin parameters of their respective margin classes as haircut parameters.</td>
</tr>
<tr>
<td>Spot-Month</td>
<td>The expiration month closest to the current delivery month.</td>
</tr>
<tr>
<td>Spot-Month Spread Margin</td>
<td>The margin rate which, throughout the delivery month, is applied to spread positions which contain a front contract. This rate is always greater than, or equal to, the back-month spread margin rate.</td>
</tr>
<tr>
<td>Spread Positions</td>
<td>In the case of options, the simultaneous purchase and sale of option contracts with different exercise prices and/or different expirations. In the case of financial futures, the simultaneous purchase and sale of futures with the same underlying instrument but with different maturity dates (time spread), or of different futures (inter-product spread).</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>Measure of the extent to which the price of a security or an index fluctuates around a mean value during a fixed period of time.</td>
</tr>
<tr>
<td>Standing Instruction</td>
<td>Instructions that determine the processing of a trade. The instruction is specified in advance and not separately for each trade.</td>
</tr>
<tr>
<td>Stop Order</td>
<td>At Eurex stop orders can only be entered for futures trading. Stop orders are restricted orders which are triggered only when the market price reaches (= trades at, or through) their price limit. In this case, the stop order becomes a market order and thus is executed at the best possible market price as soon as possible.</td>
</tr>
<tr>
<td>Strategy Trading</td>
<td>The combination trading function of the Eurex system allows the trader to enter combination orders for futures and options. Combinations are the simultaneous purchase and/or sale of two different options series with the same underlying or the simultaneous purchase and sale of two different futures contracts with the same underlying. In combination trading, the order is carried out for the same quantity for both components of the combination.</td>
</tr>
<tr>
<td>Strike Price</td>
<td>See Exercise Price</td>
</tr>
<tr>
<td>Surveillance Office</td>
<td>Body of Eurex Zürich which monitors futures and options trading.</td>
</tr>
<tr>
<td>Suspension</td>
<td>The temporary removal of the admission to trading of an exchange participant, or an exchange trader.</td>
</tr>
<tr>
<td>Term</td>
<td>Explanation</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>SWX</td>
<td>See Swiss Exchange&lt;br&gt;The Swiss Exchange is one of the shareholders of Eurex Zürich.</td>
</tr>
<tr>
<td>Synthetic Position</td>
<td>The use of other derivative contracts to reproduce a future or option or cash underlying position.</td>
</tr>
<tr>
<td>Systemic Risk</td>
<td>Risk associated with factors which influence the market as a whole. It cannot be reduced or eliminated by portfolio diversification.</td>
</tr>
<tr>
<td>Take-up</td>
<td>Opposite to Give up. The receiving member of a give up is required to accept “Take up” the trade.</td>
</tr>
<tr>
<td>Theoretical Prices</td>
<td>Options prices (used for the margin calculation) which have been deduced by the options pricing model as projected values of the underlying instrument.</td>
</tr>
<tr>
<td>Tick Size</td>
<td>The smallest increment in which the price of a derivatives contract may trade (minimum price movement).</td>
</tr>
<tr>
<td>Tick Value</td>
<td>The monetary value represented by a one-tick movement in the price of a future or option.</td>
</tr>
<tr>
<td>Time Spread</td>
<td>This is the simultaneous purchase and sale of two futures contracts based on the same underlying instrument, but with different maturity dates. The buyer of the spread combination buys the first maturity and sells the second.</td>
</tr>
<tr>
<td>Time Value</td>
<td>The component of the option price arising from the possibility that the investor's expectations will be fulfilled during the remaining lifetime. The longer the remaining lifetime, the higher the option price. This is due to the remaining time during which the value of the underlying instrument can rise or fall (a possible exception exists for options on futures and deep-in-the-money puts).</td>
</tr>
<tr>
<td>Total Margin Amount</td>
<td>The sum of the premium margin, current liquidating margin, futures spread margin and additional margin, for which collateral must be deposited.</td>
</tr>
<tr>
<td>Trade Enrichment</td>
<td>Trade Enrichment is performed automatically after each trade execution (Geschäftsabschluss). In this step, all necessary attributes for settlement are assigned.</td>
</tr>
<tr>
<td>Trade Marked for Gross Processing</td>
<td>A trade marked by an indicator to be subjected to gross processing. This indicator is set by default according to the customer's specification. It is possible to change this indicator in Gross Delivery Management.</td>
</tr>
<tr>
<td>Term</td>
<td>Explanation</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Trade Modification</td>
<td>A trade modification is possible via the trading system and must be reflected accordingly in Gross Delivery Management, where necessary. Participants can make modifications of their own trade data. There are different kinds of modifications: Changes of attributes such as text or exchange member-internal order numbers, modifications of account type, transfer of trades between proprietary and agent trades or change of the settlement account.</td>
</tr>
<tr>
<td>Trader</td>
<td>A trader is an individual admitted for trading at the exchange.</td>
</tr>
<tr>
<td>Trading Contract Notes</td>
<td>This is a confirmation of a matched trade. It is sent by the trading platform to the participant. It is generated on the level of an order's (partial) execution.</td>
</tr>
<tr>
<td>Trading Member (TM)</td>
<td>Trading members are financial institutions, financial services institutions and banking organizations, which trade in CCP relevant instruments on the trading platforms Xetra and/or on the Frankfurt Stock Exchange Floor. They are entitled to execute proprietary trades and agent trades.</td>
</tr>
<tr>
<td>Trading On-Behalf</td>
<td>In case of an emergency, Eurex Market Supervision is able to enter orders as well as to delete orders on behalf of members, after receiving their instructions.</td>
</tr>
<tr>
<td>Trading Period</td>
<td>This is the actual Trading phase, in which orders and quotes are matched and transactions are immediately confirmed on-line. Orders and quotes entered during this time, which are equal to or better than existing orders and quotes on the corresponding counter-side of the order book, are immediately matched. The Trading Period begins at the end of the opening process.</td>
</tr>
</tbody>
</table>
| Trading Unit                  | Contract size, valid values:                                                                                                           
<p>|                               | • “1” for futures,                                                                                                                                |
|                               | • any whole number for options (incl. energy options) and stock futures, set up with “0” for energy futures, but adapted by the system.                                                                 |
| Trading Surveillance Office   | Body of Eurex Deutschland which monitors futures and options trading.                                                                           |
| Traditional Options          | Options for which the traditional-style premium posting method is used for settlement.                                                          |
| Traditional-Style Premium Posting | The traditional method used for the margin treatment of the options premium. The premium is payable in full by the buyer of the option. Eurex Clearing uses this method on all equity and index options. Compare with futures-style premium posting. |</p>
<table>
<thead>
<tr>
<th>Term</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transaction Costs</td>
<td>Fees associated with the execution of an order.</td>
</tr>
<tr>
<td>Underlying Asset</td>
<td>See Underlying Instrument</td>
</tr>
<tr>
<td>Underlying Instrument</td>
<td>The financial instrument or security upon which a derivatives contract is based, the underlying instruments of Eurex contracts are shares, equity indexes or synthetic interest rate securities.</td>
</tr>
<tr>
<td>Underlying Security</td>
<td>See Underlying Instrument</td>
</tr>
<tr>
<td>Update Trade Confirmations</td>
<td>Upon further (partial) executions of an order, a trade confirmation is generated showing the accumulated volume and the volume-weighted average price of all partial executions of the current trading day, as well as price and volume of the most recent partial execution.</td>
</tr>
<tr>
<td>Valuation of Collateral</td>
<td>The valuation of (bulk) collateral comprises the following steps: - valuation of the deposited securities at market prices; - application of haircuts to define the value of collateral; - comparison if the sum of the deposited securities equals the required margin amount, followed by a margin call or a margin credit.</td>
</tr>
<tr>
<td></td>
<td>See also Specific Equity Collateral, which is offset against the margin requirement differently.</td>
</tr>
<tr>
<td>VALUES API</td>
<td>VALUES API (Virtual Access Link Using Exchange Services Application Programming Interface) is the programmable interface of the Eurex system. It provides equal access via a single entry point to the complete set of the exchanges' functionality.</td>
</tr>
<tr>
<td>Variation Margin</td>
<td>Variation margin (a daily offsetting of profits and losses) occurs as a result of the mark-to-market procedure used for futures and options on futures. Through variation margin, the gains and losses incurred as a result of the price changes in open positions during a given trading day are offset against each other. In contrast to other kinds of margin, variation margin is not an amount which must be deposited as collateral, but is rather a daily cash settlement of debit and credit balances.</td>
</tr>
<tr>
<td>Vola Trade</td>
<td>Future trade based on a pre-negotiated option trade.</td>
</tr>
</tbody>
</table>
### 10.2 Eurex Error Messages List for Trading and Clearing Applications

#### 10.2.1 1xxxx - Back End Error Messages

<table>
<thead>
<tr>
<th>Error Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>10000</td>
<td>BACKEND APPLICATION ERROR</td>
</tr>
<tr>
<td>10009</td>
<td>PAGE NUMBER MUST NOT EXCEED 50</td>
</tr>
<tr>
<td>10010</td>
<td>INVALID ENTRY</td>
</tr>
</tbody>
</table>

---

**Volatility**

The extent of the actual or forecast price fluctuation of a financial instrument (underlying instrument). The volatility of a financial instrument can vary, depending on the period of time on which it is based. Generally, market participants calculate historical volatility (based on an instrument's price movements in the past), or implied volatility (the volatility implied by option prices traded in the market). Risk-based margining employs the historical volatility, calculated on a daily basis, which is then multiplied by a risk factor that has been determined statistically for each underlying instrument by Eurex Clearing, and the resultant product is used to establish the margin parameter.

**WBAG**

Wiener Börse AG
The Vienna Stock Exchange.

**Wide Area Network**

A Wide Area Network is a geographically dispersed telecommunications network and the term distinguishes a broader telecommunication structure from a LAN.

**Workstation**

The standard front end workstation acts as a client in relation to the MISS providing the user with front end applications (e.g. Trading and Clearing GUI) and the VALUES API. MISS and workstations are usually connected to each other via a LAN.

**Worst Case Loss**

The largest possible liquidation loss that could potentially arise prior to the end of the next trading day. This amount is secured by provision of additional margin.

**Writer**

Seller of the option, the counterparty of the option buyer. In return for receiving the option premium, the writer undertakes to deliver (in the case of a call option) or take delivery of (in the case of a put option) the underlying asset if the option is exercised.

**XTF**

See Exchange Traded Fund

**Yield curve**

The graphic description of the relationship between the remaining lifetime and yield of bonds.
10011 INVALID ENTRY FOR OPTIONS
10012 INVALID ENTRY FOR PRODUCT TYPE
10014 INVALID ENTRY FOR PRODUCT
10015 INVALID CONTRACT
10016 INVALID ENTRY FOR CONTRACT
10017 INVALID SOURCE EXCHANGE FOR UNDERLYING
10018 SOURCE EXCHANGE MUST BE XEUR FOR THIS UNDERLYING
10020 SELECTION CODE MUST = X
10021 ONLY ONE FUNCTION CAN BE SELECTED AT A TIME
10022 UPDATE PROCESSING HAS BEEN CANCELLED - HIT [RETURN] TO EXIT PROGRAM
10025 NO FUNCTION HAS BEEN SELECTED
10029 NO PRIVILEGES EXIST FOR THE REQUESTED ACTION
10030 INVALID MEMBER ID ENTRY
10031 SUBGROUP NOT DEFINED
10032 EXERCISE PERMITTED FOR EUROPEAN STYLE PRODUCTS ONLY ON EXPIRATION DAY
10033 EXERCISE STYLE MUST BE BLANK FOR FUTURES
10034 EXERCISE STYLE MUST BE 'A' OR 'E'
10035 NO SUCH TRANSACTION AVAILABLE
10036 SHORT CALENDAR NAME DOES NOT EXIST
10037 CONVERSION UNIT IS NO POWER OF 10
10038 THE ENTERED SECURITY HAS THE WRONG CURRENCY
10039 INVALID CURRENCY
10040 RELATION DOES NOT EXIST BETWEEN EXG MEMBER AND CLG MEMBER
10041 CHANGE OF DECIMAL SHIFT IS NOT ALLOWED
10042 CHANGE OF SHORT CALENDAR NAME IS NOT ALLOWED
10043 UPDATE CANNOT BE MADE UNLESS CLG RELATIONSHIPS EXIST FOR ALL MEMBERS
10044 ALL MEMBERS MUST HAVE CLG RELATIONSHIPS BEFORE ENTERING BATCH
10045 INVALID TARGET RELATIONSHIP
10046 SETTLEMENT PERIOD PER CURRENCY MUST BE GREATER THAN 0
10047 CHANGE OF SETTLEMENT PERIOD PER CURRENCY IS NOT ALLOWED
10048 SETTLEMENT PERIOD MUST NOT BE LESS THAN THE CURRENCY SETTLEMENT PERIOD
10049 CONFLICTING HOLIDAY AND EXPIRY DATE
10050 INVALID SOURCE RELATIONSHIP
10051 UNKNOWN SERIES
10054 MULTISELECT POSSIBLE ONLY IF PRODUCT WAS SELECTED ON PROMPT FORM
10055 NO DATA ON LINE SELECTED
10056 INVALID ACTION - MORE THAN ONE LINE HAS BEEN SELECTED
10057 ADDS AND DELETES ALLOWED ON A040, A042 AND A043
10058 ADDS AND DELETES ALLOWED ON SCREEN A042 OR A043
10059 NOT ALLOWED TO SELECT LINES WHEN A TRAN CODE HAS BEEN SPECIFIED
10060 MEMBERS’S PRIMARY RELATIONSHIP IS NOT ACTIVE
10061 ONLY CHANGE OR INQUIRY ARE ALLOWED TO COMMODITY PRODUCT PARAMETERS
10062 ONLY PRICE RANGE TYP ‘A’ OR ‘P’ ALLOWED
10065 RELATION MUST BE ACTIVE
10066 UNKNOWN PRODUCT
10070 NEW CLEARING TYPE MUST BE INDICATED
10071 INPUT PARAMETERS LEAD TO A NEGATIVE R-FACTOR. CHECK YOUR PARAMETERS.
10072 INVALID MAJOR CURRENCY
10073 MAJOR CURRENCY CANNOT BE A MINOR CURRENCY
10074 CANNOT CHANGE A CURRENCY FROM/TO MINOR/MAJOR
10075 CHANGING HAIRCUT VALUES NOT ALLOWED FOR MINOR CURRENCY
10076 CHANGING EXCH RATE VALUES NOT ALLOWED FOR MINOR CURRENCY
10077 CANNOT DELETE MAJOR CURRENCY
10078 INVALID EUREX KRX MEMBER RELATION
10079 LAST TRADE PRICE FILE NOT AVAILABLE
10080 HISTORY NOT AVAILABLE
10090 INTEREST RATES DO NOT EXIST FOR THIS CURRENCY
10091 CANNOT DISABLE EUREX CURRENCY FLAG: CURRENCY USED IS A CLEARING CURRENCY
10094 CANNOT TRANSFER FROM A MKT MAKER ACCT TO A NON-MKT MAKER ACCT
10095 CANNOT TRANSFER QUOTES FROM MKT MAKER TO A NON-MKT MAKER
10096 DUPLICATE CLEARING MEMBER CANNOT BE ENTERED
10097 TRANSFER ONLY ALLOWED INTO AGENT ACCOUNT
10098 QUOTE REQUEST CANNOT BE ADJUSTED
10099 DUPLICATE ACCOUNT TYPE CANNOT BE ENTERED
10100 CANNOT WITHDRAW DEUTSCHE MARK
10101 INVALID ENTRY - SEPARATION TRANSACTION AMOUNT MUST BE POSITIVE
10102 INVALID ENTRY - SEPARATION TRANSACTION AMOUNT MUST BE NEGATIVE
10103 INVALID ENTRY - SEPARATION TRANSACTION AMOUNT MUST BE A LONG QUANTITY
10104 INVALID ENTRY - A SEPARATION TRANSACTION QUANTITY MUST BE ENTERED
10105 NO REQUEST HAS BEEN ENTERED
10106 TOTAL OF SEPARATE TRAN QTY ENTRIES MUST EQUAL ORIGINAL TRAN QTY
10107 INVALID ENTRY - START ON FIRST LINE AND DO NOT SKIP ANY LINES
10108 INVALID ENTRY - SEPARATION TRANSACTION AMOUNT MUST BE A SHORT QTY
10109 A FEE ADJUSTMENT AMOUNT HAS NOT BEEN ENTERED
10110 INVALID PROFILE NUMBER
10112 INVALID PRICE RANGE TYPE
10115 INVALID ACCOUNT TYPE FOR MEMBER
10116 ONE (ONLY ONE) EXCHANGE MEMBER MUST BE OCCXX
10117 OCC TRADE FOUND WITH STATUS ERROR (OR INC) - PLEASE SKIP FIRST
10120 INVALID BUY/SELL INDICATOR
10125 TRANSFER TO OTHER EXCHANGE MEMBER NOT ALLOWED
10128 <CONTRACT CAN NOT EXPIRE BEFORE IPS>
10129 UNDERLYING CONTRACT EXPIRED
10130 INVALID OPEN/CLOSE INDICATOR
10132 DUPLICATE OPEN/CLOSE CODE CANNOT BE ENTERED
10134 BOTH FIELDS MUST BE ENTERED
10135 TARGET CLG MEMBER MUST BE DIFFERENT FROM SOURCE CLG MEMB
10136 FIELD MUST BE FILLED IF CLASS SHOULD BE ASSIGNED TO A GROUP
10137 FULL FIELD REQUIRED
10140 QUANTITY MUST BE POSITIVE INTEGER
10145 FIELD MUST BE EMPTY, ENTRY REJECTED
10146 BOTH FIELDS MAY NOT BE EMPTY
10150 SERIES NOT TRADED
10155 INVALID RECEIVING MEMBER FOR ACCOUNT TYPE
10160 INVALID PRICE
10165 INAPPROPRIATE DATA ENTERED FOR SELECTION CODE
10166 NO SELECTION ALLOWED, THIS IS AN INQUIRY SCREEN FOR MEMBERS
10167 PRICE OUTSIDE PATTERN, PLEASE PRESS ENTER TO CONFIRM
10168 USE PRODUCT MAINTENANCE WINDOW FOR PRODUCT INQUIRY
10169 CAN'T USE F8 NOW, FIRST HIT ENTER
10170 INVALID ORDER TYPE
10171 INVALID ENTRY - ":" AND '|' ARE NOT ALLOWED
10173 FIELD MUST BE FILLED WHEN TK-NET HAS BEEN SPECIFIED
10174 FIELD MUST BE EMPTY WHEN DEC-NET HAS BEEN SPECIFIED
10175 DATA ENTRY IS MISSING
10176 VALID BOF CODES ARE 'D' OR 'T'
10177 FOR DECNET SPECIFY ONLY 'BOF-UD'
10178 FOR TK-NET SPECIFY THE 'BOF TK CODE' AND THE 'BOF UD'
10180 INVALID RESTRICTION CODE
10181 INVALID ENTRY - ONLY 7-BIT ASCII AND NO SPACES ALLOWED
10182 INVALID ENTRY - ONLY 7-BIT ASCII ALLOWED
10185 INAPPROPRIATE DATA ENTERED
10186 ENABLE BLOCK TRADING FOR UL PROD WHEN ENABLING BLOCK TRADING
10187 DISABLE BLOCK TRD FOR RELATED OPT-PROD WHEN DISABLING BLOCK TRD
10190 INVALID ACCOUNT TYPE
10191 INVALID ACCOUNT TYPE FOR MEMBER
10195 INVALID EXCHANGE ID CODE
10196 INVALID ENTRY FOR XETRA EXCHANGE ID CODE
10197 CONFIRM ENTRIES PRIOR TO PAGING
10198 PROMPT DATA CHANGED, PRESS ENTER BEFORE ATTEMPTING TO PAGE
10199 PRESS ENTER TO VIEW FULL LIST BEFORE ATTEMPTING TO PAGE
10200 EXEC RESTR INVALID FOR MKT ORDER
10201 ROUND UP FACTOR MUST NOT BE GREATER THAN DECIM.FOR EXER PRICE
10202 NO VALID DATA IN PROFILE
10204 INPUT IS REQUIRED
10205 FIELD MUST BE BLANK
10206 PRIMARY EXCHANGE MUST BE FILLED
10207 FIELD MUST BE ZERO
10208 EXCHANGE ID CODE MUST BE FILLED
10210 PRICE INVALID FOR MARKET ORDER
10220 LIMIT ORDER MUST HAVE PRICE
10230 QUANTITY EXCEEDS NORMAL LIMIT
10240 OPM DATA REJECTED
10250 ITEM IS NOT NUMERIC
10260 INVALID MASS QUOTE COMMAND
10265 SELECTION OF THIS ORDER TYPE IS NOT ALLOWED
10270 INCOMPLETE ENTRY
10280 INVALID TICK SIZE
10300 INVALID SECURITY ID COD
10301 INVALID SECURITY ID FOR WINDOW
10302 NEW PRODUCT ID CONTRAJECTING WITH THE EXISTING FLEXIBLE CONTRACT
PRODUCT ID
10303 SPECIFIC COLLATERAL PLEDGE ONLY ALLOWED FOR SECURITY TYPE “STOCK”
10305 INVALID SECURITY NUMBER
10310 COPY FROM PARTICIPANT DOES NOT EXIST
10315 TO-CONTRACT ALREADY CONTAINING POSITIONS
10320 NO RECORD SELECTED, ADD FUNCTION ALLOWED ONLY
10325 INVALID ACTION CODE
10327 COMPLETE ADD OR RETURN TO NEWS BOARD INQUIRY/SELECT SCREEN
10330 INVALID MEMBER ID
10331 INVALID HOST DEVICE
10332 INVALID ROUTING CODE
10335 ENTER SPECIFIED FIELD FOR DELETION
10340 ONLY 'A' IS ALLOWED WHEN THE ADD KEY HAS BEEN HIT
10341 OCC REPORT NOT PROCESSED
10350 VALID PRIORITY CODES ARE: A,B,C,D,E,F,G,H,I
10351 NO KEY CHANGE ALLOWED - REFORMATTED TO SELECTED VALUE
10355 VALID ENTRIES ARE: -1, 0, OR 1
10356 NUMBER OF CONTRACTS MUST BE AN ODD NUMBER FOR OPTIONS
10357 NUMBER OF CONTRACTS MUST BE 1 FOR FUTURES
10358 AUTOMATIC-MANUAL EXERCISE MUST BE BLANK FOR FUTURES
10359 EXERCISE FLAG 'U' VALID ONLY FOR OPTIONS WITH INTERNAL UNDERLYING
10360 NODE NUMBER DOES NOT EXIST
10361 ITM MINIMUM MUST BE ZERO IF MANUAL EXERCISE
10362 SETTLEMENT PERIOD MUST BE GREATER THAN ZERO
10363 MONTH MUST BE ENTERED FOR A FUTURES CONTRACT
10364 FIELD MUST BE EQUAL 'N' WHEN EQUAL QTY FOR SPREADS IS REQUIRED
10365 MONTH MUST BE BETWEEN 1 AND 12
10366 VALID INPUTS ARE 'F' AND 'T'
10367 VALID INPUTS FOR OPTIONS ARE 1 AND 2
10368 FIRST SERIES HAS TO BE EXPIRED
10369 MARGIN STYLE MUST BE 'F' FOR FUTURES
10370 SERIES MUST EXPIRE IN THE YEAR SHOWN IN THE SERIES GROUP ID
10373 CURRENT SYSTEM TIME DOES NOT MATCH CONTRACT ExPIRATION TIME
10374 THE PRODUCT AND THE FEES MUST HAVE THE SAME CURRENCY
10375 SERIES MUST EXPIRE IN THE MONTH SHOWN IN THE SERIES GROUP ID
10378 CHANGE OF CYCLE CODE NOT ALLOWED ON AN COMMODITY FUTURE PRODUCT
10380 NOT A VALID REPORT FREQUENCY CODE
10381 INVALID FEE TYPE CODE FOR PRODUCT TYPE
10385 VALID ACCOUNT TYPES ARE 'A','M', AND 'P'
10386 VALID COUNTERPARTY ACCOUNTS ARE 8501 AND 7525
10388 STATUS CODE CAN ONLY BE CHANGED TO 'E'
10389 STATUS CODE CAN ONLY BE CHANGED FROM 'A' OR 'I' TO 'P'
10390 INVALID PERCENTAGE
10391 VALID EXERCISE PRICE INTERVALS ARE V01, V02, F25 AND F50
10392 BOND AGE MONTH MUST BE BETWEEN 0 AND 11
10395 REPORT ID MUST BEGIN WITH 'RPT'
10400 NOT A VALID REPORT FREQUENCY CODE
10401 INVALID ENTRY REPORT DEVICE TRADING
10402 INVALID ENTRY REPORT DEVICE CLEARING
10403 INVALID CLEARING HOUSE INDICATOR FLAG
10404 CLEARING HOUSE INDICATOR MUST BE BLANK FOR NCM
10405 NODE LOAD MUST BE GREATER THAN ZERO AND LESS THAN OR = TO 99
10409 ASSIGN NODE NUMBERS BEFORE SETTING MEMBERS TO ACTIVE
10410 VALID CODES ARE 'C' AND 'A'
10411 TEXT AND XML REPORT AVAILABILITY SHOULD NOT BE BOTH 'NO'
10412 PLEASE USE DELETE OPTION FOR REPORT
10415 CODE 'A' MAY ONLY BE USED WITH MEMBER CLEARING TYPE OF 'HSE'
10420 VALID INPUTS ARE 'A'- 'H','J','L'- 'O', 'W'- 'Z' FOR THIS MAINLINE
10421 NODE IS NOT A KEY NODE
10422 ONLY 'I' OR 'K' IS VALID FOR THIS MAINLINE
10423 XML REPORT NOT AVAILABLE FOR AUDIT TRAIL REPORTS
10425 VALID ENTRIES ARE 'GCM','NCM', AND 'HSE'
10430 HOLIDAY DATE IS INVALID - SERIES EXPIRE ON THE CHOSEN DATE
10432 ROUTING GROUP DOES NOT EXIST
10434 KEY NODE DOES NOT EXIST
10435 INVALID TRANSACTION_TYPE
10436 CANNOT HAVE TWO IDENTICAL KEY NODES
10440 NODE LOAD MUST BE LEFT BLANK FOR THIS NODE TYPE
10441 THE TARGET ACCOUNT MUST NOT BE FILLED FOR THIS TRANSACTION TYPE
10442 A1 ACCOUNT IS NOT EXISTING TRANSFER TO P1 ACCOUNT
10443 TRANSACTION ONLY ALLOWED FOR A1 ACCOUNT
10444 ADD ONLY ALLOWED FOR CLEARING HOUSE
10445 TRANSACTION TYPE CODE ENTERED IS NOT ALLOWED
10446 POSITION OPEN ADJUSTMENT IS NOT VALID FOR MARKET MAKER ACCOUNTS
10447 THE TARGET ACCOUNT CANNOT BE THE SAME FOR AN ACCOUNT TRANSFER
10448 A TARGET ACCOUNT MUST BE SPECIFIED FOR AN ACCOUNT TRANSFER
10449 SHORT AND LONG QTYS MUST NOT BE THE SAME FOR A MARKET MAKER ACCOUNT
10450 BOTH ACCOUNT TYPE CODES MAY NOT BE LEFT BLANK
10455 NOT A VALID OPEN/CLOSE CODE
10460 NOT A VALID ORDER TYPE CODE
10465 NOT A VALID CURRENCY CODE
10466 NOT A VALID CONVERSION FACTOR CALCULATION METHOD CODE
10470 HISTORY DAYS CANNOT BE GREATER THAN DELIVERY RETENTION DAYS
10475 MINUTES CANNOT BE GREATER THAN 59
10480 SECONDS CANNOT BE GREATER THAN 59
10482 NUMBER OF DECIMAL PLACES CANNOT BE GREATER THAN 5
10483 FAILED DECIMAL CODE RELATION RULES FOR FRACTIONS
10484 INVALID FRACTION CODES OR NUMBER OF DECIMALS
10485 NOT A VALID PRODUCT TYPE CODE
10486 SUSPENSION PERIOD MUST BE ZERO FOR FUTURES
10487 EXERCISE PRICE FIELD SHOULD BE BLANK FOR FUTURES CONTRACT
10488 SERIES VERSION NUMBER FIELD SHOULD BE BLANK FOR FUTURES CONTRACT
10489 EXERCISE PRICE FIELD SHOULD BE ZERO FOR FUTURES CONTRACT
10490 FIELD MUST BE ZERO FOR STATED TRANSACTION TYPE CODE
10491 BLANK LINE EXPECTED. FIELD SHOULD NOT BE FILLED
10492 CONTRACT ENTRY EXPECTED. THIS FIELD SHOULD BE BLANK
10493 CONTRACT ENTRY EXPECTED. THIS FIELD SHOULD BE FILLED
10494 CONTRACT CLASS/DATE CODE DOES NOT EXIST
10495 UNDERLYING ENTRY EXPECTED. THIS FIELD SHOULD BE BLANK
10496 SERIES CONTRACT ENTERED IS NOT VALID
10497 ENTRY NOT ALLOWED, DUPLICATE ENTRY EXISTS
10498 PARTIAL TRANSFER EXISTS ALREADY
10499 PARTIAL POSITION TRANSFER IN A NEW CONTRACT IS NOT ALLOWED
10500 DUPLICATE RECORD
10501 ADJUSTMENT SUFFIX NUMBER ALREADY EXISTS
10502 PER PRODUCT ONLY ONE TRANSFER TO DESTINATION IS ALLOWED
10503 SCREEN ONLY ACCESSIBLE IN TRADING & POST TRADING
10504 NO ENTRY REQUIRED
10505 ENTRY REQUIRED
10506 DOWNGRADE NOT ALLOWED
10507 DUPLICATE NEWS BOARD MESSAGE EXISTS
10508 NEWSBOARD MESSAGE NOT FOUND
10509 INVALID TICKER PROFILE NUMBER
10510 RECORD NOT FOUND
10511 SECURITY REQUESTED FOR WITHDRAWAL NOT FOUND
10512 NO POSITION EVER EXISTED
10513 INSERT 00-00-00 FOR CHANGING CURRENT RECORD
10514 NO FORMAT RECORD EXISTS
10515 NO MORE EXCHANGE MEMBERS
10516 NO SECURITY BALANCE TO DISPLAY
10517 INVALID USER ID
10518 NEW MEMBER MISSES RESOURCE RECORD
10519 EMPTY LIST
10520 NO DELETIONS ALLOWED
10521 DELETE IS NOT A VALID FUNCTION FOR THIS SCREEN
10523 DELETION ONLY POSSIBLE IF NO PRODUCT IS ASSIGNED TO THIS MARGIN CLASS
10525 RECORD LIMIT EXCEEDED
10526 SYSTEM LIMIT EXCEEDED
10527 ALERT PERCENTAGE EXCEEDED
10528 MAXIMAL HEARTBEAT STARTS PER SUBGROUP LIMIT EXCEEDED
10529 INVALID HEARTBEAT START/STOP INDICATOR
10530 CANNOT DELETE - SERIES OUTSTANDING
10531 HEARTBEAT MONITORING ALREADY STOPPED
10532 MAX HEARTBEAT MONITORED SUBGROUPS PER MEMBER EXCEEDED
10535 PROCESSING TERMINATED - RECORD HAS BEEN CHANGED BY ANOTHER USER
10536 PROCESSING TERMINATED - RECORD HAS BEEN DELETED BY ANOTHER USER
10537 FIELD CANNOT BE CHANGED, HISTORY REPORT HAS BEEN SELECTED
10538 PROCESSING TERMINATED, RECORD HAS BEEN ADDED BY ANOTHER USER
10539 A PROFILE RECORD HAS TO BE CREATED FIRST BY SCREEN C090
10540 INSTITUTION CHANGE NOT ACCEPTED
10545 PROCESSING TERMINATED, RECORD IS CURRENTLY LOCKED BY ANOTHER USER
10546 EUREX MAY PRINT THEIR REPORTS ONLY TO THEIR LOCATION
10547 MEMBERS ARE NOT ALLOWED TO SPECIFY 'EUREX' AS THE PRINT LOCATION
10548 ADD BUBA ACCOUNT ON K031 BEFORE MEMBER IS MADE ACTIVE
10550 CANNOT DELETE - SECURITY IS USED AS UNDERLYING
10551 CANNOT DELETE - DELV BONDS MUST BE DELETED VIA DELIVERABLE BOND
10552 NOTIFICATIONS EXIST FOR THIS DELIVERABLE BOND
10555 CANNOT DELETE - ALL GUARANTEES MUST BE REMOVED
10558 CANNOT DELETE - COLLATERAL USED FLAG IS YES
10559 CANNOT CHANGE - SECURITY IS USED AS COLLATERAL
10560 CANNOT DELETE - SECURITY IS STILL USED FOR REPORTING
10561 SECURITY IS NOT USED AS COLLATERAL
10562 DEPOSIT IS NOT ALLOWED FOR THIS COLLATERAL
10563 FREE DEPOSIT QUANTITY EXCEEDED - CHECK COLLATERAL SEC DTL
10566 CANNOT DELETE - NODE IS IN USE FOR TRADE OR CLEARING REPORTS
10570 CANNOT DELETE - SECURITY IS USED AS PENDING
10571 CANNOT DELETE - FLEXIBLE CONTRACT TRANSACTION IS PENDING
10575 CANNOT DELETE CURRENT ENTRY ON THIS TABLE
10576 CANNOT DELETE - EXCHANGE MEMBER MUST BE ENTERED
10580 CANNOT PERFORM ADD, SECURITY ID NO IS USED FOR EXTERNAL PRODUCT
10581 ENTERED UNDERLYING IS NOT EXTERNAL
10582 PRODUCT ID NO AND UNDERLYING ID NO MUST BE EQUAL FOR STOCK OPTIONS
10583 ENTERED UNDERLYING ID NO IS NOT INTERNAL
10584 UNDERLYING ID NO MUST BE BLANK IF PRICE RECEIVE CODE IS 'O'
10585 UNDERLYING ALREADY EXISTS FOR THIS SECURITY
10586 INVALID EXPIRATION CYCLE ENTERED
10587 NO DATA AVAILABLE FOR A NON-CLEARING MEMBER
10588 INVALID INTERVAL PATTERN ID ENTERED
10589 EXPIRATION MONTH NOT WITHIN CURRENT EXPIRATION CYCLE
10590 CANNOT ADD CLEARING MEMBER TYPE WHEN PERFORMING DEL FUNCTION
10591 NO INTERVAL PATTERN ASSIGNMENT FOR THIS MONTH
10592 BOTH ENTRIES MUST BE FILLED
10593 INTERVAL AREAS ARE NOT MULTIPLE OF THE STRIKE PRICE BOUNDARIES
10595 INQUIRY FUNCTION MUST BE USED FIRST
10596 ONLY INQUIRY PERMITTED
10598 CANNOT CHANGE - MUST BE DELETED FROM DELBND FIRST (USE DELIVERABLE BOND OVERVIEW)
10599 CANNOT ADD AS CTD MUST BE SET FOR FIRST DELBND
10600 THIS CHANGE IS NOT ALLOWED
10601 CLEARING HOUSE INDICATOR CAN NOT BE CHANGED HERE
10603 GUARANTEE GROSS AMOUNT CANNOT BE CHANGED
10604 FIELDS CANNOT BE CHANGED
10605 FIELD CANNOT BE CHANGED
10606 THIS CHANGE IS NOT SUPPORTED
10607 ORDER CAN NOT BE CHANGED
10608 SECURITY TYPE CANNOT BE CHANGED
10609 WRONG SECURITY TYPE CODE
10610 NO CHANGE ENTERED
10611 ENTRY REFUSED - ADJUSTMENT TRANSACTION IS THE SAME AS ORIGINAL
10613 ADJUSTMENT SUCCESSFULLY MADE - HIT RETURN TO CONTINUE
10615 EXPIRATION DATE MUST BE ENTERED FOR BOND SECURITIES
10616 NEXT PAYOUT DATE MUST BE EXACTLY 1 YEAR GREATER THAN LAST PAYOUT DATE
10617 EXPIRATION DATE NOT APPLICATION FOR STOCK SECURITIES
10618 DIVIDEND FIELDS SHOULD ONLY BE ENTERED FOR STOCKS
10620 END OF DATA
10621 TOP OF DATA
10622 INVALID KEY
10625 SHARES ASSIGNED MUST COVER AT LEAST ONE CONTRACT
10627 MM-ONLY-QUOTE FLAG NOT ALLOWED FOR FUTURE
10628 PASSWORD EXPIRED
10629 INVALID PASSWORD LENGTH
10630 NO TRANSACTION IN THIS SERIES
10631 NEW PASSWORD EQUALS PREVIOUS PASSWORD
10635 DATA WAS NOT CHANGED
10640 THIS TRANSACTION CANNOT BE FURTHER ADJUSTED
10641 NO FURTHER ADJUSTMENTS ALLOWED - MAXIMUM NUMBER OF ADJUSTMENTS MADE
10642 O/C ADJUSTMENTS NOT ALLOWED FOR MARKET MAKER (M1,M2) TRANSACTIONS
10643 TRADE SEPARATIONS ONLY ALLOWED FOR A1, P1 AND P2 ACCOUNTS
10644 SEPARATION NOT ALLOWED FOR TRADES POSTED AS CLOSING ERRORS
10645 NET POSITIONS NOT APPLICABLE FOR THIS ACCOUNT TYPE
10650 CANNOT DELETE - GUARANTEES ARE OUTSTANDING
10660 CANNOT ADD - DATE NOT = TO CURRENT MONTH
10663 ONLY DELIVERY AGAINST PAYMENT INSTRUCTIONS CAN BE CASH SETTLED
10664 PRICE ENTERED EXCEEDS THE MAXIMUM PRICE ALLOWED
10665 ADD IS PERFORMED ON ANOTHER SCREEN
10666 INVALID TABLES FILE ON UD
10667 SETTLEMENT PRICE OF EXPIRED SERIES CAN NOT BE CHANGED
10668 SETTLEMENT PRICES CANNOT BE ENTERED BEFORE CALCULATED
10669 ONLY PENDING RELATIONSHIPS CAN BE DELETED
10670 CANNOT DELETE - START DATE = CURRENT YEAR AND NOT CRT MONTH
10672 CANNOT DELETE - UNDERLYING EXIST FOR THIS CURRENCY
10674 CANNOT DELETE - CURRENCY BEING USED AS COLLATERAL
10680 CANNOT DELETE - START DATE NEEDED FOR CRT MONTH INTEREST CALC
10685 CANNOT DELETE - MEMBER IS STILL ACTIVE
10689 REQUEST NOT POSSIBLE - INFORMATION WAS ALREADY SENT TO DWZ
10690 CANNOT ADD - EXPI DATE MUST BE GREATER THAN EXPI DELETE PERIOD
10695 CANNOT ADD - THIS Ticker PROFILE ALREADY EXISTS
10697 MEMBER MUST BE HALTED BEFORE DELETING
10700 CANNOT CHANGE - EXPI DATE CAN ONLY BE REDUCED
10710 CANNOT DELETE - START DATE IS NOT TODAY'S DATE
10717 EXG MEMBER CAN ONLY BE CONNECTED TO ONE NETWORK AT A TIME
10718 DEC NETWORK DEFINITION IS INCOMPLETE
10719 DEC NETWORK DEFINITION IS NEEDED
10720 PRE-TRADING RISK WORKING ORDERS PROTECTION LIMIT EXCEEDED
10721 PRE-TRADING RISK TIME INTERVAL PROTECTION LIMIT EXCEEDED
10722 INVALID VALUE FOR VIOLATION COUNTER LIMIT
10723 QTY IS NOT A MULTIPLE OF PRE-TRADING RISK ROUND LOT
10724 ORDER VIOLATES THE SET PRE-TRADING RISK LIMIT
10725 QUOTE VIOLATES THE SET PRE-TRADING RISK LIMIT
10726 PRE-TRADING RISK TIME INTERVAL PROTECTION VOLUME EXCEEDED
10727 PRE-TRADING RISK TIME INTERVAL PROTECTION TXN COUNT EXCEEDED
10730 SERIES ON CALL AND PUT SIDE MAY NOT DIFFER IN SAME ROW
10732 CANNOT ENTER SPECIFIC CLEARING MBR IF YOU CHOOSE ALL CLG MBR OPTION
10734 DIVIDEND AMOUNT AND DIVIDEND DATE FIELDS MUST BE INPUT TOGETHER
10735 NO BALANCE AVAILABLE TO BE EXERCISED
10736 BOTH FIELDS CAN NOT BE ENTERED AT THE SAME TIME
10737 AGENT ACCOUNT CANNOT USE 'EXERCISE ALL' OPTION
10738 FAILURE BECAUSE ACTION ON ALL DATA WAS REQUESTED
10739 ACTION NOT ALLOWED, PRODUCT IS HALTED
10740 ACTION NOT ALLOWED, PRODUCT IS NOT HALTED
10741 ACTION IS NOT COMPATIBLE WITH PRODUCT PROCESS STATE
10742 ACTION IS NOT COMPATIBLE WITH SYSTEM PROCESS STATE
10743 INSTITUTION WITH SAME FIRST THREE DIGITS IS ALREADY SET UP
10744 DELETION MUST BE PERFORMED ON MEMBER HEAVY MAINTENANCE SREEN
10745 CANNOT AVOID NEW CONTRACT WHEN NO SERIES EXIST FOR PRODUCT
10746 CLG TYPE CAN ONLY BE CHANGED ON MEMBER HEAVY MAINT SCREEN
10747 EXG TYPE CAN ONLY BE CHANGED ON MEMBER HEAVY MAINT SCREEN
10748 CANNOT REMOVE HALT WHEN NO SERIES EXIST FOR PRODUCT
10749 ACTION IS NOT COMPATIBLE WITH PRODUCT PROCESS STATES
10750 CLEARING MEMBER ACCESS NOT ALLOWED
10751 ASSIGNMENT IN PROCESS
10755 CLG MEMBER ID CODE CANNOT BE CHANGED
10756 CANNOT CHANGE MEMBER CLEARING TYPE CODE
10760 MEMBER ID CODE CANNOT BE CHANGED
10761 RISK LIMIT DISSALOwed FOR MEMBER
10762 INVALID, RELEASE RISK LIMIT FIRST
10763 ERROR RELEASING RISK LIMIT
10764 CANNOT SLOWDOWN, INVALID PARAMETERS
10765 HDQ CAN ONLY BE CHANGED ON THE SCREEN OF THE ACTUAL FUTURE HDQ
10770 A HEADQUARTER IS ALREADY DEFINED
10775 THIS MEMBER IS NOT SET UP AS HEADQUARTER
10780 THIS MEMBER IS NOT EXISTING
10781 THIS INSTITUTION DOES NOT EXIST
10783 UPDATE REFUSED, NOT EXPIRATION DAY FOR CONTRACT
10785 UPDATE REFUSED, ACTIVE OUTSTANDING RELATION WITH A NCM
10786 A CHANGE IS NOT POSSIBLE. EXPIRATION DATES ALREADY EXISTS.
10790 UPDATE REFUSED, NO PENDING RELATION WITH GCM IS SET UP
10795 UPDATE REFUSED, NO CLEARING GUARANTEE IS OUTSTANDING
10800 UPDATE REFUSED, CLEARING RELATION WITH HIMSELF MUST BE SET-UP
10803 LZB ACCOUNTS MUST BE SET UP ON K031 SCREEN BEFORE DCM CHANGE
10804 UPDATE REFUSED - CLG GUAR MUST = OR BE GREATER THAN MIN GUAR FOR DCM
10805 UPDATE REFUSED - CLG GUAR MUST = OR BE GREATER THAN MIN GUAR FOR GCM
10806 NO MARKET MAKER LICENCE FOR THIS PRODUCT
10807 MARKET MAKER PROTECTION LIMIT EXCEEDED, RESET LIMITS
10808 ERROR OCCURRED IN THEORETICAL CALCULATION FOR SETTLEMENT PRICES
10809 ERROR OCCURRED IN VOLATILITY CALCULATION FOR SETTLEMENT PRICES
10810 SETTLEMENT PRICE MISSING FOR AN ACTIVE/INACTIVE SERIES
10811 SETTLEMENT PRICE MISSING FOR AN 'IN-THE-MONEY', EXPIRED SERIES
10812 SETTLEMENT PRICE MISSING FOR AN EXPIRED FUTURE
10813 MISSING U/L LAST CLOSE PRICE
10814 INVALID SETTLEMENT DATE
10815 CLS PRICE FOR THIS SECU MUST BE ENTERED USING PROD MAINT
10816 SETTLEMENT PRICES HAVE TO BE ENTERED MANUALLY FOR FUTURES
10817 PREVIOUS CLOSE PRICE CANNOT BE ENTERED DURING 'ADD'
10818 PREVIOUS CLOSE PRICE MUST BE ZERO ON OPTION LIST DATE
10819 LAST CLOSE PRICE CANNOT BE ZERO ON OPTION LIST DATE
10820 INITIAL MEMBER PARTICIPANT HAS BEEN SET UP PREVIOUSLY
10821 FIELD MUST BE ZERO FOR OPTIONS
10822 UPDATE REFUSED, VOLA CALCULATION FAILED
10823 SERIES STATUS NOT ACTIVE
10824 IMPLIED VOLATILITY ENTERED MUST BE GREATER THAN ZERO
10825 EUREX CAN ONLY SET UP FIRST MEMBER PARTICIPANT
10826 MISSING VOLATILITY, CHECK SCREEN L030
10827 SETTLEMENT PRICES HAVE NOT BEEN APPROVED FOR THE UNDERLYING
10828 FUNCTION KEY F07 HAS TO BE HIT FOR OPTIONS
10829 SERIES STATUS MUST NOT BE 'REPORTING'
10830 COPY FROM SHOULD BE EMPTY
10831 SERIES STATUS OTHER THAN ACTIVE, EXPIRED AND PENDING
10833 MEMBER CAN NOT SETTLE ALL SECURITIES USED FOR SETTLEMENT
10834 ENTERED UNDERLYING IS NOT ACTIVATED FOR SETTLEMENT
10840 MEMBER CASH ACCOUNT NOT ALLOWED AS INPUT
10843 SETTLEMENT PRICE IS LOWER THAN EXPECTED - PLEASE CONFIRM
10844 SETTLEMENT PRICE IS HIGHER THAN EXPECTED - PLEASE CONFIRM
10845 SETTLEMENT PRICES CANNOT BE APPROVED WITHOUT U/L LAST CLOSE PRICE
10846 SETTLEMENT PRICES HAVE NOT BEEN APPROVED FOR ALL PRODUCTS
10847 SETTLEMENT PRICES HAVE NOT BEEN APPROVED
10848 CURRENT SETTLEMENT MUST BE 'E' OR 'C' IF NORMAL SETTLEMENT IS 'E'
10850 SETTLEMENT PRICES HAVE ALREADY BEEN APPROVED
10851 PRODUCT MUST BE IN POST TRADING STATE TO ACCESS SETTLEMENT PRICES
10852 SETTLEMENT PRICE ENTERED MUST BE GREATER THAN ZERO
10853 INVALID PRICE RECEIVE CODE
10854 WHEN PRICE RECEIVE CODE IS 'O', UNDERLYING ID COD MUST BE BLANK
10855 MEMBER IS NOT A CLEARING MEMBER
10856 VALID INPUTS FOR OPTIONS ARE 1, 2 AND 3
10857 VALID INPUTS FOR FUTURES ARE 3, 4 AND 5
10858 CURRENT SETTLEMENT MUST BE 'C' OR 'S' IF NORMAL SETTLEMENT IS 'S'
10859 CURRENT SETTLEMENT MUST BE 'C' IF NORMAL SETTLEMENT IS 'C'
10860 THIS CLEARING MEMBER TYPE DOES NOT HAVE A DEFAULT RECORD
10861 MEMBER PROFILE HAS NOT BEEN SETUP
10862 CURRENT SETTLEMENT MUST BE 'D' IF NORMAL SETTLEMENT IS 'D'
10863 CURRENT SETTLEMENT MUST BE 'N' IF NORMAL SETTLEMENT IS 'N'
10864 VALID INPUTS ARE 0, 1, 2 AND 3
10865 PROFILE RECORD DELETED BY OTHER USER, NEW ONE MUST BE CREATED
10866 NO PENDING DELIVERY FOUND WITH THIS TRANSACTION NUMBER
10867 STORNO WAS ALREADY ENTERED
10868 STORNO DOES NOT EXIST FOR REQUESTED FORCED DELIVERY
10869 SETTLEMENT TYPE MUST BE EITHER SHARE OR NOTIONAL
10870 INVALID USER FOR MEMBER
10871 NO USER SET-UP PROFILE ON THIS PARTICIPANT
10872 WRONG PENDING TRANSACTION NUMBER IN CONFIRMATION
10873 CANNOT DELETE - CORRESPONDING FORCED DELIVERY EXISTS
10874 COPY FROM WAS SUCCESSFUL
10875 CURRENT SETTLEMENT MUST BE 'T' IF NORMAL SETTLEMENT IS 'T'
10880 RESOURCE DENIED - MEMBER STATUS IS INACTIVE
10881 RESOURCE DENIED - MEMBER STATUS IS ACTIVE
10885 RESOURCE PRIVILEGE DENIED - RELATIONSHIP IS NOT ACTIVE
10889 RESOURCE PRIVILEGE DENIED TO THE HOUSE
10890 RESOURCE DENIED - MEMBER STATUS IS HALTED
10891 EUREX TRADE FORBIDDEN
10892 BEHALF MEMBER RESTRICTED
10893 PRODUCT IS IPS - ASSIGN LEGS FIRST
10894 IPS QUANTITY CANNOT EXCEED SINGLE LEG QUANTITIES
10895 INCORRECT CENTRAL BANK/CURRENCY RELATION
10896 ON BEHALF NOT ALLOWED
10897 DEASSIGN LEGS FOR NEW IPS PRODUCT IS NOT ALLOWED
10900 NO NCM ACCESS IN POST-TRAD-RES
10905 NO CHANGE OF IPS SPREAD RATIO - FIRST DELETE OLTRAN MSG ON K160
10906 NO CHANGE OF IPS PRICE OPERATOR - FIRST DELETE OLTRAN MSG ON K160
10907 NO CHANGE OF IPS OFFSET PRICE - FIRST DELETE OLTRAN MSG ON K160
10908 NO PRODUCT DELETION - FIRST DELETE OLTRAN MSG ON K160
10909 GIVE-UP NOT ALLOWED DURING CURRENT PRODUCT STATE
10910 RESOURCE NOT AVAILABLE
10911 RESOURCE NOT AVAILABLE DURING CURRENT PRODUCT STATE FOR NCM
10912 RESOURCE NOT AVAILABLE
10913 RESOURCE NOT AVAILABLE DURING CURRENT PRODUCT STATE
10914 REQUEST CANCELED DUE TO INTERFERENCE WITH OTHER USER
10915 INSUFFICIENT PRIVILEGE TO ADD RELATIONSHIP
10916 VALID ENTRIES FOR IPS PRICE OPERATOR ARE: - AND + OR + AND -
10917 THIS IS AN IPS LEG. FIRST DEL IPS USING PROD MAINT
10918 <DELETE ONLINE TRANSACTION SUCCESSFULLY WRITTEN>
10919 SPREAD LEGS OF IPS PRODUCT CANNOT BE CHANGED
10920 ONLY ACTIVE AND PENDING RELATIONSHIPS CAN BE ADDED
10921 IPS OFFSET PRICE EXCEEDS MAXIMUM PRICE
10922 DECIMAL PLACES OF IPS LEGS ARE NOT COMPATIBLE
10923 TICK SIZES OF IPS LEGS ARE NOT COMPATIBLE
10924 CYCLE CODES OF IPS LEGS ARE NOT COMPATIBLE
10925 PRODUCT TYPE/GROUP OF IPS LEGS ARE NOT COMPATIBLE
10926 <VALID ENTRIES: I OR BLANK>
10927 IPS FLAG IS ALLOWED ONLY FOR FUTURE PRODUCTS
10928 <IPS CANNOT HAVE TWO IDENTICAL LEGS>
10929 THE IPS OF THIS LEG MUST FIRST BE DELETED
10930 ONLY PENDING RELATIONSHIPS CAN BE ADDED
10931 INVALID PRODUCT/PRODUCT GROUP
10932 INVALID PRODUCT ID FOR IPS LEGS
10935 THIS RELATION CANNOT BE PRIME UNTIL ACTIVE
10940 RELATIONSHIP MUST BE PRIMARY
10945 STATUS CODE MUST BE ACTIVE
10950 INVALID STATUS CODE CHANGE
10955 STATUS CODE MUST BE SET TO PENDING
10960 NO SECURITY RELATED ACCOUNT
10963 ACCESS IS POSSIBLE ONLY WHEN CONTRACT IS EXPIRED
10964 DELIVERY IS POSSIBLE ONLY FOR EXPIRED SERIES
10965 NO TRADING ASSIGNMENT FOR THIS PRODUCT
10967 NO NOTIFIABLE BONDS
10970 THIS MEMBER IS NOT VALID FOR THIS TABLE
10975 SECURITY IS MARKED FOR DELETE - CANNOT DEPOSIT
10976 TICK SIZE EQUAL 1 REQUIRED FOR FRACTIONAL PRICE FORMATS
10977 PRIMARY EXCHANGE ID ALREADY ASSIGNED (MERGER)
10978 MULTIPLE EXCHANGES ARE NOT ALLOWED
10979 MAXIMUM ALLOWED AMOUNT EXCEEDED
10980 CHANGES ARE NOT ALLOWED ON THIS TABLE
10985 FROM OR TO CONTRACT ALREADY IN ANOTHER CREDIT DEFAULT EVENT
10986 DEBIT AND CREDIT ACCOUNTS CANNOT BE THE SAME
10987 UNDERLYING SECURITY ID NUMBER MUST BE ENTERED
10988 SECURITY ID NUMBER MUST BE ENTERED, NOT THE PRODUCT TYPE
10989 PRODUCT TYPE MUST BE ENTERED, NOT THE SECURITY ID NUMBER
10990 SECURITY ID NUMBER DOES NOT EXIST
10991 SECURITY ID NUMBER AND PRODUCT TYPE MUST BE BLANK
10992 PRODUCT TYPE IS MISSING
10993 EXCHANGE ID CODE IS REQUIRED
10994 F8 IS NOT VALID FOR A NON-CLEARING MEMBER
10995 SECURITY ID NUMBER IS MISSING
10996 SECURITY ID NUMBER MUST BE BLANK
10997 PRODUCT TYPE MUST BE BLANK
10998 ENTER ADJUSTMENT CODE
10999 INAPPROPRIATE DATA ENTERED FOR FUNCTION KEY
11000 INVALID TRANSACTION DATE
11005 DATE IS NOT A BUSINESS DATE
11006 CASCADE HIGH LEVEL MUST EXPIRE BEFORE BOTTOM LEVEL
11007 CASCADE BOTTOM LEVEL MUST NOT EXPIRE BEFORE HIGHER LEVEL
11008 CHANGING THIS DELIVERY HOLIDAY DESTROYS CASCADE CONSISTENCY
11010 INVALID DATE - MUST BE WITHIN TWO TRADING DAYS
11011 INVALID DATE - ENTER CURRENT DATE OR DATE OF PREVIOUS BUSINESS DAY
11015 CANNOT EXERCISE ON BUSINESS DAY BEFORE DIVIDEND DATE
11020 EXPIRATION DATE MUST BE GREATER THAN START DATE
11022 DATE MUST BE GREATER THAN EFFECTIVE DATE
11023 DATE MUST BE EQUAL OR SMALLER THAN THE PREVIOUS EXPIRATION DATE
11025 TRANSACTION DATE MUST BE BEFORE TODAY
11030 INVALID DATE
11035 DATE MUST BE A HOLIDAY
11040 EXPIRATION DATE MUST BE GREATER THAN OR = TO TODAY'S DATE
11041 EXPIRATION DATE MUST BE AT LEAST 2 BUSINESS DAYS AFTER EFFECTIVE DATE
11042 EXPIRATION DATE CANNOT BE EQUAL TO BUSINESS DATE
11043 CREATION DATE CANNOT BE EQUAL TO BUSINESS DATE
11044 DEFERRED CREATION DATE MUST BE BEFORE EXPIRATION DATE
11045 CANNOT DELETE OR CHANGE HOLIDAY STATUS FOR CURRENT DATE
11046 DEFERRED CREATION DATE MUST BE BEFORE NEXT DAY EXPIRATION DATE
11048 SETTLEMENT DATE MUST BE AFTER CURRENT BUSINESS DATE
11050 START DATE CANNOT BE CHANGED
11055 PUT NO DATE OR NEXT BUSINESS DATE
11060 DATE MUST BE LESS THAN OR = TO TODAY'S DATE
11070 MUST CONTAIN NEXT BUSINESS DAY
11071 DATE MUST BE A BUSINESS DAY FOLLOWING TODAY'S DATE
11072 DATE MUST BE A BUSINESS DAY AFTER NEXT BUSINESS DAY
11075 RESTRICTED ORDER MUST EXPIRE TODAY
11080 EFFECTIVE DATE IS TOO FAR IN THE FUTURE
11081 EFFECTIVE DATE MUST BE LOWER THAN PRIMARY EXPIRATION DATE
11085 EXPIRATION YEAR CANNOT BE LESS THAN CURRENT YEAR
11090 DATE MUST BE WITHIN CURRENT ACCOUNTING PERIOD
11095 TRANSACTION DATE MUST BE GREATER THAN OR = TODAY'S DATE
11100 EFFECTIVE DATE MUST BE GREATER OR EQUAL TO TODAY'S DATE
11105 CANNOT ADD CONTRACTS PAST THE EXPIRATION PERIOD FOR THIS MONTH
11110 DATE ENTERED IS PRIOR TO EXCHANGE START DATE
11120 FUTURE DIV DATE MUST BE GREATER THAN LAST DIV DATE
11122 CONTRACT EXPI DATE CANNOT BE MORE THAN SIX MONTH FROM CURRENT DATE
11125 REPORT DATE IS INVALID, IT MUST BE MORE RECENT
11126 NO CHANGE ALLOWED, SET MANUAL UPDATE FIRST
11127 INVALID PREFERRED PRICE SOURCE
11128 PREFERRED PRICE SOURCE SUI REQUIRES COLL EXCH XSWX OR XVTX
11129 SECURITY WAS RECEIVED FROM WSS - CANNOT BE DELETED
11130 CSD IS STILL IN USE - IN ACCT, COLL BALANCE OR COLL TRN
11200 FUTURE DATED RECORD ALREADY EXISTS
11250 ENTER A BUSINESS DAY NOT BEFORE TODAY’S DATE
11260 UNNOTIFIED POSITIONS EXIST - USE SCREEN H025 TO NOTIFY
11275 NOT AT NOTIFICATION DAY
11276 FINAL SETTLEMENT PRICE ENTRY ONLY ALLOWED IN CYCLE MONTH
11280 CONTRACT NOT AT NOTIFICATION
11282 NOTIFICATION MUST BE LESS THAN OR EQUAL TO NET OPEN SHORT POSITIONS
11284 ADJUSTMENT CANNOT BE LESS THAN THE SECURITY’S NOTIFIED POSITIONS
11286 NO UNNOTIFIED POSITIONS EXIST
11287 NO OPEN SHORT POSITIONS EXISTS
11288 ISIN STILL IN USE IN FPMERGER
11300 NO CONTRACT TO EXPIRE THIS MONTH FOR PRODUCT
11301 ODD LOT PRODUCT CAN BE FILLED ONLY FOR FSTK
11302 PRODUCT OF R-FACTOR AND POSITION CONVERSION SHOULD BE < 1
11303 RESULTING TRADING UNIT SHOULD BE GREATER THAN STANDARD TRADING UNIT
11304 ODD LOT PRODUCT AND ORIGINAL PRODUCT DIFFER IN PRODUCT ASSIGNMENT GROUP
11305 ODD LOT PRODUCT AND ORIGINAL PRODUCT DIFFER IN PRODUCT TYPE
11306 ODD LOT PRODUCT AND ORIGINAL PRODUCT DIFFER IN PRODUCT CURRENCY
11307 ODD LOT PRODUCT AND ORIGINAL PRODUCT DIFFER IN EXCHANGE AFFILIATION
11308 ODD LOT PRODUCT AND ORIGINAL PRODUCT HAVE DIFFERENT EXPIRATION CYCLES
11309 ODD LOT PRODUCT HAS NON-BLANK IPSFLAG
11310 ODD LOT PRODUCT ID AND ORIGINAL PRODUCT ID MUST BE DIFFERENT
11311 CONTRACT-DISPLAY-DECIMAL OF ORIGINAL AND ODD LOT PRODUCT MUST BE EQUAL
11312 PRODUCT GROUP NOT ASSIGNED TO THIS TRADER
11315 PRODUCT GROUP NOT ASSIGNED TO CLEARER
11320 PRODUCT GROUP NOT ASSIGNED TO THIS MEMBER
11325 MEMBER HAS NO PRODUCT GROUP ASSIGNED
11330 PRODUCT GROUP ALREADY ASSIGNED
11331 GROUP EXPIRATION DATE DOES NOT EXIST
11332 NOT ALL RECORDS SUCCESSFULLY PROCESSED
11335 PRODUCT NOT IN PRODUCT GROUP
11336 EMPTY PRODUCT GROUP NAME IS NOT ALLOWED
11337 DEASSIGNMENT NOT POSSIBLE, PRODUCT WILL BE MOVED
11350 SOURCE PRODUCT GROUP NOT FOUND
11351 DESTINATION PRODUCT GROUP NOT FOUND
11352 DIFFERENT EXPIRATION DATE CODE
11353 CHANGE NOT POSSIBLE, A CONTRACT ALREADY EXISTS.
11356 MISSING MARGIN DEFAULT COLLATERAL POOL FOR CLEARING MEMBER
11357 MISSING CSD ACCOUNT FOR MARGIN DEFAULT COLLATERAL POOL
11358 MEMBER STILL HAVE COLLATERAL POOL
11359 DELETED CM COULD HAVE ONLY 1 MARGIN DEFAULT COLLATERAL POOL
11360 CHANGE OF USAGE, TYPE, CM OR OWNER NOT ALLOWED
11361 CLEARING MEMBER AND CLIENT HAVE DIFFERENT EXCHANGE AFFILIATION
11362 COLLATERAL POOL ALREADY EXISTS.
11363 COLLATERAL POOL STILL IN USE
11364 INVALID CLIENT
11365 INVALID CLIENT MEMBER
11366 INVALID COMBINATION OF CLGMBR AND OWNER FOR THIS POOL TYPE
11367 INVALID POOL ID
11368 INVALID POOL OWNER
11369 INVALID POOL USAGE
11370 INVALID POSITION ACCOUNT FOR CLEARING MEMBER TYPE
11371 INVALID RECORD FOR THIS ACTION
11372 MEMBER MARKED FOR DELETION
11373 MEMBER NOT AUTHORIZED FOR THIS POOL
11374 NO MEMBER CLEARING CURRENCY AVAILABLE
11375 ONLY ONE DEFAULT POOL PER MEMBER AND USAGE ALLOWED.
11376 ONLY ONE OMNIBUS POOL PER MEMBER ALLOWED.
11377 POOL RELATION ALREADY EXISTS
11378 RECORD HAS BEEN CHANGED BY ANOTHER USER
11379 STILL COLLATERALS ASSIGNED TO POOL
11380 STILL CSD ACCOUNTS ASSIGNED TO POOL
11381 THIS ACTION IS NOT ALLOWED
11382 WRONG CLEARING MEMBER FOR POOL
11383 WRONG POOL TYPE
11384 WRONG POOL TYPE FOR USAGE
11385 ADDITIONAL AGENT ACCOUNTS NOT SUPPORTED FOR OCC PRODUCTS
11386 SEGREGATED MEMBER TYPE IS ALLOWED FOR GCM OR DCM MEMBERS ONLY
11387 DOWNGRADE NOT ALLOWED DUE TO INVALID MEMBER EXCHANGE TYPE
11388 COLLATERAL POOL DOES NOT EXIST
11389 POSITION ACCOUNT NOT ASSIGNED TO ANY POOL
11390 POOL OF POSITION AND CSD ACCOUNT IS NOT THE SAME
11391 POOL MARKED FOR DELETION
11392 POOL MUST BE OF TYPE MARGIN
11393 NOT ENOUGH ACCOUNTS IN DEFAULT MARGIN POOL
11394 INVALID POOL STATE
11395 DEFAULT POOL FOR CLG MBR AND USAGE MISSING
11396 INVALID POSITION ACCOUNT FOR CLIENT MEMBER TYPE
11397 THIS ACTION IS NOT ALLOWED FOR OMNIBUS POOLS
11400 CANNOT ADD - MARGIN CLASS ALREADY EXISTS
11402 CANNOT UPDATE - MARGIN CLASS DOES NOT EXIST
11404 CANNOT UPDATE CLASS PARMS IF MARGIN CLASS LEFT BLANK
11405 THERE IS NO SUCH PRODUCT
11406 CANNOT UPDATE SYSTEM PARMS IF MARGIN CLASS IS SELECTED
11408 ONLY CHANGE OR INQUIRY ARE ALLOWED TO SYSTEM PARMS
11409 MUST DELETE MARGIN PARA USING MARGIN PARA OVERVIEW
11410 SPREAD RATES ARE FOR FUTURES ONLY
11411 INTERVAL PRODUCT MUST BE ASSIGNED TO THIS MARGIN CLASS
11412 HISTORICAL VOLATILITY MUST BE WHOLE NUMBER FOR FUTURES
11413 NO UPD MADE, HIST VOLA MUST BE WHOLE NO ON MARGIN PARA OVERVIEW
11415 THIS FIELD MUST BE FILLED FOR FUTURES
11416 THIS FIELD MUST BE FILLED FOR BONDS
11417 THIS FIELD MUST BE ONE FOR FUTURES
11418 LOW BOND AGE CANNOT BE GREATER THAN HIGH BOND AGE
11420 CAN ONLY ASSIGN UNASSIGNED CLASSES TO A GROUP
11421 AUTO_CALC_EVAL_PCT AND USED_AS_COLL REQUIRE THE SAME VALUES FOR BONDS
11422 GROUP ID CANNOT BE CHANGED
11424 MARGIN CLASS NOT ASSIGNED TO A GROUP
11426 OFFSET PERCENTAGE CANNOT BE GREATER THAN 100
11427 PERCENTAGE CANNOT BE GREATER THAN 100
11428 EVALUATED PERCENTAGE CANNOT BE GREATER THAN MAXIMUM FOR SECU TYPE
11500 NOT A DELIVERABLE BOND SECURITY
11502 LAST PAYOUT DATE MUST BE <= EXP DATE FOR CONTRACT
11503 THIS CONTRACT DOES NOT EXIST FOR SECURITY NUMBER
11504 LAST PAYOUT DATE REQUIRED FOR DELIVERABLE BONDS
11505 REMAINING LIFE TO MATURITY OUTSIDE SPECIFIED RANGE
11510 SECURITY NUMBER AND CONTRACT ARE NOT CONSISTENT
11700 ACCESS GRANTED
11705 ACCESS NOT GRANTED
11710 RESOURCE NOT AVAILABLE
11715 CANNOT ADJUST OTHER EXCHANGE MEMBERS
11716 TRANSACTION ALREADY CONFIRMED
11717 ACTIVE PRIMARY RELATIONSHIP CANNOT BE CHANGED TO INACTIVE
11718 FIRST RELATIONSHIP ADDED MUST BE PRIME
11719 MEMBER IS NOT ALLOWED TO PERFORM A 'POSITION OPEN ADJUSTMENT'
11720 INSUFFICIENT ACCOUNT PRIVILEGE
11721 TRANSACTION NOT ALLOWED
11722 MEMBER IN PROMPT MUST BE PART OF TRANSACTION
11724 INSUFFICIENT PRIVILEGE FOR NEXT SCREEN
11725 SECURITY NOT ASSIGNED TO TRADER
11726 INVALID SCREEN ID
11727 USER CANNOT HAVE MORE PRIVILEGE THAN MEMBER
11728 PRODUCT IS NOT ASSIGNED TO MEMBER
11729 NO TRADER ASSIGNED TO MEMBER
11730 DECODE WAS NOT PERFORMED
11731 PRODUCT IS NOT ASSIGNED TO CLEARING MEMBER OF THIS MEMBER
11732 DESTINATION PRODUCT GROUP NOT ASSIGNED TO ALL RELEVANT MEMBERS
11733 TARGET PRODUCT GROUP CONTAINS NOT ALL REQUIRED PRODUCTS
11741 ACTION IS NOT COMPATIBLE WITH COMMODITY OPTION PRODUCT PROCESS STATE
11750 CANNOT CHANGE RELATIONSHIP OF GCM OR DCM WITH ITSELF
11755 ONLY NCM RELATIONSHIPS WITH ITSELF CAN BE ADDED
11760 INVALID PROCEDURE: PRIME GCM IS DELETED WHEN NEW ONE IS SELECTED
11761 THIS MEMBER IS NOT A GCM OR DCM
11762 ONLY CLEARING HSE GUARANTEES SHOULD BE ADDED FOR NCM
11765 UPDATE MUST BE PERFORMED WHEN GCM IS IN PROMPT AREA
11767 BOF NODES MUST BE UNIQUE
11770 UPDATE MUST BE PERFORMED WHEN NCM IS IN PROMPT AREA
11771 STATUS CHANGE ONLY ALLOWED BY EUREX FOR GCM OR DCM
11772 CHANGE IS ONLY ALLOWED FOR NCM
11773 ONLY ALLOWED TO CHANGE RELATIONS FOR SIGNED ON MEMBER
11774 CHANGE ONLY ALLOWED FOR EUREX AND NCM
11775 PRIMARY GCM CODE IS INCOMPATIBLE WITH NON-ACTIVE STATUS
11776 EUREX DOES NOT HAVE RELATIONSHIPS
11777 ACTIVE PRIMARY RELATIONSHIP CANNOT BE CHANGED TO INACTIVE
11778 GUARANTEES ARE NOT ALLOWED FOR NCM’S
11780 DCM CAN ONLY HAVE ONE PENDING RELATIONSHIP WITH GCM
11785 A DCM MUST HAVE A RELATIONSHIP WITH ITSELF
11787 POSITION TRANSFER TO ONESELF NOT ALLOWED
11788 MEMBER NOT ALLOWED TO PERFORM POSITION TRANSFER
11789 MEMBER NOT TAKE-UP ALLOWED
11790 UNKNOWN RESOURCE
11791 INVALID MEMBER PROFILE
11792 INVALID USER FOR MEMBER
11793 FIRST POSITION MUST BE MINUS OR SPACE
11794 INVALID MEMBER FOR NODE
11795 INVALID CLEARING MEMBER ID
11796 NO RELATIONSHIP BETWEEN MEMBERS
11797 SIGN POSITION ERROR
11798 DECIMAL NOT ALLOWED
11799 MUST ENTER NUMBER
11800 PRIME GCM CANNOT BE SPECIFIED
11801 MEMBER PROFILE HAS NOT BEEN SET UP
11802 ACTIVE PRIMARY RELATIONSHIP ALREADY EXISTS FOR THIS MEMBER
11805 CANNOT SET PRIME RELATION TO INACTIVE BEFORE A NEW ONE IS SPECIFIED
11806 PRIM RELATION CAN ONLY BE SET INACTIVE IF THE CLG MEMBER IS INACTIVE
11807 TRANSFER SOURCE AND DESTINATION CANNOT BE EQUAL
11810 MUST MAINTAIN ONE ACTIVE RELATIONSHIP WHEN MEMBER STATUS IS ACTIVE
11820 INCOMPATIBLE CLEARING TYPES; RELATIONSHIP NOT PERMITTED
11821 INVALID MEMBER RELATIONSHIP
11822 INVALID MEMBER CLASS
11823 CLG MBR NOT ALLOWED TO CLEAR OCC LINK PRODUCTS
11825 INVALID MEMBER SELECTION
11830 MEMBER CANNOT BE ACTIVE UNTIL PRIME RELATION IS SPECIFIED
11832 VAT IS ONLY VALID FOR MBRS ALLOWED TO TRADE PHYS. SETTL. COMMODITIES
11833 CHECK DELIVERY PARAMETERS IN ENERGY CASCADE MAINTENANCE WINDOW
11835 MEMBER PROFILE RECORD NOT FOUND
11840 NO CHANGE ALLOWED TO EUREX ACCESS LEVELS
11850 THIS MEMBER ALWAYS NEEDS ACCESS TO ALL RESOURCES
11855 SCREEN A050 MUST DEFAULT TO MAXIMUM ACCESS
11856 POSITION 1 FOR A030 MUST BE 3
11860 MEMBER MAY NOT DELETE ITSELF
11865 NO MORE EXCHANGE MEMBERS
11867 (1) VALUE IS NOT MEANINGFUL
11900 GIVE-UP STATUS IS NOT COMPATIBLE WITH SELECTED ACTION
11910 CANNOT SELECT RECORDS AND PAGE
11911 GIVE-UP STATUS PRE-DESIGNATED IS ONLY POSSIBLE FOR CURRENT DATE
11920 DESIGNATED MEMBER MUST BE DIFFERENT FROM EXCHANGE MEMBER.
11930 NOT ALL TRADES PROCESSED
11940 NO TRADES FOUND FOR REQUESTED ACTION
11950 DESIGNATION OF CLOSING TRADES NOT POSSIBLE
11960 EXACT CONTRACT SIZE REQUIRED FOR STOCK SPLIT WITH NO NEW SERIES
11961 NEW SERIES MUST BE 'Y' IF SERIES WITH VERSION > 0 EXIST
11962 VALUE MUST BE 0, 1, 2 OR 3
11963 INVALID R-FACTOR > 99.99 FOR STOCK SPLIT
11991 THEO PRICE UPDATE NOT COMPLETED - PRICE TOO LOW - PLEASE CONFIRM
11992 THEO PRICE UPDATE NOT COMPLETED - PRICE TOO HIGH - PLEASE CONFIRM
11993 THEO PRICE UPDATE NOT COMPLETED - PLEASE CONFIRM
11994 THEO PRICE UPDATE NOT COMPLETED
12000 TRANSACTION CANNOT BE EFFECTIVE BEFORE TOMORROW
12001 CLOSING PRICE MUST BE ENTERED
12002 LAST CLOSING PRICE MUST BE ENTERED
12003 PLEASE CONFIRM CHANGE OF EXTERNAL EXCHANGE
12004 NEXT PAY DATE MUST BE AFTER LAST PAY DATE
12005 FUTURE DIVIDEND DATE MUST BE AFTER CURRENT BUSINESS DATE
12006 DIVIDEND DATES NOT ENTERED IN DATE ORDER
12007 CALENDAR MUST BE ACTIVE
12008 INVALID CSD
12010 INVALID MNEMONIC CODE
12019 INVALID UNDERLYING ISIN
12020 INVALID UNDERLYING CODE
12021 INCONSISTENT MNEMONIC/UNDERLYING DATA
12030 INVALID CLASS CODE
12040 INVALID COMBINATION TYPE
12050 INVALID HOUR
12054 SETTLEMENT PRICE EQUALS ZERO - PLEASE CONFIRM
12055 ACCESS DENIED
12060 INVALID DATE
12061 INVALID START DATE
12062 MISSING CURRENCY CODE
12063 NON-BOND ISIN NOT ALLOWED FOR EFP-FIN
12064 BOND HAS ALREADY EXPIRED
12065 IPS PRODUCT NOT ALLOWED
12067 ONLY CHF AND EUR CASH LEGS ALLOWED
12068 EFP-INDEX NOT ALLOWED FOR THIS PRODUCT
12069 INVALID EXCHANGE TYPE FOR MEMBER TO WHOLESALE TRADE
12070 NON EXISTENT DATE
12071 NO UNDERLYING INFO EXISTS
12072 PRODUCT NOT ALLOWED FOR FLEXIBLE CONTRACTS
12073 FLEXIBLE CONTRACT MUST BE UNRATIFIED FOR THIS ACTION
12074 FLEXIBLE CONTRACT TRADE IS CHANGED BY ANOTHER USER
12075 FLEXIBLE CONTRACT MUST BE RATIFIED FOR THIS ACTION
12076 EXERCISE STYLE 'A' NOT ALLOWED FOR THIS PRODUCT
12077 TRANSFER NOT ALLOWED DUE TO MISSING PREVIOUS SETTLEMENT PRICE
12078 ACCOUNT CHANGE NOT ALLOWED
12079 GIVE-UP NOT ALLOWED WITH A TRANSACTION PRICE OF ZERO
12080 CHANGE DATE OR RESTRICTION
12081 DISPLAY OF FLEX TRANSACTIONS NOT ALLOWED FOR PRODUCT
12082 ACCOUNTS FOR CLOSE OUT MUST BE IDENTICAL
12090 INVALID ORDER NUMBER
12091 NUMBER OF SINGLE TRADES MAY NOT BE CHANGED
12092 ILLEGAL NUMBER OF SINGLE TRADES
12093 SECU ID NOT EQUAL PROD ID
12094 ILLEGAL TRADE QUANTITY
12095 UNBALANCED BUY AND SELL QUANTITY
12096 TOO MANY BUY OR SELL TRADES
12097 ILLEGAL EXPIRATION YEAR
12098 UNMATCHED SINGLE TRADE ID
12099 CONTRACT/SERIES WAS CHANGED
12100 CHANGE CLASS OR COMBO TYPE
12101 CHANGE OF BROKER ID NOT ALLOWED
12102 EBI TRADE IS ALREADY FULLY APPROVED
12103 BAD LAST UPDATE DATE FROM UD
12104 EBI TRADE NOT ALLOWED
12105 INCONSISTENT VERSION NUMBERS
12106 CHANGE OF ACT, O/C OR TEXT NOT ALLOWED IF SUB-TRADE HAS BEEN APPROVED
12107 EBI SUBTRADES CAN ONLY BE MODIFIED BY THE BROKER VIA MTR WINDOW
12108 A CLEARING MEMBER CANNOT BE STOPPED/RELEASED ON BEHALF
12109 A MEMBER IS NOT ALLOWED TO HALT ONESELF
12110 CHANGE MONTH OR COMBO TYPE
12111 MEMBER IS INACTIVE - STOP FAILED
12112 MEMBER IS INACTIVE - RELEASE FAILED
12113 ALL FOUR-EYES-PRINCIPLE DATA MUST BE FILLED
12114 MEMBER IS ALREADY HALTED
12115 MEMBER IS ALREADY ACTIVE
12116 MEMBER HALTED BY EUREX - RELEASE FAILED
12117 COUNTERPARTY CURRENTLY STOPPED - APPROVE FAILED
12118 FOUR-EYES INITIATING AND CONFIRMING USER IDS ARE IDENTICAL
12119 EXCH AFFILIATION FOR INITIATING AND CONFIRMING USERS ARE DIFFERENT
12120 INVALID BUY/SELL CODE
12121 INITIATOR CURRENTLY STOPPED - APPROVE FAILED
12122 NEED A CLEARING MEMBER TO STOP ANOTHER MEMBER
12123 NOT OWN TRADER
12124 NEED A VALID SUBGROUP
12125 RELEASE NOT SUPPORTED FOR TRADER/SUBGROUP
12126 INVALID MEMBER ID OR SUBGROUP CODE
12130 INVALID OPEN/CLOSE CODE
12140 INVALID QUANTITY
12144 INVALID CUSTOMER CODE
12145 INVALID MEMBER
12150 CONTRACT DOES NOT EXIST
12160 INVALID PRICE
12161 FIELD MUST BE BLANK
12170 INVALID ORDER TYPE
12175 INVALID FOR THIS PRODUCT
12176 NO OCQ ALLOWED FOR PRODUCT
12180 INVALID RESTRICTION CODE
12181 INVALID RESTRICTION CHANGE
12185 INVALID EXPIRATION DATE
12190 INVALID ACCOUNT TYPE CODE
12191 INACTIVE CONTRACT
12192 ACTIVATION NOT ALLOWED ON CONTRACT EXPIRY DAY-OPEN
12193 DEACTIVATION NOT ALLOWED - OPEN INTEREST EXISTS ON CONTRACT
12194 DEACTIVATION NOT ALLOWED - IPS PRODUCT
12195 DEACTIVATION NOT ALLOWED - UNDERLYING OPTION PRODUCT
12196 DEACTIVATION NOT PROCESSED - CASCADING ENERGY PRODUCT
12197 CONTRACT IS NOT INACTIVE
12198 INVALID PRODUCT - PRODUCT HAS INACTIVE CONTRACTS
12199 UNDERLYING PRODUCT HAS AT LEAST ONE INACTIVE CONTRACT
12200 NO RESTRICTION FOR MARKET ORDERS
12201 STOP ORDERS HAVE TO BE MARKET ORDERS
12202 STOP ORDERS ARE FORBIDDEN
12203 BLOCK AUCTION ALREADY EXISTS
12204 BLOCK AUCTION DOES NOT EXIST
12205 TRADER NOT AUTHORIZED TO CHANGE BLOCK AUCTION
12206 BLOCK AUCTION IS NOT ALLOWED
12207 QUANTITY MUST BE GREATER THAN OR EQUAL TO MINIMUM REQUESTER SIZE
12208 BID QUANTITY MUST BE GREATER THAN OR EQUAL TO MINIMUM RESPONDER SIZE
12209 ASK QUANTITY MUST BE GREATER THAN OR EQUAL TO MINIMUM RESPONDER SIZE
12210 NO PRICE FOR MARKET ORDERS
12211 REQUESTER NOT ALLOWED TO ENTER QUOTE
12212 JOINING AN AUCTION IN RESTRICTED PHASE NOT POSSIBLE
12213 BLOCK AUCTION QUOTE NOT FOUND
12214 NOT OWNER OF BLOCK AUCTION QUOTE
12215 QUOTE DELETION NOT ALLOWED IN RESTRICTED PHASE
12216 ONLY QUOTE IMPROVEMENTS ALLOWED IN RESTRICTED PHASE
12217 BUY/SELL SIDE NOT SPECIFIED
12218 ACCEPT EXECUTE PRICE INVALID
12219 ACCEPT EXECUTE QUANTITY INVALID
12220 LIMIT ORDERS REQUIRE A PRICE
12221 STOP ORDERS REQUIRE A PRICE
12222 INVALID SL-PRC/RES-COD DATA
12223 ORDER EXECUTE QUANTITY INVALID
12225 BLOCK AUCTION ALLOWED ONLY WHEN BLOCK TRADE ALLOWED
12226 BUY SIDE NOT FOUND
12227 SELL SIDE NOT FOUND
12228 BOTH SIDES NOT FOUND
12230 QUANTITY NOT REASONABLE
12232 BID PRICE NOT REASONABLE
12233 ASK PRICE NOT REASONABLE
12234 BOTH PRICES NOT REASONABLE
12235 PRICE NOT REASONABLE
12236 PRICE LOWER THAN INSIDE MKT BID PRC
12237 PRICE HIGHER THAN INSIDE MKT ASK PRC
12238 CLOSING PRICE REASONABILITY CHECK FAILED - PLEASE CONFIRM
12239 MARGIN CLOSING PRICE REASONABILITY CHECK FAILED - PLEASE CONFIRM
12240 CHANGE PRICE OR COMBINATION TYPE
12241 INVALID REQUEST INQUIRE MARGIN REQUIREMENT INFO
12242 NO MARGIN REQUIREMENT INFORMATION AVAILABLE
12250 INVALID ASK QUANTITY
12260 INVALID BID QUANTITY
12270 MEMBER NOT AUTHORIZED
12271 MEMBER AND SUBGROUP NOT AUTHORIZED
12280 INVALID ASK PRICE
12290 INVALID BID PRICE
12294 TRADE ALREADY REVERSED
12295 SOME LEG(S) REVERSED, TRADE NO LONGER AVAILABLE FOR DISPLAY
12300 PRICES ARE INCONSISTENT
12305 CONTRACT HAS EXPIRED
12310 INVALID DISCLOSURE CODE
12315 UNDERLYING STATE IS CURRENTLY CHANGED
12320 ENTER PRICE OR QUANTITY
12321 INCONSISTENT PRC/QTY DATA
12330 ENTER PRICE AND QUANTITY
12331 ENTER PRICE
12332 ENTER QUANTITY
12340 INVALID INQUIRY TYPE
12342 INVALID MULTI RECORD COUNTER
12350 INVALID EXCHANGE CODE
12360 TYPE MUST BE BOOK OR QUOTE
12361 INVALID TYPE CODE
12370 QUOTE FLAG MUST BE Y OR N
12375 QUOTE REQUEST DENIED
12380 ORDER FLAG MUST BE Y OR N
12381 PUT LEPO NOT ALLOWED
12382 INVALID CHANGE - EURO EXCHANGE RATES WILL REMAIN FIXED
12383 INVALID UPPER LIMIT PRICE
12384 HIGH LIMIT PRICE MUST EXIST BEFORE ADDING OTHER PRICES
12385 INVALID ACCOUNT TYPE
12386 INVALID PRICE REASONABILITY CHECK FLAG
12387 INVALID NUMBER OF DECIMALS
12388 COMBO CONTAINS PUT LEPO SERIES
12389 EXCH RATE ENTERED DIFFERS > 5% FROM PRV RATE
12390 ONE FLAG MUST BE Y
12391 SETTLEMENT PRICE DECIMALS MUST BE GREATER OR EQUAL CONTRACT DISPLAY DECIMALS
12392 ACTIVE LEPOS IN THE SYSTEM. DELETE THE LEPOS IN D010 FIRST!
12393 ORDERS WILL BE DELETED FOR PRODUCTS USING THIS TABLE
12394 HIGHEST LIMIT RANGE CAN BE DELETED ONLY IF IT IS THE LAST ENTRY
12395 THIS PRICE STEP TABLE IS IN USE
12396 LEPO EXERCISE PRICE MUST NOT BE LESS THAN THE SUGGESTED PRICE
12397 LEPO AVAILABLE ONLY ON STOCK OPTIONS
12398 LEPO FLAG MUST BE (L) OR SPACE
12399 LEPO EXER.PRC. MUST BE MIN. 1 CURR.UNIT OR INT.MULTIPLE
12400 MEMBER CODE MISSING
12401 HITT NOT ALLOWED FOR MARKET MAKER ACCT (M1,M2) TRANSACTIONS
12410 CHECK TICK INCREMENT
12412 INVALID QUOTE SPREAD
12413 INVALID SPREAD FOR CURRENT STATE
12414 EQUAL QUANTITIES REQUIRED
12415 SL-PRICE LIMIT EXCEEDED
12416 PRICE LIMIT EXCEEDED
12417 ENTERED BID QUANTITY EXCEEDS LIMIT
12418 ENTERED ASK QUANTITY EXCEEDS LIMIT
12419 ENTERED BID AND ASK QUANTITIES EXCEED Limit
12420 PRICE AND QUANTITY NOT EQUAL ZERO
12421 INVALID BID QUANTITY FOR CURRENT STATE
12422 INVALID ASK QUANTITY FOR CURRENT STATE
12423 INVALID QUANTITIES FOR CURRENT STATE
12430 INVALID KEYSTROKE
12440 INVALID MESSAGE (GOTO)
12441 EITHER LONG OR SHORT POSITIONS MUST BE FILLED
12442 CASH AMNT/ORIG TRD PRC MUST BE FILLED WHEN TOT CASH AMNT IS FILLED
12443 TOT CASH AMNT MUST BE FILLED WITH CASH AMNT + CALCULATED CASH
12444 DEL IS NOT ALLOWED FOR REAL TIME POS TSF AS ALL PARTIES HAVE APPROVED
12445 EITHER LONG OR SHORT POSITIONS MUST BE FILLED, BUT NOT BOTH
12446 REAL TIME POSITION TRANSFER EXECUTION REQUIRES 4 EYES APPROVAL
12447 POSITION TRANSFER MODE IS NOT VALID FOR GIVEN TRANSACTION ID
12448 CONTRACT MISMATCH WHILE TRYING TO CLOSE OUT POSITION
12449 INVALID VALUE IN FIELD FLX TRN TYP COD
12450 "!" NOT VALID IN TEXT
12460 INVALID UNDERLYING FOR MASS QUOTE TRANSACTION
12462 ONLY ONE UNDERLYING ALLOWED IN MASS QUOTE TRANSACTION
12464 DUPLICATE SERIES IN MASS QUOTE TRANSACTION
12470 ABSOLUTE VALUE GREATER THAN 99.99 IS NOT ALLOWED
12471 PERCENTAGE VALUE GREATER THAN 9.99 IS NOT ALLOWED
12490 [+MUST BE 'N' IF ONE SIDED QUOTES ALLOWED
12495 [+ONLY ONE DECIMAL PLACE ALLOWED
12497 [+PRICE IS ABOVE THE MAXIMUM OF THE CALCULATED PRICE RANGE
12498 [+PRICE IS BELOW THE MINIMUM OF THE CALCULATED PRICE RANGE
12499 [+MAXIMUM PRICE ALLOWED MUST NOT BE GREATER THAN FIRST BID-UP-TO
12500 [+DELETE PAGE' TO CONFIRM
12501 [+BID PRICES MUST BE IN DESCENDING ORDER
12502 [+DELETE PAGE' ABORTED
12503 [+SPREAD AMOUNT IS ZERO OR LESS
12504 [+A' OR 'P' MUST BE ENTERED TO CALCULATE SPREAD
12505 [+MIN QUOTE QTY MUST BE GREATER THAN ZERO
12506 [+MUST EQUAL MAXIMUM PRICE
12507 [+BLANK ROWS CANNOT BE NESTED IN TABLE
12508 [+ROWS MUST BE COMPLETELY FILLED-ZEROES ARE NOT VALID
12509 [+MINIMUM QUOTE IS INVALID
12510 [+REL PAGE' TO CONFIRM
12511 [+BID MUST BE UNIQUE
12512 [+REL PAGE' ABORTED
12513 [+MAXIMUM PRICE MUST BE GREATER THAN 0
12514 [+SPREAD AMOUNT IS GREATER THAN MAX PRICE
12515 [+MAXIMUM PRICE EXCEEDS LIMIT
12516 [+MAXIMUM PRICE OUT OF RANGE
12517 [+ALL LINES MUST BLANK
12518 [+MAXIMUM NUMBER OF QUOTES EXCEEDED
12520 [+SCREEN CONTAINS NO ERRORS
12521 [+MAX PRICE GIVEN IS INVALID FOR IMPLIED MATCH PRODUCT TYPE
12522 [+MAX PRICE GIVEN IS INVALID FOR PRORATA MATCH PRODUCT TYPE
12523 [+MAX PRICE GIVEN IS GREATER THAN SYSTEM ALLOWED LIMIT
12525 [+NO CONTRACTS FOR THIS PRODUCT
12530 [+OPM DATA RETRIEVED
12535 [+NO MARKET MAKER ASSIGNED FOR SELECTED PRODUCT
12540 [+OPM DATA REJECTED
12542 [+NO DELETION OF SERIES WITH OPEN INTEREST PERMITTED
12546 [+CASH STL FRAC RESPONSE MUST BE Y OR NO
12547 [+CASH STL FRAC RESPONSE MUST BE EMPTY
12548 [+TRANSACTION NOT ALLOWED FOR CASH SETTLED PRODUCTS
12549 [+EXERCISE CASH SETTLED FLEXIBLE CONTRACTS ALLOWED ONLY IN POSTF AND CLAUC STATE
12550 ITEM IS NOT NUMERIC
12551 QUANTITY MUST BE GREATER THAN OR EQUAL TO MINIMUM BLOCK SIZE
12552 ACTION PROHIBITED - BLOCK TRADE HAS ALREADY BEEN APPROVED
12553 MEMBER IN PROMPT MUST BE BUY MEMBER
12554 MEMBER IN PROMPT MUST BE SELL MEMBER
12555 PROCESSING TERMINATED - RECORD HAS BEEN RATIFIED BY ANOTHER USER
12556 BLOCK TRADE IS NOT ALLOWED
12557 CURRENT DAILY HIGH/LOW PROHIBITS WHOLESALE TRADE
12560 INVALID MASS QUOTE COMMAND
12565 COMMAND INVALID FOR PREOPENING
12570 INCOMPLETE ENTRY
12571 DEBIT RATE MUST BE GREATER THAN OR = TO CREDIT RATE
12575 GCM MINIMUM AMOUNT MUST BE GREATER THAN DCM MINIMUM AMOUNT
12580 INVALID TICK SIZE
12581 INVALID GUARANTOR ID
12582 CHANGE OF GUARANTOR ID NOT ALLOWED
12585 POSITION HIST DAYS CANNOT BE GREATER THAN POSITION RETENT DAYS
12589 INVALID ORDER FOR EXPIRATION TIME - ASCENDING ORDER REQUIRED
12590 INSUFFICIENT PRIVILEGE
12591 INSUFFICIENT PRIVILEGE FOR FOUR-EYES INITIATING USER
12592 INSUFFICIENT PRIVILEGE FOR FOUR-EYES CONFIRMING USER
12593 CONFIRMING USER NOT AUTHORISED FOR FOUR-EYES-PRINCIPLE
12594 FIRST DIGIT OF TIME FIELD MUST BE D(AYS) OR M(ONTH)
12595 SECURITY HIST DAYS CANNOT BE GREATER THAN SECURITY RETENT DAYS
12596 TIME MUST BE BETWEEN 0 AND 25
12597 TIME MUST BE BETWEEN 0 AND 99
12598 TIME MUST BE LESS THAN THE FOLLOWING ONE
12599 TIME MUST BE GREATER THAN THE PREVIOUS ONE
12600 NO SELECTIONS MADE
12601 TIME AND DATE MAY BE DESCREEASED
12602 CASH WITHDRAWAL GREATER THAN CASH BALANCE
12603 PERMANENT CASH BALANCE EXISTS IN THIS CURRENCY - REMOVE FIRST
12604 INSUFFICIENT POSITIONS TO BE CLOSED IN RECEIVING ACCOUNT
12605 NO DATA ON PAGE
12606 NO POSITION TO BE TRANSFERRED
12607 NO POSITION TO BE CLOSED
12608 CANNOT TRANSFER NEGATIVE QUANTITIES
12609 NOT ENOUGH POSITIONS TO BE TRANSFERRED
12610 INVALID KEY
12611 POSITION CAN ONLY BE REDUCED IN A CLOSING ADJUSTMENT
12612 NOT ENOUGH POSITIONS TO BE CLOSED
12613 POSITIONS MUST BE REDUCED OR INCREASED BY THE SAME AMOUNT
12614 POSITION CAN ONLY BE INCREASED IN AN OPENING ADJUSTMENT
12615 OFFER PRICE GREATER THAN ZERO IS REQUIRED FOR RIGHT'S ISSUE
12616 TRAN TYIP REQUIRES OFFER OF ZERO
12617 NUMBER OF RIGHTS/SHARE REQUIRED
12618 NUMBER OF RIGHTS/SHARE MUST BE BLANK
12619 AMOUNT ENTERED IS GREATER THAN CURRENT BULK BALANCE
12620 NO SELECTION PERMITTED
12621 QUANTITY MUST BE POSITIVE
12622 THIS TRANSFER IS NOT ALLOWED
12630 INVALID CROSS
12631 INVALID TYPE COD
12632 SHARES ASSIGNED GREATER THAN SHARES AVAILABLE FOR COVER
12633 SHARES REASSIGNED GREATER THAN COVERED SHARES
12634 SHARES ASSIGNED MUST BE MULTIPLES OF THE CONTRACT SIZE
12635 AMOUNT ENTERED WILL EXCEED MAXIMUM BALANCE
12640 NO REFERENCE PRICE
12641 TOTAL COVERED SHARES MUST COVER AT ONE CONTRACT OR BE ZERO
12645 SHARES ASSIGNED CAN NOT EXCEED OPEN SHORT SHARES AMOUNT
12650 OPM DATA RETRIEVED
12655 POSITION LIMIT CANNOT BE GREATER THAN SHARES ISSUED
12656 WITHDR REQUEST MUST BE LESS OR = TO AVAILABLE FOR WITHDR QTY
12657 REVERSE WITHDR REQUEST MUST BE LESS THAN OR = TO WITHDR QTY
12660 NO OPM DATA AVAILABLE
12670 NO SCROLLING IN PROFILE
12672 NO PROFILE ON THIS SCREEN
12680 TOP OF SCREEN
12682 NO MORE SERIES
12684 NO MORE ORDERS FOUND
12686 NO MORE TRADES
12690 ADJUSTMENT TYPE NOT AVAILABLE FOR MARKET MAKERS
12691 SCROLL NOT PERMITTED
12692 NO MORE MESSAGES
12694 PLEASE REFRESH SCREEN
12700 TRANSACTION CANNOT BE SEPARATED
12704 INVALID INSIDE MARKET DATA
12705 REVERSE DEPOSIT REQUEST MUST BE LESS THAN OR = TO DEPOSIT AMOUNT
12709 SPREAD RATIO MUST BE BETWEEN 1 AND 99
12710 AMOUNT FIELD CANNOT BE LESS THAN OR EQUAL 0
12712 INVALID TRANSACTION CODE
12713 AUTOMATIC TRANSITION LIMIT EXCEEDED
12714 INVALID TRANSITION STATUS
12715 INVALID TRANSITION TYPE
12717 INVALID TRANSITION AUTO/MAN FLAG
12718 INVALID TRANSITION TIME
12720 SECURITY NOT AVAILABLE FOR RESERVE
12725 SECURITY ID FOR DEBIT ACCOUNT MUST EQUAL CONTRA ACCOUNT
12730 MINIMUM BALANCE AMOUNT MUST BE EQUAL TO 0
12735 QUANTITY EXCEEDS MAX AVAILABLE QUANTITY DUE TO PENDING GU TRANSACTIONS
12740 WITHDRAWAL REQUEST AMOUNT MUST BE EQUAL TO 0
12750 NO HISTORY AVAILABLE FOR DATE ENTERED
12760 MARKET MAKER ACCOUNT COMBINED WITH PRINCIPLE ACCOUNT
12770 MOVE TO A DEFAULT PRODUCT GROUP IS NOT ALLOWED
12771 CHANGE OF A DEFAULT PRODUCT GROUP IS NOT ALLOWED
12772 PRODUCT GROUP HAS ELEMENTS, CHANGE NOT ALLOWED
12773 VALUE IS NOT ALLOWED
12774 CHANGE NOT POSSIBLE, PENDING MOVE EXISTS
12775 INVALID NEXT DAY EXPIRATION DATE
12776 INVALID DEFERRED CREATION DATE
12780 NO FRACTION ALLOWED
12788 MASS QUOTE FAILURE
12789 TABLE SIZE LIMIT EXCEEDED
12790 CHANGE MUST BE MORE THAN 2%
12798 THIS USER DEVICE ID MUST BE SPECIFIED FOR THE NETWORK
12800 INPUT MUST BE GREATER THAN ZERO
12801 FIELD CAN BE ANY VALID POSITIVE OR NEGATIVE NUMBER
12802 ENTRY OF NEW ORDERS CURRENTLY SUSPENDED. TRY AGAIN LATER.
12803 TOO MANY ORDERS FOR MEMBER IN THIS PRODUCT. PLEASE REDUCE NUMBER OF BOOK ORDERS.
12804 TOO MANY ORDERS FOR SUBGROUP. PLEASE REDUCE NUMBER OF BOOK ORDERS.
12805 TOO MANY ORDERS FOR TRADER. PLEASE REDUCE NUMBER OF BOOK ORDERS.
12810 ADJUSTMENT AMOUNT CANNOT BE GREATER THAN CURRENT MONTH FEES
12814 ORDER DATA HAS CHANGED SINCE RETRIEVED FOR EDITING
12815 NO ORDERS IN BOOK
12816 ORDER NOT FOUND IN DATABASE
12817 NO ORDERS IN BOOK
12819 NO BLOCKS FOR THIS SERIES
12820 TOTAL OF ALL TRADES MUST BE EQUAL TO THE ORIGINALS
12821 NO BLOCK WAS FOUND
12823 THIS BLOCK CANNOT BE TAKEN
12824 INVALID UNDERLYING
12830 PERCENT ENTERED CANNOT BE GREATER THAN 1
12831 MINIMUM CANNOT BE GREATER THAN MAXIMUM
12832 SERIES NOT FOUND
12835 NO NEWS CURRENTLY IN NEWSBOARD
12836 NO COMBINATIONS FOR THIS SERIES
12837 NO MORE COMBINATIONS
12839 NO ORDER FOR SERIES FOUND
12840 AMOUNT ENTERED MUST BE BETWEEN 0 AND 1
12841 NO ORDER FOR SERIES IDENTIFIED
12842 PERCENT MUST BE LESS THAN OR EQUAL TO 1, BUT GREATER THAN ZERO
12843 NO ORDERS IDENTIFIED
12844 EXTERNAL EXCHANGE CODE MUST BE 0, 1 OR 2
12845 FIRST LETTER MUST BE 'B' OR 'S'
12846 FIRST LETTER MUST BE 'B' OR 'S'
12847 INVALID NUMBER OF DECIMALS
12848 VALID ENTRIES ARE 0, 1, 2 AND 3
12849 POS 291 TO 300 MUST CONTAIN ONLY THREE'S FOR AUTOMATIC ACCESS
12850 INVALID COMMAND
12851 DECREASE IS NOT ALLOWED
12852 NO FURTHER CHANGE - FIRST DELETE OLTRAN MSG. ON K160
12853 VALID ENTRIES ARE 0, 1, 2, 3, 4 AND 5
12854 PROD-TYP 'STK' REQUIRES EXTERNAL UNDERLYING
12855 CHANGE OF MEM_CLG_TYPE_COD NOT ALLOWED
12856 EXTERNAL EXCHANGE: ONLY 0 IS ALLOWED FOR SECURITY TYPE BOND
12857 PRIMARY EXCHANGE CHANGE FOR AN UNDERLYING NOT ALLOWED IN CURRENT PHASE
12858 EXTERNAL EXCHANGE CHANGE TO '0' FOR AN UNDERLYING NOT ALLOWED
12859 UL ISIN CHANGE ALLOWED FOR 'STK' ONLY
12860 ACCESS TO F060 ONLY POSSIBLE THROUGH F050
12861 EFP-FIN TRADE HAS BEEN CHANGED BY ANOTHER USER
12862 CHG NOT POSSIBLE - FIRST DEL OLTRAN REL (MERGER) ON K160
12863 EFS TRADE HAS BEEN CHANGED BY ANOTHER USER
12864 SECU-TYP-PFX-COD OF EXTERNAL UL MUST BE 'S' FOR 'STK'
12865 SPECIFY SUB-ACCOUNT NUMBER FOR GENERAL CLEARING MEMBERS
12866 SUB-ACCOUNT NUMBER IS NOT ALLOWED FOR NON-CLEARING MEMBERS
12867 FIELD MUST BE ENTERED FOR ALL GCM AND DCM MEMBERS
12868 DUPLICATE ACCOUNT NUMBER NOT ALLOWED
12869 EFP-INDEX HAS BEEN CHANGED BY ANOTHER USER
12872 FORMAT RECORD NOT FOUND
12882 NO TRADES IN THIS SERIES
12884 PROCESS STATUS NOT FOUND
12886 NO MORE TRADES
12887 UPDATE FLAG MUST BE “X” OR BLANK
12888 CANNOT CHANGE FIELD WITHOUT SETTING UPDATE FLAG
12892 RECORD NOT FOUND
12897 NO CONNECTION TO EUREX
12898 LOST USER DEVICE
12899 MSGCMP: SYNC RESPONSE LOST
12900 NO LICENCE FOR UNDERLYING
12901 THE DEFAULT SETTINGS HAVE BEEN USED TO FORMAT THE SCREEN
12902 THE USER PROFILE HAS BEEN USED TO FORMAT THE SCREEN
12903 INVALID RESOURCE ACCESS LEVEL NUMBER - ENTER 0,1,2 OR 3
12904 CUSTOMER TEXT CODE HAS TO BE BETWEEN 1 AND 68
12905 NO MARKET MAKER LICENSE
12910 INVALID FOR CURRENT STATE
12915 INVALID FOR CURRENT STATE
12920 INVALID FOR CURRENT STATE
12925 INVALID FOR CURRENT STATE
12930 INVALID FOR CURRENT STATE
12935 INVALID FOR CURRENT STATE
12937 FOR MASS ACCEPTANCE ‘FROM MEMBER’ ENTRY REQUIRED
12940 NO RESTRICTION AT PRESENT
12941 BASIS TRADE HAS ALREADY BEEN APPROVED
12942 BASIS TRADE HAS BEEN CHANGED BY ANOTHER USER
12943 WHOLESALE TRADE APPROVAL IS OUTSIDE ALLOWABLE TIME
12944 ACTION CODE PROHIBITED - BASIS TRADE HAS ALREADY BEEN APPROVED
12945 THE SUBGROUP IS INVALID
12946 NO TRANSACTION FOR GIVEN NUMBER AVAILABLE
12947 ZERO BONDS ARE NOT ALLOWED FOR BASIS TRADE
12948 DECIMAL SHIFT MUST BE ZERO
12949 EXCHANGE RATE CANNOT BE ZERO
12950 EITHER FULLTEXT OR TWO REFERENCES REQUIRED
12953 JUST FULLTEXT ALLOWED
12955 NO DOUBLE REFERENCES ALLOWED
12956 DOUBLE REFERENCES ONLY ALLOWED FOR ‘G2’ TYP
12960 A REFERENCE MUST POINT TO A FULLTEXT FIELD
12965 PRODUCT NOT ASSIGNED TO RECEIVING MEMBER
12969 INVALID EXCHANGE TYPE FOR MEMBER TO WHOLESALE TRADE
12970 SELECT ANOTHER CHEAPEST TO DELIVER BOND TO REMOVE FLAG
12971 SELECT ANOTHER CHEAPEST TO DELIVER BOND BEFORE TRYING TO DELETE
12972 INVALID HEDGE TYPE
12973 INVALID SETTLEMENT INSTITUTION
12974 SETTLEMENT DATE IS TOO FAR FROM CURRENT BUSINESS DATE
12975 NO CHEAPEST TO DELIVER BOND AVAILABLE FOR HEDGE VALIDATION
12976 INVALID HEDGE RATIO
12977 NOMINAL VALUE IS TOO SMALL
12978 PRICE EXCEEDS THE MAXIMUM PRICE ALLOWED
12979 PRICE IS LOWER THAN THE MINIMUM PRICE ALLOWED
12980 NO TRADE PRICE AVAILABLE
12981 FOR IN-HOUSE TRADES AT LEAST ONE ACCOUNT MUST BE THE AGENT ACCOUNT
12982 PRESS RETURN BEFORE TRYING TO CONFIRM
12983 CHANGE FUTURE PRICE OR GROSS BASIS TO GET POSITIVE CASH PRICE
12984 PRODUCT MATCHING TYPE INVALID
12985 IPS-LEGS MUST HAVE IDENTICAL MATCHING FLAGS
12986 PART OF TRADE READY MODIFIED
12987 PART OF TRADE READY AN IPS
12988 FIELD MUST BE EMPTY FOR WHOLESALE TRADES
12989 PART OF TRADE READY A GIVE-UP OR TAKE-UP
12990 ENTER NEW HIGHEST PRICE
12991 ENTER NEW LOWEST PRICE
12992 NEW HIGHEST PRICE IS GREATER THAN OLD VALUE
12993 NEW LOWEST PRICE IS LOWER THAN OLD VALUE
12994 HIGHEST PRICE LOWER THAN LOWEST PRICE
12995 INVALID LIMIT AMOUNT
12996 END DATE BEFORE START DATE
12997 NO OWN ACCOUNT EXISTS
12998 EFFECTIVE PERIODS MAY NOT OVERLAP
12999 ACCOUNTS MUST NOT BE DELETED
13000 NO TRADES PROCESSED
13001 CLOSING TRADES ENCOUNTERED
13002 ALL TRADES PROCESSED
13003 INVALID TRADE TYPE FOR REQUESTED ACTION
13004 INVALID CONFIRMATION FLAG
13005 NOTICE: YOU WILL EXERCISE AN OUT-OF-THE-MONEY OPTION
13006 INVALID CLEARING TYPE CODE
13007 RESOURCE LEVEL NOT CONFORM WITH BACK FLAG
13008 RESOURCE LEVEL NOT CONFORM WITH TRAD FLAG
13009 INVALID CLEARING HOUSE INDICATOR
13010 QUOTE REQUEST DENIED DUE TO CLOSE QUOTE INSIDE MARKET
13057 INVALID USER ID
13058 INVALID PASSWORD
13059 EFP TRADE HAS ALREADY BEEN APPROVED
13060 EFP TRADE APPROVE OUTSIDE ALLOWABLE TIME
13061 NO EFP TRADE WAS FOUND
13062 EFP TRADE HAS BEEN CHANGED BY ANOTHER USER
13063 MEMBER MUST BE A COMMODITY EXCHANGE MEMBER
13064 NEGATIVE HAIRCUT VALUE NOT ALLOWED
13397 INVALID TRADE ORIGIN TYPE SELECTION
13490 MAX STRATEGY QUOTE SPREAD MUST BE ZERO FOR A FUTURES PRODUCT
13491 INVALID STRATEGY TYPE
13500 TRADING STYLE RESTRICTION IS NOT ALLOWED FOR THIS PRODUCT
13501 TRADING OF OUTRIGHT CONTRACTS IS NOT ALLOWED FOR THIS PRODUCT
13502 TRADING OF SPREAD CONTRACTS IS NOT ALLOWED FOR THIS PRODUCT
13503 STRATEGY DOES NOT EXIST. IT HAS NOT BEEN REQUESTED OR IT HAS BEEN DELETED BY MS
13504 STRATEGY CANNOT BE DELETED. THERE ARE OUTSTANDING ORDERS FOR THAT STRATEGY
13505 STRATEGY CONTAINS A LEG WITH A PRODUCT THAT IS NOT ALLOWED FOR STRATEGIES
13506 STRATEGY CONTAINS A LEG THAT IS EXPIRED
13507 STRATEGY CONTAINS A LEG THAT IS AN IPS OR AN OPTION ON AN IPS
13508 STRATEGY CONTAINS A LEG WITH DIFFERENT TRADING UNITS
13509 STRATEGY ORDER/QUOTE PRICE IS BELOW THE MINIMUM PRICE FOR THAT TYPE OF STRATEGY
13510 OPTION VOLATILITY STRATEGY HAS INCORRECT VOLUMES
13511 FUTURE CONTRACT OF OPTION VOLATILITY STRATEGY DOES NOT MATCH OPTION UNDERLYING
13512 NO LAST TRADE PRICE FOUND FOR THE FUTURE CONTRACT OF THE OPTION VOLA STRATEGY
13513 FUTURE CONTRACT PRICE OF OPTION VOLA STRATEGY TOO FAR FROM LAST TRADE PRICE
13514 STRATEGY PRICE MUST BE A MULTIPLE OF ITS LOWEST OPTION LEG VOLUME
13515 WHOLESALE STRATEGY HAS ALREADY BEEN APPROVED
13516 INVALID WHOLESALE STRATEGY TRANSACTION NUMBER
13517 WHOLESALE STRATEGY APPROVAL IS OUTSIDE ALLOWABLE TIME
13518 THE BUY AND SELL BASIS TRADE TYPES MUST BE EQUAL
13519 BLOCK TRADE APPROVAL IS OUTSIDE ALLOWABLE TIME
13520 VOLA TRADE APPROVAL IS OUTSIDE ALLOWABLE TIME
13521 NO VALID UNDERLYING FUTURE CONTRACT EXISTS FOR THE OPTION
13522 THE BUY AND SELL ISSUER TEXT AND SWAP TYPES MUST BE EQUAL
13523 THE BUY AND SELL COUPON FIXED RATES MUST BE EQUAL
13524 THE BUY AND SELL VARIABLE RATE REFERENCES MUST BE EQUAL
13525 THE BUY AND SELL VARIABLE RATE OFFSETS MUST BE EQUAL
13526 THE BUY AND SELL START DATES MUST BE EQUAL
13527 THE BUY AND SELL MATURITY END DATES MUST BE EQUAL
13528 THE BUY AND SELL COUPON FREQUENCIES MUST BE EQUAL
13529 THE BUY AND SELL SECOND SWAP IDS MUST BE EQUAL
13530 FUTURE CONTRACT PRICE OF VOLA STRATEGY TOO FAR FROM LAST SETTLEMENT PRICE
13531 INVALID WHOLESALE STRATEGY TRANSACTION NUMBER
13532 QUOTE NOT FOUND
13533 VOLATILITY STRATEGIES NOT SUPPORTED FOR THIS PRODUCT
13534 NO LAST SETTLEMENT PRICE FOR LEPO CONTRACT AVAILABLE
13535 LEPO PRICE OF VOLA STRATEGY TOO FAR FROM LAST UNDERLYING PRICE
13536 LEPO PRICE OF VOLA STRATEGY TOO FAR FROM LAST SETTLEMENT PRICE
13537 TOO MANY ERRORS - PLEASE REINQUIRE
13538 PRODUCT(S) WITH INVALID STATE(S) FOR TRANSACTION NOT PROCESSED
13539 NOT ALL PRODUCTS PROCESSED - SETTLEMENT PRICES MUST BE APPROVED
13540 NOT ALL PRODUCTS PROCESSED - HALTED PRODUCTS WITHOUT SERIES DETECTED
13541 NOT ALL PRODUCTS PROCESSED - UNNOTIFIED POSITIONS DETECTED
13542 NOT ALL PRODUCTS PROCESSED - FIRST CONTRACT HAS TO BE EXPIRED
13543 NOT ALL PRODUCTS PROCESSED - SEVERE MARKET ORDER IMBALANCE DETECTED
13544 NOT ALL PRODUCTS PROCESSED - CLEARING RELATION MISSING
13545 STATUS OF THE AUTOMATIC STATE TRANSITION(S) IS NOT IN PROCESS (P)
13546 THE MANUAL STATE TRANSITION(S) IS BEING EXECUTED BEFORE ITS SCHEDULE TIME
13547 MISSING IPS LEG PRODUCT(S) DETECTED
13548 INCOMPATIBLE TICK SIZE(S) FOR IPS AND LEG PRODUCT(S) DETECTED
13549 DIFFERENT DECIMALS FOR IPS AND LEG PRODUCT(S) DETECTED
13550 INCOMPATIBLE CYCLE-CODES FOR IPS AND LEG PRODUCT(S) DETECTED
13551 MISSING CURRENCY CONVERSION RATES: CHECK EXCHANGE RATE OVERVIEW WINDOW
13552 INCONSISTENT MATCH FLAG SWITCH FOR IPS LEGS -> CHECK SCREEN K160
13553 ASSIGNMENT STILL IN PROGRESS
13554 ERROR DURING ASSIG. PROCESS
13555 ASSIGNMENT NOT STARTED YET!
13556 MISSING EXPIRATION DATE(S) IN TAB27 - PLEASE REINQUIRE
13557 EXCL-FILE-FEED-FLAG = YES, BUT NO ACTIVE SERIES AFTER EXPIRATION
13558 INCOMPLETE COMMODITY PRODUCT SETUP DETECTED
13559 DIFFERENT EXPIRATION DATES FOR IPS AND LEG PRODUCT(S) DETECTED
13560 NOT ALL PRODUCTS PROCESSED - ONE PRODUCT NOT READY - TRY LATER
13561 FINAL SETTLEMENT PRICE MISSING
13562 CONTRACT STATE RECORD MISSING
13563 ERROR DURING CONTR STATE CHG
13564 INCOMPATIBLE CONTRACT STATE
13565 INVALID STATE CHANGE CURRENT STATE ALREADY AT REQUESTED STATE
13566 CASH INST IS IN USE, DELETION NOT POSSIBLE
13567 THERE CAN ONLY BE ONE CENTRAL BANK PER CLGHSE AND CURR
13568 CLEARING HOUSE ACCOUNT FIELDS MUST BE BLANK
13569 CLEARING HOUSE ACCU ACCOUNT AND CSD CUSTOMER CANNOT BE BLANK
13570 CLEARING HOUSE MAIN ACCOUNT CANNOT BE BLANK
13571 CLEARING HOUSE SWIFT ADDRESS AND NAME CANNOT BE BLANK
13572 CURRENCY NOT VALID FOR THIS FORMAT
13573 INVALID SETTLEMENT BANK TYPE/FORMAT COMBINATION
13574 INVALID CLEARING HOUSE
13575 SETTLEMENT BANK ID CANNOT BE BLANK
13576 NATIONAL CLEARING SYSTEM CODE FORMAT ERROR
13577 SETTLEMENT BANK SWIFT ADDRESS MUST BE BLANK
13578 SETTLEMENT BANK SWIFT ADDRESS AND NAME CANNOT BE BLANK
13579 CURRENT SETTLEMENT MUST BE 'P' IF NORMAL SETTLEMENT IS 'P'
13580 CURRENCY PRODUCTS CAN ONLY HAVE NORMAL SETTLEMENT IND EQUAL TO 'P'
13581 PAYMENT BANK STILL EXISTS FOR THE CENTRAL BANK
13582 INVALID BANK TYPE CODE
13583 FOR SWIFT USAGE ONLY 35 CHARACTERS ARE ALLOWED
13584 NOT A VALID SETTLEMENT BANK
13585 SWIFT NAME MUST NOT BE CHANGED
13586 AUCTION TIME BIG MUST BE GREATER OR EQUAL TO AUCTION TIME SMALL
13587 REST TIME BIG MUST BE GREATER OR EQUAL TO REST TIME SMALL
13588 SETTLEMENT BANK SWIFT ADDRESS INVALID FOR PRODUCTION AREA
13589 SETTLEMENT BANK SWIFT ADDRESS INVALID FOR TEST AREA
13600 MARKET RESET EVENT NOT YET PROCESSED
13601 SPREAD ORDERS ARE NOT YET ACTIVATED
13602 STOP ORDERS ARE NOT YET TRIGGERED
13603 MOC ORDERS ARE NOT YET PROCESSED
13604 COMBINATION ORDERS ARE NOT YET HALTED
13605 STRATEGY ORDERS ARE NOT YET PROCESSED
13606 TRADE STATISTICS ARE NOT YET UPDATED
13607 MARKET RESET OCCURRED IN THE FREEZE STATE
13608 STRATEGY INSIDE MARKET NOT YET UPDATED
13609 DUPLICATE USER ORDER REFERENCE
13610 VALUES ADD OF ETS NON PERSISTENT ORDER IS NOT SUPPORTED
13611 VALUES MODIFICATION OF ETS NON PERSISTENT ORDER IS NOT SUPPORTED
13612 ETS ORDER MAINTENANCE OF OTHER SESSION'S ORDER NOT SUPPORTED
13613 VALUES OVERWRITE OF ETS QUOTE NOT SUPPORTED
13614 ETS OVERWRITE OF OTHER SESSION'S QUOTE NOT SUPPORTED
13615 INVALID ON BEHALF ETS SESSION ID FOR MEMBER
13616 ENHANCED ORDER VALIDATION - INVALID PRICE
13617 EXCHANGE AFFILIATION UNKNOWN
13618 WRONG EXCHANGE FOR PRODUCT GROUP
13619 SESSION ALREADY CONNECTED
13620 INVALID SESSION ID
13621 ETS BROADCAST FLAG SET IN BATCH NOT YET PROCESSED
13622 COLLATERAL ACCOUNT IS ALREADY USED
13623 COLLATERAL ACCOUNT IS USED FOR COLLATERAL DEPOSIT
13624 CURRENCY IS NOT ALLOWED FOR COLLATERAL
13625 NOT ENOUGH MARGIN ACCOUNTS EXIST
13626 INVALID CSD ID ACCOUNT FOR MEMBER
13627 STATUS OF COLL ENGINE DOESNT ALLOW THIS ACTION
13628 COLLATERAL ACCOUNT FOR USAGE MARGIN MISSING
13629 VOLA STRAT UNDER ID CHANGE NOT ALLOWED
13630 ONE SIDED QUOTE NOT ALLOWED FOR OPTIONS
13631 ONE SIDED QUOTE NOT ALLOWED FOR THIS PRODUCT
13632 USER NOT AUTHORISED TO MODIFY CASH LIMITS
13633 COLLATERAL TRN HAS TO BE PERFORMED BY DIFFERENT USER
13634 INCORRECT TRANSITION FOR COLLATERAL TRANSACTION
13635 NOT ENOUGH COVERAGE FOR COLLATERAL WITHDRAWAL TRN
13636 COLLATERAL TRANSACTION ALREADY FINAL
13637 COLLATERAL TRANSACTION APPLICATION ERROR
13638 UNKNOWN MARGIN TYPE ONLY M,C,F ARE ALLOWED
13639 UNKNOWN ERROR OCCURED
13640 USAGE CODE - COLLATERAL ACCOUNT MISSMATCH
13641 TOTAL QUANTITY ALLOWED FOR DEPOSIT EXCEEDED
13642 FRACTIONS ARE NOT ALLOWED FOR STOCKS
13643 CSD COLL ACCOUNT DOES NOT EXIST
13644 COLLATERAL ACCOUNT NOT FOR USAGE MARGIN
13645 DELETE NOT ALLOWED FOR DEFAULT VALUES
13646 RECORD NOT FOUND IN TODAY'S DATA OR TRYING TO DEL HIST DATA
13647 CSDREF/BUSINESS PARTNER ID IS MANDATORY FOR CSD EQUAL SIS
13648 CAN'T CHANGE DECIMALS, TODAY'S PRICE NOT SET
13649 CAN'T CHANGE EXCHANGE, TODAY'S PRICE NOT SET
13650 CAN'T CHANGE PRICE SOURCE, TODAY'S PRICE NOT SET
13651 FOR BOND ONLY 2 DECIMALS PLACES ARE ALLOWED IN THE AMOUNT
13652 NO DATA AVAILABLE
13653 EXCLUSIVE FILE FEED SET TO YES NOT ALLOWED FOR NEW ADDED PRODUCTS
13654 OTM EXERCISE: FOUR EYE APPROVAL IS REQUIRED
13655 FOUR EYE APPROVAL IS REQUIRED
13656 GATEWAY SESSION LOGIN TIMEOUT
13996 INCOMPATIBLE TRADE ORIGIN TYPE WITH TRADE TYPE SELECTION
13998 INVALID MINIMUM AND MAXIMUM TRADE EVENT SEQUENCE SELECTION
13999 INVALID MINIMUM AND MAXIMUM TRADE TIME SELECTION
14197 FINAL SETTLEMENT PRICE HAS TO BE ENTERED
14198 FINAL SETTLEMENT PRICE NOT ALLOWED FOR THIS PRODUCT
14199 FINAL SETTLEMENT PRICE HAS TO BE ZERO
14481 STOCK OPTIONS AND FUTURES MUST HAVE NORMAL SETTLEMENT='S' OR 'C'
14711 TRADING NOT ALLOWED IN THIS PRODUCT BY AMERICAN TRADERS
14712 US-TRADER: ASS.NOT ALLOWED
14713 INVALID CASCADE ID
14714 EITHER PRODUCT OR CASCADE ID HAS TO BE ENTERED
14715 CASCADE ID ALREADY EXISTS
14716 INVALID EFP PRICE RANGE TYPE
14717 INVALID EFP PRICE RANGE
14718 NOT POSSIBLE FOR POPULATED CASCADE
14719 NOT POSSIBLE FOR PRODUCT WHICH IS MEMBER OF CASCADE
14720 PRODUCT IS STILL TARGET OF POSITION BREAKDOWN
14721 PRODUCT CANNOT BE MEMBER OF MORE THAN ONE CASCADE
14722 INVALID DELIVERY AMOUNT PER TIME UNIT
14723 INVALID DELIVERABLE TIME UNITS PER DAY
14724 INVALID DELIVERY CALENDAR
14725 INVALID LEVEL IN CASCADE
14726 INVALID SETTLEMENT TYPE
14727 INVALID NUMBER OF BASE CONTRACTS
14728 INVALID POSITION BREAKDOWN PRODUCT
14729 PRODUCT MUST BE A BASE PRODUCT
14730 EXPIRATION DATE MUST BE LATER
14731 INVALID COMBINATION ACTIONCOD AND REQUEST INDICATOR
14732 INCONSISTENT NUMBER OF SERIES IN CASCADE BASE PRODUCT
14733 PRODUCT IS NOT A MEMBER OF THIS CASCADE
14734 PRODUCT IS NOT AN COMMODITY FUTURE PRODUCT
14735 PRODUCT AND CASCADE DELIVERY PARAMETERS NOT IDENTICAL
14736 ONLY CHANGE OR INQUIRY IS ALLOWED FOR COMMODITY PRODUCTS
14737 INVALID CASCADE DESCRIPTION
14738 VOLA TRADE HAS ALREADY BEEN APPROVED
14739 NO VOLA TRADE FOUND
14740 COUPON FREQUENCY HAS VALUE IN RANGE 1 TO 99
14741 ENTERED FUTURE QUANTITY IS TOO SMALL
14742 ONE ACCOUNT MUST BE A1 FOR SAME BUYER AND SELLER
14743 VOLA TRADE IS NOT ALLOWED
14744 QUANTITY MUST BE GREATER THAN OR EQUAL TO MINIMUM VOLA SIZE
14745 INVALID UNDERLYING FOR ASSOCIATED OPTIONS CONTRACT
14746 INELIGIBLE COUNTERPARTY OR DELTA OR CONTRACT COMB
14747 VOLA TRADING IS ONLY ALLOWED ON FUTURES
14748 NO DELIVERED BOND EXISTS FOR THIS INSTRUMENT
14749 PROHIBITED: VOLA TRADE HAS ALREADY BEEN APPROVED
14750 QUANTITY EXCEEDS AMOUNT AVAILABLE
14751 ENTERED FUTURE QUANTITY IS TOO LARGE
14752 ZERO VALUE CANNOT DETERMINE IMPLIED VOLATILITY
14753 SELL SIDE OF VOLA TRADE ALREADY EXISTS
14754 BUY SIDE OF VOLA TRADE ALREADY EXISTS
14755 MEMBERS DO NOT MATCH THE OPTIONS TRADE
14756 UNUSED OPTION QUANTITY EXCEEDED
14757 CURRENCY CODE NOT VALID FOR THIS CASCADE
14758 PRODUCT MISMATCH BETWEEN VOLA AND OPTION PRODUCT
14759 INVALID CSD FOR MEMBER
14760 INVALID CSD ID
14761 MEMBER CAN NOT SETTLE ISIN
14762 INVALID CUSTODIAN ID
14763 INVALID MEMBER CSD RELATIONSHIP
14764 INVALID ISIN
14765 CANNOT DELETE IF A GROUP IS ASSIGNED TO THIS CLASS
14766 INVALID MEMBER SECURITY RELATIONSHIP
14767 CUSTODIAN ALREADY EXISTS
14768 CSD ALREADY EXISTS
14769 PLEASE USE VALUES API INTERFACE
14770 INVALID PRODUCT FOR MEMBER
14771 MEMBER IS COMMODITIES EXCHANGE MEMBER
14772 AWV COUNTRY CODE REQUIRED FOR GCM AND DCM
14773 DELIVERY ACCOUNT REQUIRED FOR GCM AND DCM
14774 COMPANY CAPITAL ACCOUNT REQUIRED FOR GCM AND DCM
14775 CURRENCY TYPE IS REQUIRED FOR GCM AND DCM
14776 ONLY OPTIONS ON STOCKS SHOULD BE COVERABLE
14777 INVALID THEORETICAL MODEL CODE
14778 ONLY OPTION PRODUCTS HAVE A THEORETICAL MODEL CODE
14779 THEORETICAL UNDERLYING IS NOT A VALID PRODUCT
14780 THEORETICAL UNDERLYING IS NOT A FUTURES PRODUCT
14781 ONLY OPTIONS ON INDEX HAVE THEORETICAL UNDERLYING
14782 MAXIMUM ORDER QTY EXCEEDED
14783 NO FULL MATCH TRADES AVAILABLE
14784 USER IS NOT ALLOWED TO CHANGE MS RESOURCE LEVEL
14785 CSD IS SELECTED AS SETTLEMENT LOCATION FOR AN ISIN
14786 MEMBER CURRENCY RELATION DOES NOT EXIST
14787 CURRENCY IS NOT ALLOWED FOR EUREX
14788 INVALID COLLATERAL ACCOUNT FOR GCM OR DCM MEMBER
14789 INVALID NEURCSH ACCOUNT FOR GCM OR DCM MEMBER
14790 INVALID CLG FLAG FOR MEMBER TYPE
14791 INVALID TRD FLAG FOR MEMBER TYPE
14792 OCC CLG FLAG NOT SET FOR CLG MEMBER
14793 INVALID TRD/CLG FLAG COMBINATION FOR MEMBER TYPE
14794 CHANGE NOT ALLOWED, OCC TRD FLG SET FOR NCM
14795 CHANGE NOT ALLOWED, OCC PRODUCTS ASSIGNED TO THE MEMBER
14796 MAIN ACCT ALREADY USED TODAY BY OTHER MEMBER
14797 CLGF ACCT ALREADY USED TODAY BY OTHER MEMBER
14798 CMPC ACCT ALREADY USED TODAY BY OTHER MEMBER
14799 NEURCSH ACCT ALREADY USED TODAY BY OTHER MEMBER
14800 GIVEN MAIN ACCT ALREADY USED AS COLL ACCT
14801 GIVEN CLGF ACCT ALREADY USED AS COLL. ACCT
14802 GIVEN CMPC ACCT ALREADY USED AS COLL ACCT
14803 GIVEN NEURCSH ACCT ALREADY USED AS COLL. ACCT
14804 GIVEN COLL ACCT ALREADY USED AS MAIN ACCT
14805 GIVEN CLGF ACCT ALREADY USED AS MAIN ACCT
14806 GIVEN CMPC ACCT ALREADY USED AS MAIN ACCT
14807 GIVEN NEURCSH ACCT ALREADY USED AS MAIN ACCT
14808 GIVEN COLL ACCT ALREADY USED AS CLGF ACCT
14809 GIVEN MAIN ACCT ALREADY USED AS CLGF ACCT
14810 GIVEN CMPC ACCT ALREADY USED AS CLGF ACCT
14811 GIVEN NEURCSH ACCT ALREADY USED AS CLGF ACCT
14812 GIVEN COLL ACCT ALREADY USED AS CMPC ACCT
14813 GIVEN MAIN ACCT ALREADY USED AS CMPC ACCT
14814 GIVEN CLGF ACCT ALREADY USED AS CMPC ACCT
14815 GIVEN NEURCSH ACCT ALREADY USED AS CMPC ACCT
14816 GIVEN COLL ACCT ALREADY USED AS NEURCSH ACCT
14817 GIVEN MAIN ACCT ALREADY USED AS NEURCSH ACCT
14818 GIVEN CLGF ACCT ALREADY USED AS NEURCSH ACCT
14819 GIVEN CMPC ACCT ALREADY USED AS NEURCSH ACCT
14820 COLL ACCT ASSIGNED TO SOME OTHER MEMBER ACCT
14821 MAIN ACCT ASSIGNED TO SOME OTHER MEMBER ACCT
14822 CLGF ACCT ASSIGNED TO SOME OTHER MEMBER ACCT
14823 CMPC ACCT ASSIGNED TO SOME OTHER MEMBER ACCT
14824 NEURCSH ACCT ASSIGNED TO SOME OTHER MEMBER ACCT
14825 INSUFFICIENT TRADER AUTHORIZATION FOR MEMBER OR USER
14826 UNKNOWN EXCHANGE AFFILIATION OF MS USER
14827 UNKNOWN EXCHANGE AFFILIATION OF ON BEHALF MS USER
14828 UNKNOWN EXCHANGE AFFILIATION OF MEMBER
14829 UNKNOWN EXCHANGE AFFILIATION OF PRODUCT OR TYPE
14830 ON BEHALF USER DOES NOT BELONG TO ALLOWED EXCHANGE
14831 MEMBER DOES NOT BELONG TO ALLOWED EXCHANGE
14832 PRODUCT OR TYPE DOES NOT BELONG TO ALLOWED EXCH
14833 TRANSACTION NOT KNOWN FOR EXCH SPECIFIC VALIDATION
14834 TRANSACTION NOT ALLOWED FOR THIS EXCHANGE
14846 OPTION PRODUCT REQUIRED
14851 ONLY IPS PARAMETERS MAY BE ENTERED FOR AN IPS
14852 IPS LEGS MUST BE FUTURE PRODUCTS
14854 PRODUCT MISMATCH BETWEEN FUTURE AND OPTION PRODUCT
14855 CURRENCY IS NOT COMPATIBLE
14856 PRC TRIGGER UNDER MUST BE F OR U
14863 ONLY GOOD FOR DAY ORDER ALLOWED
14864 INVALID TRANSACTION DURING THE CURRENT STATE
14866 COMBINATION TRANSACTIONS NOT ALLOWED
14868 FUTURE SIZE TOO BIG. REENTER WITH SMALLER QUANTITY
14869 SECOND LEG NOT FOUND
14870 ORDER NO LONGER IN BOOK
14871 WILDCARD NOT ALLOWED FOR THIS EXCHANGE
14874 CHANGE OF SUBGROUP IS NOT ALLOWED
14876 MUST CHANGE OVER SERIES ON SCREEN D060 FIRST
14877 IF SPECIFIED, TIME FRAME 2 MUST BE GREATER THAN TIME FRAME 1
14878 ALL PARAMETERS MUST BE NON-ZERO BEFORE VOL INT CAN BE ENABLED
14879 FTOLCA CONSISTENCY CHECK FAILED
14880 INVALID AWV COUNTRY
14881 STOCK OPTIONS MUST HAVE THE NORMAL SETTLEMENT INDICATOR EQUAL TO 'S'
14882 SECURITY GROUP LIMIT MUST BE BETWEEN 0 AND 1
14883 INVALID ORIG EXCH
14884 INVALID SUBGROUP FOR EUREX TRADE
14885 PRODUCT IS STILL IN USE
14886 DUPLICATE PRIORITY FOR MEMBER
14887 LIMIT FOR EUREX CURRENCIES HAS ALREADY BEEN REACHED
14888 RECORD HAS ALREADY BEEN MARKED FOR DELETION - CHECK K160
14889 CANNOT CHANGE PRICE STEPS TABLE FOR AN IPS LEG
14890 CANNOT CHANGE PRICE STEPS TABLE FOR IPS WITH LEGS
14891 MAXIMUM WHOLESALE QUANTITY EXCEEDED
14892 MAXIMUM CALENDAR SPREAD QUANTITY EXCEEDED
14893 EFPI ALLOWED ONLY FOR INDEX FUTURES
14894 WHOLESALE FUTURE PRICE RANGE MUST BE ZERO FOR OPTIONS
14895 WHOLESALE FUTURE PRICE RANGE OUT OF RANGE
14896 BLOCK TRADE MINIMUM SIZE MUST BE NON-ZERO
14897 BLOCK TRADE MINIMUM SIZE MUST BE ZERO
14898 INVALID SOURCE EXCHANGE ID FOR UNDERLYING
14899 FLEX FLAG ALLOWED ONLY WHEN BLOCK TRADE ALLOWED
14900 FLEX FLAG NOT ALLOWED FOR SETTLEMENT TYPE
14902 FLEX FLAG NOT ALLOWED FOR MARGIN STYLE
14903 VOLA MINIMUM SIZE MUST BE ZERO FOR NON VOLA ALLOWED PRODUCT
14904 VOLA MINIMUM SIZE IS INVALID
14905 VOLA DELTA RANGE MUST BE ZERO FOR NON VOLA ALLOWED PRODUCT
14906 VOLA DELTA RANGE IS INVALID
14907 INVALID SETTLEMENT TYPE FOR FLEXIBLE CONTRACT
14908 FLEXIBLE CONTRACT MUST BE UNADJUSTED FOR THIS ACTION
14909 INVALID PRODUCT OR PRODUCT LINE FOR FLEXIBLE CONTRACT
14910 INVALID DATA IN FLEXIBLE CONTRACT REQUEST
14911 INVALID QUANTITIES IN FLEXIBLE TRADE SEPARATION
14912 NOT ENOUGH POSITIONS TO BE CLOSED
14913 EXPIRATION DATE CANNOT BE GREATER THAN STANDARD MATURITY
14914 INVALID TRADE STATUS FOR THIS ACTION
14915 PRODUCT ID ALREADY EXISTS
14916 PRODUCT ID INVALID
14917 CHANGE OF PRODUCT ID NOT ALLOWED
14918 CHANGE OF PRODUCT TYPE NOT ALLOWED
14919 PRODUCT NAME CONTAINS ILLEGAL CHARACTER(S)
14920 CONFLICTING HOLIDAY AND EXPIRY DATE
14921 CHANGE OF CURRENCY NOT ALLOWED
14922 INVALID TRADING UNIT
14923 TRADING UNIT HAS TO BE EMPTY/ZERO
14924 CHANGE OF TRADING UNIT NOT ALLOWED
14925 TRADING UNIT HAS TO BE 1.0000
14926 CHANGE OF IPS FLAG NOT ALLOWED
14927 INVALID IPS
14928 CANNOT CHANGE IPS FLAG FOR IPS WITH LEGS
14929 FACE AMOUNT HAS TO BE GREATER THAN ZERO
14930 FACE AMOUNT HAS TO BE EMPTY/ZERO
14931 NOTIONAL RATE AND BOND AGE YEARS HAVE TO BE GREATER THAN ZERO
14932 NOTIONAL RATE AND BOND AGES HAVE TO BE EMPTY/ZERO
14933 US TRD FLG INCOMPATIBLE IN IPS LEGS
14934 CHANGE OF ISIN NOT ALLOWED
14935 DUPLICATE ISIN
14936 CONFLICTING HOLIDAY AND SERIES CREATION DATE
14937 MARGIN STYLE CAN BE ONLY 'F' OR 'T' FOR OPTIONS
14938 ISIN CHANGE FORBIDDEN - FIRST DELETE OLTRAN MSG. ON K160
14939 UNDERLYING SECURITY MUST BE OF TYPE S FOR 'STK'
14940 PRICE RECEIVE CODE “O” VALID ONLY FOR FUTURES
14941 ONLY OPTIONS HAVE VOLA STRAT UNDERLYING
14942 VOLA STRAT UNDERLYING IS NOT A VALID PRODUCT
14943 VOLA STRAT UNDERLYING IS NOT A FUTURES PRODUCT
14944 EXCLUSIVE FILE FEED FLAG INVALID (Y/N ALLOWED)
14945 AVOID PRICE MOVEMENT OR NEW EXP MONTH INVALID (Y/N ALLOWED)
14946 UL SERIES ADD PERIOD MUST BE FOR FUTURES ZERO
14947 UL SERIES ADD PERIOD MUST BE FOR OPTIONS 1 OR 2
14948 NO SERIES ADD MUST BE > ZERO
14949 INVALID EXCHANGE AFFILIATION
14950 INVALID VALUE IN QUOTE REQ PERCENTAGE
14951 PROD MTCH TYPE CHANGE FORBIDDEN - FIRST DELETE OLTRAN MSG. ON K160
14952 PROD MTCH TYPE CANNOT CHANGE FOR IPS
14953 DECIMALS & TICS CHANGE FORBIDDEN - FIRST DELETE OLTRAN MSG. ON K160
14954 INVALID SETTLEMENT DECIMALS
14955 INVALID PRODUCT DECIMALS
14956 INVALID EXERCISE DECIMALS
14957 EXERCISE AND UNDERLYING DECIMALS DIFFERENT
14958 EXERCISE DECIMAL CHANGE FORBIDDEN - FIRST DELETE OLTRAN MSG. ON K160
14959 INVALID FORMAT OF FIN STL TIME
14960 INVALID CURRENT SETTLEMENT CODE
14961 INVALID NORMAL SETTLEMENT CODE
14962 NORMAL SETTLEMENT FOR OSTK AND FSTK MUST BE ‘C’ OR ‘S’
14963 EXERCISE STYLE MUST BE BLANK FOR FUTURES
14964 EXERCISE STYLE MUST BE ‘A’ OR ‘E’
14965 CHANGE OF SETTLEMENT PERIOD FLAG NOT ALLOWED
14966 SETTLEMENT PRICE TYPE INVALID
14967 FINAL SETTLEMENT PRICE TYPE INVALID
14968 FLEX CSH SETTLEMENT FLAG INVALID (Y/N ALLOWED)
14969 NO SETTLEMENT TYPE ENABLED FOR FLEXIBLE PRODUCT
14970 FLEX CSH SETTLEMENT FLAG ALLOWED ONLY FOR FLEXIBLE PRODUCT
14971 FLEX PHYS SETTLEMENT FLAG INVALID (Y/N ALLOWED)
14972 FLEX PHYS SETTLEMENT FLAG MUST BE N FOR CURRENT SETTLEMENT
14973 FLEXPHYS SETTLEMENT FLAG ALLOWED ONLY FOR FLEXIBLE PRODUCT
14974 FLEX CSH SETTLEMENT PERIOD INVALID
14975 FLEX CSH STL PERIOD MUST NOT BE LESS THAN THE CURRENCY SETTLEMENT PERIOD
14976 FLEX PHYS SETTLEMENT PERIOD INVALID
14977 MM ONLY QUOTE FLAG INVALID (Y/N ALLOWED)
14978 CHANGE OF MAX PRICE NOT ALLOWED
14979 EQUAL SPREAD QUANTITY FLAG INVALID (Y/N ALLOWED)
14980 CHANGE OF EQL QTY SPREAD FLAG NOT ALLOWED
14981 ONE SIDED QUOTE FLAG INVALID (Y/N ALLOWED)
14982 CHANGE OF ONE SIDED QUOTE FLAG NOT ALLOWED
14983 ONE SIDED QUOTE FLAG CANNOT BE 'Y'
14984 FAST MARKET PERCENTAGE INVALID
14985 CHANGE OF FAST MARKET PCNT NOT ALLOWED
14986 MARKET ORDER MATCH RANGE INVALID
14987 CHANGE OF MARKET ORDER MATCH RANGE NOT ALLOWED
14988 MAXIMUM ORDER QUANTITY MUST BE ZERO
14989 MAX STRATEGY QUOTE SPREAD MUST BE MULTIPLE OF TICK SIZE
14990 MAX STRATEGY QUOTE SPREAD MUST BE ZERO FOR FUTURES
14991 PRICE RANGE TYPE SPREAD IS NOT ALLOWED FOR FUTURES
14992 PRICE RANGE TYPE INVALID
14993 PRICE RANGE INVALID
14994 STRATEGY MATCH TYPE INVALID (VALID: N/O/I)
14995 ASYNC OVER UPDATE FLAG INVALID (Y/N ALLOWED)
14996 ASYNC OVER UPDATE DEPTH OUT OF RANGE (1-10)
14997 ASYNC OVER UPDATE DEPTH HAS TO BE ZERO
14998 BCAST GROUP INVALID (VALID: ALPHABETIC OR ZERO)
14999 BCAST GROUP INVALID: PRODUCT HAS SERIES WITH ASYNC-OVER-UPDATE-FLAG
15000 PRICE STEP TABLE MUST BE POSITIVE NUMBER
15001 PRICE STEP TABLE NOT FOUND IN FPTABLES
15002 PRICE STEP TABLE NOT COMPATIBLE WITH TICK SIZE
15003 INVALID ROUND LOT
15004 VOLA INTERRUPT MUST BE DISABLED
15005 VOLA INTERRUPT PERIOD MUST BE POSITIVE NUMBER
15006 VOLA INTERRUPT PERIOD MUST BE EMPTY
15007 MAX DEV TF1 MUST BE POSITIVE NUMBER
15008 MAX DEV TF1 MUST BE EMPTY
15009 MAX DEV TF1 FAST MUST BE POSITIVE NUMBER
15010 MAX DEV TF1 FAST MUST BE EMPTY
15011 MAX DEV TF2 MUST BE POSITIVE NUMBER
15012 MAX DEV TF2 MUST BE EMPTY
15013 MAX DEV TF2 FAST MUST BE POSITIVE NUMBER
15014 MAX DEV TF2 FAST MUST BE EMPTY
15015 PERCENT PRICE RANGE MUST BE ZERO
15016 PERCENT PRICE RANGE FAST MUST BE ZERO
15017 ABSOLUTE PRICE RANGE MUST BE ZERO
15018 ABSOLUTE PRICE RANGE TOO HIGH
15019 ABSOLUTE PRICE RANGE MUST BE MULTIPLE OF TICK SIZE
15020 ABSOLUTE PRICE RANGE FAST MUST BE ZERO
15021 ABSOLUTE PRICE RANGE FAST TOO HIGH
15022 ABSOLUTE PRICE RANGE MUST BE MULTIPLE OF TICK SIZE
15023 PRODUCT TYPE AND PRODUCT MISMATCH
15024 INVALID QUOTE MIN QUANTITY
15025 INVALID QUOTE MIN QUANTITY FOR FAST MARKET
15027 UPDATE CANNOT BE MADE UNLESS CLG RELATIONSHIPS EXIST FOR ALL MEMBERS
15029 RELATION MUST BE ACTIVE
15030 TIC SIZE AND TIC VALUE MUST BE GREATER THAN ZERO
15031 UNDERLYING AND PRODUCT CURRENCIES DIFFER
15032 MM ONLY QUOTE FLAG HAS TO BE N FOR FUTURES
15034 AVOID PRC MVMT AND NEW EXP MTH MUST BE N FOR FUTURES
15035 CHANGE OF QUOTE MIN QUANTITY IS NOT ALLOWED
15036 CHANGE OF QUOTE MIN QUANTITY FOR FAST MARKET IS NOT ALLOWED
15037 INTERNAL SYSTEM ERROR
15038 UL NAME CHANGE DISALLOWED FOR UL PRC RCV COD
15039 EXTERNAL UNDERLYING MUST HAVE AN EXTERNAL EXCHANGE
15040 EFPI NOT ALLOWED FOR EMPTY BLOCK EXCHANGE ID
15041 FLEX PHYS SETL (SHARE) REQUIRES PRC RCV CODE EXTERNAL
15042 FLEX PHYS SETL (SHARE) REQUIRES CNTRPRTY ACCOUNT NO FOR SECURITY
15043 FLEX PHYS SETL (DERIVATIVE) REQUIRES PRC RCV CODE INTERNAL
15044 FLEX PHYS SETL (PVP) FOR CURRENCY PRODUCTS ONLY
15045 FLEX PHYS SETL NOT AVAILABLE FOR CURRENT SETL TYPE
15061 EXPIRATION DATE MISSING
16660 INVALID USER DEVICE SOFTWARE VERSION NUMBER
17500 TRADE NOT APPROVED
17501 UNKNOWN CALL PUT FLAG - ONLY C/P ALLOWED
17503 INVALID TRADER ID
17505 TAKEUP MEMBER ID MUST BE BLANK
17506 G1/G2 ACCOUNT NOT ALLOWED FOR MODIFY REQUEST
17507 EXERCISE PRICE HIGHER THAN PRICE RANGE HIGHER BOUNDARY
17508 EXERCISE PRICE LOWER THAN PRICE RANGE LOWER BOUNDARY
17509 ABANDON OF AUTOMATIC EXERCISE MUST BE SET TO Y OR N
17510 AUTOMATIC EXERCISE CANNOT BE SET FOR SELL SIDE
17511 NO TRADE PRICE AVAILABLE
17512 OPTION PRICE LOWER THAN PRICE RANGE LOWER BOUNDARY
17513 OPTION PRICE HIGHER THAN PRICE RANGE HIGHER BOUNDARY
17514 A STANDARD CONTRACT SERIES EXISTS WITH SAME PROPERTIES
17515 FROM PRODUCT MUST NOT BE THE SAME AS THE TO PRODUCT
17516 FLEX ID MAPPING ALREADY EXISTS
17517 ERROR GENERATING FLEX ID
17518 ERROR CHECKING FLEX ID
17519 FLEX ID COLLIDES WITH PRODUCT ID
17520 MODIFY NOT ALLOWED - FLEXIBLE CONTRACT IS ALREADY EXERCISED
17521 CASH SETTLED OPTION NOT IN-THE-MONEY
17522 EXERCISE PRICE NEEDS TO HAVE THE SAME PRECISION AS THE UNDERLYING FUTURE
17601 TRADE REPROCESSED SUCCESSFULLY
17602 TRADE SET TO SKIPPED
17603 FAILED XML PARSING OR MISSING MANDATORY FIELD
17604 WRONG TRADE DATE
17605 WRONG OCC MATURITY/EXPIRY DATE
17606 BAD FORMAT FOR TRANS TIME
17607 MISSING TRANS TIME
17608 BAD FORMAT FOR TXN TIME
17609 MISSING TXN TIME
17610 INCORRECT EUREX MEMBER
17611 ERROR Parsing EUREX MEMBER
17612 INCORRECT OCC MEMBER ID
17613 INVALID OCC ACCOUNT TYPE
17614 OCC/EUREX PRODUCT MAPPING NOT FOUND
17615 PRODUCT IN POST RESTRICTED STATUS
17616 MEMBER CANNOT TRADE THE PRODUCT
17617 OCC/EUREX PRODUCT MAPPING NOT FOUND
17618 MAPPING EUREX TRADE NOT FOUND FOR REVERSAL
17619 UNKNOWN TRADE TYPE
17620 DUPLICATE OCC REPORT/TRADE ID
17621 PRICE INVALID TO CONTRDECIMALS
17622 APPLICATION ERROR IN TRADE UPLOAD. PLEASE CHECK OPERATOR LOG
17736 CONTRACT VALUE FOR THIS PRODUCT IS LIMITED TO 100 MIO. CHF
17740 INVALID COUPON FREQUENCY
17741 INVALID COUPON RATE
17742 INVALID COUPON VARIABLE RATE REFERENCE
17743 INVALID COUPON VARIABLE RATE OFFSET
17744 CURRENCY MISMATCH BETWEEN BOND AND PRODUCT
17745 EFP-FIN TRADE HAS ALREADY BEEN APPROVED
17746 EFS TRADE HAS ALREADY BEEN APPROVED
17747 UNKNOWN BOND - SPECIFY DETAILS
17748 EFP-INDEX HAS ALREADY BEEN APPROVED
17749 NO TRADE PRICE FOR OPTIONS UNDERLYING
17750 NO TRADE PRICE IN FUTURE
17751 LEPO PRICE LOWER THAN LEPO PRICE RANGE LOWER BOUNDARY
17752 LEPO PRICE HIGHER THAN LEPO PRICE RANGE UPPER BOUNDARY
17753 FUTURE PRICE LOWER THAN FUTURE PRICE RANGE LOWER BOUNDARY
17754 FUTURE PRICE HIGHER THAN FUTURE PRICE RANGE UPPER BOUNDARY
17755 FUTURE PRICE LOWER THAN WHOLESALE FUTURE PRICE RANGE LOWER BOUNDARY
17756 FUTURE PRICE HIGHER THAN WHOLESALE FUTURE PRICE RANGE UPPER BOUNDARY
17757 OPTION PRICE LOWER THAN WHOLESALE OPTION PRICE RANGE LOWER BOUNDARY
17758 OPTION PRICE HIGHER THAN WHOLESALE OPTION PRICE RANGE UPPER BOUNDARY
17759 STRATEGY PRICE LOWER THAN WHOLESALE STRATEGY PRICE RANGE LOWER BOUNDARY
17760 STRATEGY PRICE HIGHER THAN WHOLESALE STRATEGY PRICE RANGE UPPER BOUNDARY
17761 FUTURE PRICE LOWER THAN EFP FUTURE PRICE RANGE LOWER BOUNDARY
17762 FUTURE PRICE HIGHER THAN EFP FUTURE PRICE RANGE UPPER BOUNDARY
18000 CASH SETTLE FRACTION MUST BE 'Y' FOR CAPITAL DECREASES
18005 NO NEW SHARES ALLOWED FOR CAPITAL DECREASES
18010 MORE THAN ONE CAPITAL ADJUSTMENT PER PRODUCT AND DAY IS NOT ALLOWED
18012 ONLY ONE CAPITAL ADJUSTMENT PER ODD LOT PRODUCT AND DAY IS ALLOWED
18015 MAXIMUM # OF CAPITAL ADJUSTMENTS HAS BEEN EXCEEDED FOR THIS UNDERLYING
18020 CYCLE CODE CHANGE BLOCKED BY ODD LOT CAPITAL ADJUSTMENT
18500 ORDER ROUTING KEY OVERFLOW ORI-MSG
18501 USER DEVICE SYSTEM APPLICATION ERROR ORI-MSG
18503 TRADING NOT POSSIBLE - CHECK UD/HOST AVAILABILITY ORI-MSG
18506 SECURITY VIOLATION DURING PROCESSING - TRADER SIGNON ORI-MSG
18510 ERROR IN ORPI_ASSIGN ORI-MSG
18511 ERROR IN ORPI_DEASSIGN ORI-MSG
18512 ERROR OCCURRED IN WRITE TO FILE ORI-MSG
18513 ERROR OCCURRED IN WRITE TO HISTORY FILE ORI-MSG
18514 ERROR OCCURRED IN READ FROM FILE ORI-MSG
18516 TRADER TABLE HAS REACHED MAXIMUM CAPACITY ORI-MSG
18517 NO FIELD TO BE CHANGED IN THE ORDER ORI-MSG
18519 PRICE REASONABILITY FLAG NOT = Y OR N ORI-MSG
18520 DUPLICATE ORDER INPUT ORI-MSG
18524 ORDER RECOVERED TO ORDER STATUS RCVRFAIL ORI-MSG
18600 SEVERE ERROR OCCURRED DURING PROCESSING
19000 INVALID SERIES VERSION NUMBER
19005 INVALID EXPIRATION MONTH
19010 INVALID SERIES CLASS CODE
19011 INVALID SERIES CLASS CODE FOR PRODUCT TYPE
19015 INVALID EXPIRATION MONTH/YEAR CODE
19020 INVALID TICKER FORWARD PRICE CODE
19025 INVALID DISPLAY MODE
19026 INVALID DISPLAY MODE FOR PRODUCT TYPE
19030 INVALID TRADING SCREEN ID
19031 INVALID TRADING SCREEN ID FOR PRODUCT TYPE
19034 INPUT MUST EQUAL A OR N
19035 INPUT MUST EQUAL Y OR N
19036 INPUT MUST EQUAL Y, A OR N
19037 INPUT MUST EQUAL N
19040 INVALID TRANSACTION TIME
19045 POST EXERCISE CODE MUST = X
19050 INVALID ACTION CODE
19055 INVALID SECURITY ID CODE
19060 INVALID EXCHANGE ID CODE
19061 INVALID OWN/INSIDE CODE
19065 INVALID ORDER BUY/SELL CODE
19066 INVALID PRICE INDICATOR
19070 INVALID ORDER TYPE CODE
19075 INVALID OPEN/CLOSE CODE
19080 INVALID ORDER EXPIRATION DATE
19085 INVALID RESTRICTED ORDER CODE
19090 SELECTION CODE MUST = X
19095 SELECTION CODE MUST = X OR D
19100 INVALID ACCOUNT TYPE CODE
19105 INVALID CURRENCY TYPE CODE
19110 INVALID TRANSACTION TYPE CODE
19111 INVALID TRANSACTION TYPE CODE
19112 VALID TRAN TYPES ARE 516,518,520 AND 522
19113 INVALID TRANSACTION TYPE CODE FOR NON COMMODITY MEMBERS
19115 INVALID TRANSACTION DATE
19120 INVALID TICKER PROFILE NUMBER
19125 FATAL ERROR - PLEASE EXIT SCREEN
19130 ADDITION NOT VALID FOR THIS SCREEN
19135 ENTER ALPHABETIC CHARACTERS (A - Z) ONLY
19140 INVALID NUMBER - CONTAINS A NON NUMERIC CHARACTER
19145 INVALID DATE - CONTAINS A NON NUMERIC CHARACTER
19150 INVALID NUMBER - CONTAINS MULTIPLE DECIMALS POINTS
19155 INVALID NUMBER - CONTAINS A MISPLACED SIGN
19157 INVALID NUMBER - CONTAINS A MISPLACED COMMA
19160 INVALID NUMBER - CONTAINS MULTIPLE SIGNS
19165 INVALID NUMBER - NUMBER ENTERED IS NOT VALID
19170 INVALID NUMBER - NEGATIVE SIGN IS NOT VALID
19175 FATAL ERROR - ASSOCIATED DATA VALUE IS NOT VALID
19177 INVALID NUMBER - IN CONJUNCTION WITH BLANK SECU ID
19180 INCORRECT MENU SELECTION FOR CURRENT MENU
19185 ONLY NUMERIC CHARACTERS 01 THRU 99 ARE VALID
19190 END OF DATA
19195 TOP OF DATA
19200 DATE MUST BE LESS THAN OR EQUAL TO TODAY'S DATE
19205 NO FIELD LEVEL HELP AVAILABLE
19210 HISTORICAL DATA FOR THIS DATE IS NOT AVAILABLE
19215 NO FORM LEVEL HELP AVAILABLE
19220 INVALID DATE
19225 NO HELP AVAILABLE
19230 INVALID DATE - DATE MUST BE A BUSINESS DATE
19235 RECORD SUCCESSFULLY ADDED
19240 RECORD SUCCESSFULLY CHANGED
19241 RECORD SUCCESSFULLY RATIFIED
19245 RECORD SUCCESSFULLY DELETED
19250 CONFIRM DELETION
19255 INVALID PRINT LOCATION CODE
19256 PRESS ENTER TO CONFIRM OR F17 TO CANCEL
19259 INVALID USAGE CODE - ENTER C, F OR M
19260 INVALID GUARANTEE TYPE CODE - ENTER C, F OR M
19261 EXERCISE SUCCESSFULLY COMPLETED TRANS #
19262 EXERCISE ADJ SUCCESSFULLY COMPLETED TRANS #
19263 NOTIFICATION SUCCESSFULLY COMPLETED TRANS #
19264 NOTIFICATION ADJ SUCCESSFULLY COMPLETED TRANS #
19265 INVALID ISIN
19266 INVALID CHECK CODE
19267 ISIN ALREADY EXISTS
19268 INVALID INTEREST RATE METHOD
19269 SECURITY EXISTS ALREADY
19270 INVALID RELATIONSHIP STATUS CODE - ENTER A, I, OR P
19275 INVALID INPUT - TO DELETE RELATION, USE ACTION CODE 'D'
19280 TRANSACTION ID NUMBER CONTAINS NON-NUMERIC CHARACTERS
19285 DATE MUST BE GREATER THAN OR EQUAL TO TODAY'S DATE
19290 INVALID FEE TYPE CODE
19295 ORDER ENTRY NUMBER CONTAINS NON-NUMERIC CHARACTERS
19300 INVALID CURRENCY TABLE COD
19302 FOUR-EYES INITIATING AND CONFIRMING USERS MUST BOTH BELONG TO SAME MEMBER
19303 INVALID CONTEXT FOR FOUR-EYES APPROVAL
19304 INVALID RESOURCE ACCESS LEVEL
19305 INVALID RESOURCE ACCESS LEVEL NUMBER - ENTER 0,1,2 OR 3
19310 INVALID RESOURCE ACCESS LEVEL NUMBER - ENTER 0 OR 1
19311 QUOTE REQUEST RAL AND QUOTE ENTER RAL - BOTH CANNOT BE 1
19312 COMBINATION QUOTE REQUEST AND COMBINATION QUOTE ENTER CANNOT BE ONE
19313 COMBINATION QUOTE REQUEST AND QUOTE ENTER CANNOT BE ONE
19314 QUOTE REQUEST AND COMBINATION QUOTE ENTER CANNOT BE ONE
19315 INVALID ID CODE - ENTER NUMBERS (0-9) OR LETTERS (A-Z)
19316 SUCCESSFUL LOGIN TO EUREX
19317 INVALID INQUIRY FOR CURRENT PRODUCT STATE
19318 INVALID KEY-DATA-CONTROL-BLOCK
19319 QUOTE REQUEST (2008) AND MASS QUOTE REL.(2210) CANNOT BOTH BE ONE
19320 SUFFIX NUMBER CONTAINS NON-NUMERIC CHARACTERS
19321 INVALID REQUEST DATA FOR INQUIRE ALL DOUBLE LEG TRADES
19322 ERROR READING SPREAD TRADE FILE
19324 TOO MANY DIGITS
19325 INVALID NUMBER - TOO MANY SIGNIFICANT DIGITS ENTERED
19326 ERROR READING PRODUCT MAPPING FILE
19327 ERROR READING EXTERNAL CONTRACT MAPPING
19330 INVALID DATE - DATE MUST BE BEFORE CURRENT DATE
19335 INVALID SERIES STATUS CODE FOR THIS SCREEN
19340 THE PRINT QUEUE NAME MUST BE IN A VALID DEC FORMAT
19345 THE PRINT QUEUE NAME MUST BE ENTERED
19350 THIS ACTION CODE IS NOT VALID ON THIS SCREEN
19355 MESSAGE SUCCESSFULLY SENT
19620 A REFERENCE MUST POINT TO A FULLTEXT FIELD
19901 BACKTAB NOT VALID ON THIS FIELD
19902 TAB NOT VALID ON THIS FIELD
19905 INVALID KEY STROKE
19910 EITHER LONG OR SHORT POSITIONS NEED TO BE FILLED
19911 EITHER LONG OR SHORT POSITIONS NEED TO BE FILLED
19912 CASH AMOUNT OR ORIG TRADE PRICE MUST BE FILLED IF TOTCSHAMNT FILLED
19913 TOTAL CASH AMOUNT MUST BE FILLED WITH CASH AMOUNT + CALCULATED CASH
19914 FOUR EYE APPROVAL IS REQUIRED
19915 INSUFFICIENT PRIVILEGE FOR FOUR-EYES CONFIRMING USER
19916 INSUFFICIENT POSITION
19917 APPROVAL FLAGS FOR SAME MEMBERS SHOULD BE SET OR SHOULD BE RESET
19918 SECOND USER DETAILS MUST BE FILLED
19919 INSUFFICIENT POSITION
19920 CONTRACT MISMATCH WHILE TRYING TO CLOSE OUT POSITION
19921 CM/NCM ACCOUNT RELATION DOES NOT FIT TO CSD ACCOUNT
19922 DEFAULT POOL FOR CLGMBR AND USAGE MISSING
19970 DATA NOT YET AVAILABLE - TXN REJECTED - TRY AGAIN
19971 MEMBER SLOWDOWN: TXN REJECTED
19980 INVALID FUNCTION KEY ENTERED
19981 LAST ERROR ON SCREEN, HIT [RETURN] FOR FIRST ERROR
19982 RPS DATA UPDATE IS ALREADY RUNNING. PLEASE WAIT AND TRY AGAIN!
19983 RPS DATA UPDATE NOT SUCCESSFUL. PLEASE TRY AGAIN!
19990 RETRANSMISSION TIMEOUT; CHECK RESULT OF TRANSACTION
19991 NOT SUBSCRIBED TO THE BROADCAST STREAM.
19992 REQUEST REJECTED; RETRANSMISSION IS ALREADY PENDING.
19994 BUSY: TXN REJECTED. TRY AGAIN
19995 NO ERRORS EXIST
19996 TRANSACTION BEING PROCESSED. CHECK RESULT OF REQ. TXN
19998 CHECK RESULT OF REQ. TXN
19999 CHECK RESULT OF REQ. TXN

10.2.2 2xxxx, 3xxxx, 4xxxx - BESS Error Messages
20000 CONTRACT IS INVALID
20001 PRODUCT IS INVALID
20002 MULTI CONTRACT COUNTER IS INVALID
20003 COMBINATION CONTRACT IS INVALID
20004 EXECUTION PRICE (BUY) IS INVALID
20005 EXECUTION PRICE (SELL) IS INVALID
20006 ACCOUNT TYPE IS INVALID
20007 ACCOUNT TYPE NUMBER IS INVALID
20008 QUANTITY (BUY) IS INVALID
20009 QUANTITY (SELL) IS INVALID
20010 QUANTITY IS INVALID
20011 INVALID ANSWER FROM CONNECTION MANAGER
20012 NO BUSINESS DATE IN REFERENCE DATA FILE
20013 EXCHANGE ID IS INVALID
20014 A CONFIGURATION FILE ENTRY HAS A WRONG LENGTH
20015 REQUEST DATA OR DATA HEADER INVALID
20016 BODY LENGTH IS INVALID
20017 TIME (MAX) IS INVALID
20018 TIME (MIN) IS INVALID
20019 BUY/SELL INDICATOR IS INVALID
20020 UNDERLYING IS INVALID
20021 INVALID PRICE REASONABLE CHECK INDICATOR
20022 TABLE NOT FOUND
20023 TOO MANY FILE RECORDS FOUND ON LOAD
20024 RECORD NOT FOUND DURING SEARCH
20025 SEARCH FIRST NOT PERFORMED
20026 END OF TABLE REACHED
20027 SETTLEMENT INSTITUTION IS INVALID
20028 SETTLEMENT DATE IS INVALID
20029 HEDGE TYPE IS INVALID
20030 INVALID GROSS BASIS
20031 NOMINAL VALUE IS INVALID
20032 OPEN/CLOSE FLAG IS INVALID
20033 NON EXISTING COUNTERPARTY
20034 TEXT FIELD CONTAINS INVALID CHARACTER
20035 DELIVERY AGENT FIELD NOT PRINTABLE
20036 INSTRUMENT NOT AVAILABLE
20037 SUBGROUP CODE IS INVALID
20038 PARTICIPANT NUMBER IS INVALID
20039 PRICE IS INVALID
20040 BUY AND SELL SIDE OF WHS TRADE ARE INVALID
20041 TRANSACTION ID OF WHS TRADE IS INVALID
20042 DATE IS INVALID
20043 CLASSIFICATION CODE IS NEITHER OPT NOR FUT
20044 NO PUT LEPOS ARE ALLOWED IN THE SYSTEM
20045 NUMBER OF RECORDS IS INVALID
20046 QUOTE VALIDATION PROCESS FAILED
20047 ASK PRICE MUST BE GREATER THAN BID PRICE
20048 NO SECOND LEGS FOR SELECTED COMBINATION TYPE
20049 ORDER NUMBER IS INVALID
20050 ORDER TYPE IS INVALID
20051 LIMIT PRICE MUST BE FILLED
20052 USER ORDER NUMBER FIELD CONTAINS INVALID CHARACTER
20053 EXECUTION PRICE IS INVALID
20054 (SINGLE) ORDER INQUIRY IS INVALID
20055 (MULTIPLE) ORDER INQUIRY IS INVALID
20056 INVALID RESTRICTION FOR MARKET ORDER
20057 STOP ORDER REQUIRES A PRICE
20059 INVALID PRODUCT OR PRODUCT LINE
20060 MASS QUOTE ATTRIBUTES CHECK FAILED
20061 CUSTOMER FIELD CONTAINS INVALID CHARACTER
20062 ORIGIN IS INVALID
20063 EXCHANGE FEE IS INVALID
20064 AVERAGE PRICE SYSTEM IS INVALID
20065 STEP OF THE ASK PRICE IS INVALID
20066 STEP OF THE BID PRICE IS INVALID
20067 PRICE STEP IS INVALID
20068 QUOTE SPREAD IS INVALID
20069 EQUAL QUANTITIES ARE REQUIRED
20070 UNREASONABLE ASK QUANTITY
20071 UNREASONABLE BID QUANTITY
20072 UNREASONABLE QUANTITIES
20073 THE SUBGROUP IS INVALID
20074 THE APPLICATION ID IS INVALID
20076 USER NOT FOUND IN REFERENCE FILE
20077 MAXIMUM BID PRICE IS EXCEEDED
20078 MAXIMUM ASK PRICE IS EXCEEDED
20079 MAXIMUM PRICE IS EXCEEDED
20080 PRODUCT IS INVALID
20081 EXPIRATION DATE IS INVALID
20082 BOTH SIDES ARE EMPTY
20083 INVALID PASSWORD
20084 INVALID COMBINATION TYPE
20085 INVALID CLASS CODE
20086 INVALID STOP ORDER TYPE
20087 RESTRICTION CODE IS INVALID
20088 EXPIRATION DATE IS INVALID
20089 CLEARING MEMBER IS INVALID
20090 LAST UPDATE DATE IS INVALID
20091 TIME IS INVALID
20092 STOP ORDERS NOT ALLOWED FOR PRO RATA PRODUCTS
20093 MARKET ORDERS MUST BE IOC FOR PRO RATA PRODUCTS
20094 UNEXPECTED END OF REFERENCE FILE
20095 INVALID TRANSACTION TYPE FOR BACK OFFICE INQUIRY
20096 STOP SEQUENCE NUMBER MUST NOT BE SMALLER THAN START SEQUENCE NUMBER
20097 QUOTE NOT FOUND IN DATABASE
20098 NO INQUIRIES ALLOWED WHEN ORDERBOOK DEPTH IS BROADCASTED
20099 INVALID START SEQUENCE NUMBER
20100 INVALID STOP SEQUENCE NUMBER
20101 MEMBER ID IS INVALID
20102 CURRENCY IS INVALID
20103 INVALID PRODUCT FOR BASIS TRADE
20104 INVALID TRADE TYPE
20105 TIME (MAX) MUST BE GREATER THAN TIME (MIN)
20106 INVALID MATCH TYPE
20107 PRODUCT MUST BE A FUTURE ON A BOND
20108 NEW MEMBER SAME AS OLD ONE
20109 INSUFFICIENT PRIVILEGE FOR THIS ACTION
20110 SELECTED ALL FLAG IS INVALID
20111 CUSTOMER FIELD IS INVALID
20112 EXCHANGE MEMBER IS INVALID
20113 OTM WARNING FLAG IS INVALID
20114 GIVE-UP MEMBER IS INVALID
20115 GIVE-UP STATUS IS INVALID
20116 SELECTED IN/OUT OF THE MONEY FLAG IS INVALID
20117 INQUIRY IS INVALID
20118 LONG QUANTITY IS INVALID
20119 MI ORDER NUMBER IS INVALID
20120 FROM - CUSTOMER IS INVALID
20121 FROM - MI ORDER NUMBER IS INVALID
20122 FROM - TEXT IS INVALID
20123 TO - CUSTOMER IS INVALID
20124 TO - MI ORDER NUMBER IS INVALID
20125 TO - TEXT IS INVALID
20126 SHORT QUANTITY IS INVALID
20127 FROM - ACCOUNT IS INVALID
20128 FROM - CLEARING MEMBER IS INVALID
20129 FROM - EXCHANGE MEMBER IS INVALID
20130 TRANSACTION SUFFIX IS INVALID
20131 TO - ACCOUNT IS INVALID
20132 TO - CLEARING MEMBER IS INVALID
20133 TO - EXCHANGE MEMBER IS INVALID
20134 TEXT FIELD IS INVALID
20135 TRANSACTION DATE IS INVALID
20136 TRANSACTION ID IS INVALID
20137 TRANSACTION TYPE CODE IS INVALID
20138 TO - ACCOUNT MUST BE DIFFERENT FROM FROM - ACCOUNT
20139 AT LEAST ONE QUANTITY MUST NOT EQUAL ZERO
20140 QUANTITIES MUST NOT BE THE SAME FOR MARKET MAKER ACCOUNTS
20141 INVALID COMBINATION OF PRODUCT AND EXPIRATION MONTH
20142 INVALID CONFIRMATION STATUS CODE
20143 DESTINATION MEMBERS ARE THE SAME AS SOURCE MEMBERS
20144 INVALID DELIVERY FILTER DATE INDICATOR
20145 QUANTITIES MUST BE THE SAME FOR CLOSE OUT
20146 PRODUCT SHOULD BE AN OPTION ON A STOCK
20147 TRADE SEPARATION ENTRY IS INVALID
20148 TRADE SEPARATION ENTRIES MUST START ON THE FIRST LINE
20149 NO BLANK LINE IS ALLOWED BETWEEN THE TRADE SEPARATION ENTRIES
20150 EXERCISE ALL IS NOT ALLOWED FOR AGENT ACCOUNT
20151 EXERCISE ALL FLAG AND EXERCISE QUANTITY CANNOT BE BOTH ENTERED
20152 NO EXERCISE QUANTITY IS ENTERED
20153 THIS TRANSACTION CANNOT BE FURTHER ADJUSTED
20154 INVALID CROSS MARGIN PARAMETER
20155 INVALID TRANSACTION
20156 QUANTITIES MUST BE THE SAME
20157 INVALID MESSAGE DETAIL
20158 INVALID ADDITIONAL QUANTITY
20159 INVALID ASSET PURPOSE
20160 INVALID RESOURCE ACCESS LEVEL
20161 CONVFACMETH MUST BE NUMERIC
20162 CONVFAC MUST BE NUMERIC
20163 CHPTODLVFLAG MUST BE Y OR N
20164 INVALID PRODUCT SHORT NAME
20165 INVALID TRADE UNIT NO.
20169 INVALID COOPERATION FLAG EXCH. AFF
20170 INVALID UNDERLYING SHORT NAME
20171 INVALID HISTORICAL VOLA CODE
20172 INVALID IPS INDICATOR
20173 INVALID US TRAD. ALLOWED INDICATOR
20174 INVALID UNDERLYING PRC RCV. CODE
20175 INVALID CONTRACT ASYN. DEPTH
20176 INVALID PRICE STEP TABLE CODE
20177 INVALID BLOCK TRADE ALLOWED INDICATOR
20178 INVALID MINIMUM BLOCK TRADE SIZE
20179 INVALID CURRENT SETTLEMENT TYPE
20180 INVALID NORMAL SETTLEMENT TYPE
20181 INVALID SETTLEMENT PERIOD
20182 INVALID SETTLEMENT PRC. TYPE
20183 INVALID SETTLEMENT PRC. CODE
20184 INVALID CONTRACT COV. ASSIGNMENT INDICATOR
20185 INVALID CYCLE CODE
20186 INVALID AVOID NEW EXPIRY MONTH INDICATOR
20187 INVALID EXCL. FILE FEED INDICATOR
20188 INVALID AVOID PRC. MOVEMENT INDICATOR
20189 INVALID ATM MIN. PERIOD
20190 INVALID EXPIRY TYPE CODE
20191 INVALID ADV. NEW SRS PERIOD
20192 INVALID VOLA PARAMETERS
20193 INVALID MULTI RECORD COUNTER
20194 INVALID PRIMARY CLEARING INDICATOR
20195 INVALID GIVE UP INDICATOR
20196 INVALID TAKE UP INDICATOR
20197 INVALID RELATIONSHIP STATUS
20198 INVALID CURRTYPCODDTO
20199 INVALID EXCHANGE RATE
20200 INVALID DECIMAL SHIFT NUMBER
20201 INVALID OLD EXCHANGE RATE
20202 INVALID CASH COLLECTABLE CURRENCY
20203 INVALID CENTRAL BANK CURRENCY INDICATOR
20204 INVALID UNDERLINE PRICE OFFSET
20205 INVALID CALL DOMESTIC RATE
20206 INVALID CALL FOREIGN RATE
20207 INVALID PUT DOMESTIC RATE
20208 INVALID PUT FOREIGN RATE
20209 INVALID MEMBER RESPONSIBLE DEPARTMENT
20210 INVALID MEMBER STREET ID
20211 INVALID MEMBER CITY ID
20212 INVALID MEMBER POSTAL CODE
20213 INVALID MEMBER COUNTRY NAME
20214 INVALID MEMBER AWV COUNTRY CODE
20215 INVALID MEMBER CLEARING PERSON
20216 INVALID MEMBER CLEARING PERSON PHONE NO
20217 INVALID MEMBER CLEARING PERSON FAX NO
20218 INVALID MEMBER CLEARING PERSON TELEX
20219 INVALID MEMBER CSD ID
20220 INVALID MEMBER CSD CUSTOMER ID
20221 INVALID MEMBER MARGIN ACCOUNT NUMBER AT CSD
20222 INVALID CLEARING MEMBER PLEDGE ACCOUNT FOR CSD
20223 INVALID PLEDGE ACCT NO FOR COMPANY CAPITAL AT CSD
20224 INVALID CURRENCY TYPE FOR COMPANY CAPITAL
20225 INVALID DATE WHEN COMPANY CAPITAL WAS ENTERED
20226 INVALID COMPANY CAPITAL AMOUNT
20227 INVALID MAIN ACCOUNT NO FOR COLLATERAL PROCESSING
20228 INVALID MEMBER GIVE UP CONTACT PERSON
20229 INVALID GIVE UP CONTACT PERSON PHONE NUMBER
20230 INVALID GIVE UP CONTACT PERSON FAX NUMBER
20231 CLASS CODE CONTAINS UNPRINTABLE CHARACTERS
20232 CLASS DESCRIPTION CONTAINS UNPRINTABLE CHARACTERS
20233 INTERVAL PRODUCT ID CONTAINS UNPRINTABLE CHARACTER
20234 SPOT MONTH SPREAD RATE CONTAINS NONNUMERIC CHARS
20235 BACK MONTH SPREAD RATE CONTAINS NONNUMERIC CHARS
20236 OUT O THE MONEY MIN RAT CONTAINS UNPRINTABLE CHARS
20237 MARGIN GROUP CODE CONTAINS UNPRINTABLE CHARACTERS
20238 MARGIN GROUP OFFSET CONTAINS NONUMERIC CHARACTERS
20239 MARGIN GROUP DESCRIPTION CONTAINS UNPRINTABLE CHARACTERS
20240 REPORT ID CONTAINS UNPRINTABLE CHARACTERS
20241 INVALID PRINT LOCATION CODE
20242 INVALID TEXT REPORT INDICATOR
20243 INVALID XML REPORT INDICATOR
20244 INVALID HISTORICAL REPORT DATE
20245 INVALID CLASS OR GROUP INDICATOR
20246 INVALID ADJUSTMENT MEMO
20247 INVALID CONVERSION REMARK
20248 INVALID DATABASE CONVERSION TYPE
20250 NEWISIN IS INVALID
20251 ISIN_DUMMY IS INVALID
20252 PRODUCT_DUMMY IS INVALID
20254 PRODUCT_NEW IS INVALID
20256 ON BEHALF MEMBER INVALID OR EMPTY
20257 INVALID THEORETICAL MODEL CODE
20258 ONLY OPTION PRODUCTS HAVE A THEORETICAL MODEL CODE
20259 THEORETICAL UNDERLYING IS NOT A VALID PRODUCT
20260 THEORETICAL UNDERLYING IS NOT A FUTURES PRODUCT
20261 ONLY OPTIONS ON INDEX HAVE THEORETICAL UNDERLYING
20262 INVALID CUSTODIAN DESCRIPTION
20263 INVALID CUSTODIAN ID
20264 INVALID CSD SWIF ADDRESS
20265 INVALID CSD PRIORITY
20266 INVALID CSD ACCOUNT
20267 INVALID INTERNATIONAL SECURITY ID NUMBER
20268 INVALID FEE TYPE
20269 INVALID SECURITY SHORT NAME
20270 INVALID SECURITY LONG NAME
20271 INVALID COLLATERAL INDEX
20272 INVALID COLLATERAL ALLOWED INDEX
20273 INVALID BASIS TRADE ALLOWED INDEX
20274 INVALID NEW MINIMUM BALANCE
20275 INVALID DOMESTIC RATE
20276 INVALID FOREIGN RATE
20277 INVALID SUBJECT
20278 DUPLICATE CSD ID
20279 INVALID EXCH RATE REASONABILITY INDICATOR
20281 INVALID POS. TSF. CASH LIMIT
20282 POS TSF CASH LIM MUST BE ZERO FOR NONE EUREX CURR
20283 INVALID POS. TSF. CASH AMOUNT
20285 INVALID ITM MINIMUM AMOUNT
20286 INVALID BROADCAST INTERNAL GAP SKIP INDICATOR
20287 ALL PRODUCTS IN TRANSACTION MUST BE THE SAME
20288 INVALID ACCOUNT
20289 SWAP START DATE MUST BE EQUAL OR PRIOR SWAP END DATE
20290 SETTLEMENT DATE MUST BE AFTER CURRENT BUSINESS DATE
20291 MATURITY DATE MUST BE AFTER SETTLEMENT DATE
20292 SWAP START DATE MUST BE EQUAL OR AFTER SETTLEMENT DATE
20293 PERCENTAGE CANNOT BE GREATER THAN MAXIMUM
20294 CROSS CURRENCY HAIRCUT CANNOT BE LARGER THAN 1.00
20295 INVALID FUTURE PRODUCT FOR STRATEGY VOLA LEG
20296 PRODUCT MUST BE A FUTURE ON AN INDEX
20297 PRODUCT MUST BE A FUTURE ON A CREDIT
20298 TO-PRODUCT MUST BE DIFFERENT FROM FROM-PRODUCT
20299 RUN DATE MUST BE EQUAL OR AFTER CURRENT BUSINESS DATE
20300 RUN DATE MUST BE BEFORE THE FROM-CONTRACT'S EXPIRY DATE
20301 PRODUCT MUST BE AN OPTION
20302 INVALID CONTRACT EXPIRATION DATE
20303 PRODUCT MUST BE A FUTURE ON BOND OR A CREDIT
20304 CONTRACT EXPIRATION DATE MUST BE GREATER THAN CURRENT BUSINESS DATE
20305 MAXIMAL CALENDAR SPREAD QUANTITY MUST BE ZERO FOR OPTION PRODUCTS
20306 MAXIMAL CALENDAR SPREAD AND WHS QUANTITIES MUST BE ZERO FOR IPS PRODUCTS
20307 BLOCK TRADE PARAMETERS FOR NON BLOCK TRADE GIVEN
20308 VOLA TRADE PARAMETERS FOR NON VOLA TRADE GIVEN
20309 FLEXIBLE CONTRACT PARAMETER GIVEN FOR NON FLEXIBLE CONTRACT
20310 BLOCK AUCTION PARAMETERS GIVEN FOR NON BLOCK AUCTION
20311 FLEXIBLE CONTRACT PARAMETER CAN BE SET TO 'Y' FOR OPTIONS ONLY
20312 FLEXIBLE CONTRACT PARAMETER CAN BE SET TO 'Y' ONLY IF BLOCK TRADE IS ALLOWED
20313 INVALID TICK SIZE OF THE PRICE
20314 INVALID TICK SIZE OF THE BID PRICE
20315 INVALID TICK SIZE OF THE ASK PRICE
20316 QUOTE NOT SUBMITTED TO EXCHANGE
20317 AT LEAST ONE PRODUCT CATEGORY MUST BE SELECTED
20318 ONLY ONE OF THE BOTH QUANTITY FIELDS COULD BE GIVEN
20319 NOT ALL PARAMETERS FOR BLOCK TRADE ARE SET
20320 EITHER ORDR QTY OR ORDR TOT QTY MUST BE EMPTY
20321 EITHER ORDR NO OR USER ORDR REF MUST BE EMPTY
20322 PRODUCT MUST BE A FUTURE ON BOND, A CREDIT OR AN INDEX
20323 TRADING NOT ALLOWED IN THIS PRODUCT BY US TRADERS
20324 INVALID UNDERLYING PRODUCT FOR STRATEGY VOLA LEG
20325 OSTK PRODUCT NOT ALLOWED FOR VOLA STRATEGY
20400 INVALID CUSTOMER TYPE INDICATOR
20401 INVALID ORIGIN CODE
20402 INVALID EXCHANGE FEE CODE
20403 INVALID EXCHANGE FEE FOR CUSTOMER TYPE INDICATOR
20404 INVALID CUSTOMER ACCOUNT
20405 INVALID ISSUER/SWAP TYPE
20406 INVALID FIX COUPON
20407 INVALID VARIABLE COUPON
20408 HEDGE TYPE MUST BE “DUR” FOR AN EFS TRADE
20409 INVALID SWAP/PHYSICAL FLAG
20410 INVALID STRATEGY PRICE
20411 STRATEGY LEG PRICE BELOW MINIMUM
20412 INVALID STRATEGY LEG TYPE
20413 STRATEGY LEG QUANTITY OVER MAXIMUM
20414 INVALID STRATEGY TYPE
20415 MISSING STRATEGY LEG EXPIRY DATE
20416 STRATEGY LEG EXPIRY DATES ARE NOT EQUAL
20417 FIRST TWO STRATEGY LEG EXPIRY DATES OUT OF THREE ARE NOT EQUAL
20418 FIRST THREE STRATEGY LEG EXPIRY DATES OUT OF FOUR ARE NOT EQUAL
20419 STRATEGY LEG EXPIRY DATES ARE NOT EQUAL ON BOTH SIDES
20420 STRATEGY LEG EXPIRY DATES ARE NOT ASCENDING
20421 STRATEGY LEG EXPIRY DATES ARE NOT DESCENDING
20422 MISSING STRATEGY LEG RATIO
20423 INVALID STRATEGY LEG RATIO
20424 MISSING STRATEGY PRICE
20425 STRATEGY EXERCISE PRICES MUST INCREASE BY A FIXED STEP SIZE
20426 STRATEGY EXERCISE PRICES MUST INCREASE BY A FIXED STEP SIZE FOR THE FIRST THREE LEGS
20427 STRATEGY EXERCISE PRICES MUST DECREASE BY A FIXED STEP SIZE FOR THE FIRST THREE LEGS
20428 STRATEGY LEG EXERCISE PRICES ARE NOT EQUAL
20429 STRATEGY LEG EXERCISE PRICES ARE NOT EQUAL ON BOTH SIDES
20430 FIRST TWO STRATEGY LEG EXERCISE PRICES OUT OF THREE ARE NOT EQUAL
20431 STRATEGY LEG EXERCISE PRICES ARE NOT DIFFERENT
20432 STRATEGY LEG EXERCISE PRICES MUST INCREASE
20433 FIRST TWO STRATEGY LEG EXERCISE PRICES OUT OF THREE MUST INCREASE
20434 FIRST TWO STRATEGY LEG EXERCISE PRICES OUT OF FOUR MUST INCREASE
20435 STRATEGY LEG EXERCISE PRICES MUST DECREASE
20436 FIRST TWO STRATEGY LEG EXERCISE PRICES OUT OF THREE MUST DECREASE
20437 FIRST TWO STRATEGY LEG EXERCISE PRICES OUT OF FOUR MUST DECREASE
20438 MISSING STRATEGY BUY CODE
20439 INVALID STRATEGY LEG QUANTITY
20440 MISSING STRATEGY LEG PRICE
20441 DUPLICATE OR REDUNDANT STRATEGY LEGS
20442 NO FRONT MONTH LEPO SERIES AVAILABLE FOR PRODUCT
20443 INCORRECT FRONT MONTH LEPO SERIES IN UNDERLYING LEG
20444 LEPO NOT ALLOWED IN VOLA STRATEGY NON-UNDERLYING LEG
20445 PRODUCT INVALID FOR STRATEGY
20446 VERSION NUMBERS FOR ALL NON-UNDERLYING LEGS MUST BE IDENTICAL
20447 ONE-SIDED-QUOTE NOT ALLOWED
20448 POSITION TRANSFER MODE IS INVALID
20449 ORIGINAL TRADE PRICE IS INVALID
20450 TOTAL CASH AMOUNT IS INVALID
20451 CONF COD MEMB EXCH ID TO FIELD SHOULD CONTAIN Y OR N
20452 CONF COD MEMB CLG ID TO FIELD SHOULD CONTAIN Y OR N
20453 CONF COD MEMB CLG ID FROM FIELD SHOULD CONTAIN Y OR N
20454 CASH TRANSFER FOR GIVE-UP IS NOT ALLOWED
20455 INVALID VALUE IN FIELD FLX-TRAN-TYP-IND
20456 INVALID FLX-TRAN-TYP-IND FOR THIS REQUEST
20457 HIGH RANGE VALUE LOWER THAN THE LOW RANGE VALUE
20458 INVALID VALUE IN FIELD STRT ITM AMNT
20459 INVALID VALUE IN FIELD STOP ITM AMNT
25001 PARAMETER CHECK FAILED
25002 INTERNAL ERROR: STORED MESSAGE
25003 XERVICE SHUTDOWN REQUEST RECEIVED
25004 TRANSACTION CODE OF MANAGEMENT MESSAGE UNKNOWN
25005 NO CONNECTION TO CS
25006 MESSAGE TYPE OF BACK END MESSAGE UNKNOWN
25007 INVALID LENGTH OF BACK END MESSAGE
25008 INVALID LENGTH OF FRONT END MESSAGE
25009 STARTUP_INFO NOT PROCESSED
25010 DIFFERENT VERSIONS ON FRONT END AND BACK END
25011 REFERENCE DATA FILE CHECK FAILED
25012 COULD NOT OPEN CHANNEL TO BACK END ARCHITECTURE
25014 WRITING TO CS CHANNEL FAILED
25015 CHANNEL IS CLOSED
25016 INVALID RECONNECT TRIGGER
25017 MISS ID MISSING IN CONFIG FILE
25018 INVALID REFDAT FILE
25020 INVALID RECORD SIZE
25021 TABLE NOT FOUND
25022 OUT OF MEMORY
25023 NO CS FOUND IN REFERENCE FILE
25024 NO MISS FOUND IN REFERENCE FILE
25025 NO TRANSACTION CODE WRITTEN TO TABLE FOR ECL
25026 NO TRANSACTION CODE TABLE CREATED FOR ECL
25027 COMPRESSION OR ENCRYPTION FAILED
25028 DECOMPRESSION OR DECRYPTION FAILED
25029 INVALID COMPLETION CODE
25030 INVALID MEMBER ID ENTRY
25031 INVALID MESSAGE TYPE
25032 REQ RESP MESSAGE RECEIVED WHILE BESS UNAVAILABLE
25033 NO APPLICATION PROCEDURE FOUND FOR REQUEST ID
25034 INVALID REQUEST ID
25035 INTERNAL PROCESSING ERROR
25036 PROCESS CONNECTED TWICE
25037 ROBS INCONSISTENT
25038 BROADCAST STREAM OUT OF SEQUENCE
25039 ERROR PROCESSING MESSAGE
25040 INVALID CONFIGURATION FILE ENTRY
25041 TOO MANY SUBSCRIPTIONS TO BROADCAST RECEIVER
25043 INVALID BROADCAST TYPE
25044 NOT SUBSCRIBED TO ANY BROADCAST STREAM
25045 ERROR COMPARING CHECKSUM
25046 UNKNOWN STREAM RECEIVED FROM BACK END
25047 INVALID ROB MESSAGE LENGTH
25048 MEMBER ID INVALID OR NOT AUTHORIZED
25049 NO ROB LOG FILE FOUND - PLEASE CHECK SUBSCRIPTION
25050 ERROR DECODING DOUBLE LEG EXPIRATION DATE
25051 UNKNOWN SERIES IDENTIFICATION RECEIVED
25052 UNKNOWN PUBLIC BROADCAST TYPE
25053 UNKNOWN OVER MESSAGE TYPE
25054 SYSERROR HAS BEEN CALLED! PLS CONTACT SYSADMIN
25055 INVALID NOTIFICATION
25056 MEMBER NOT AUTHORIZED TO SUBSCRIBE TO THIS STREAM
25057 ACTIVE BROADCAST SERVER
25058 ERROR TRYING TAKE OVER PROCESS
25059 INACTIVE BROADCAST SERVER
25060 INACTIVE BROADCAST SERVER EXISTS IN DEVELOPMENT
25061 INVALID SEQUENCE NUMBER
25062 SEQUENCE NUMBER TOO HIGH
25063 BROADCAST RETRANSMITTER NOT AVAILABLE YET
25064 NON DEFINED INTERNAL LIST  
25065 ARRAY INDEX OUT OF RANGE  
25066 UNKNOWN PRODUCT  
25067 INCONSISTENT XERCISE ID  
25068 INVALID APPLICATION VERSION  
25069 REQUEST NOT SUPPORTED FOR SELECTED EXCHANGE  
25070 NO SERIES IN ORDERBOOK BROADCAST  
25071 UNEXPECTED MESSAGE RECEIVED  
25072 REQUEST NOT SUPPORTED FOR PREVIOUS RELEASE  
25073 ORDERBOOK RECOVERY REQUEST EXPIRED  
25074 CANNOT LOAD DYNAMIC USIM LIBRARY  
25075 CANNOT LOAD DYNAMIC VERSION LIBRARY  
25076 CANNOT LOAD DYNAMIC PATCH VERSION LIBRARY  

10.3 9xxxx - GUI Error Messages  
5001 REQUEST NOT SUCCESSFULLY PROCESSED  
90000 TEXT ALREADY IN LISTBOX  
90001 INVALID PRODUCT  
90002 LISTEN PORT ALREADY USED  
90003 LISTEN PORT NOT FOUND  
90004 CONNECTION IS LOST  
90005 CAN NOT OPEN USER PROFILE  
90006 UNKNOWN PROFILE  
90007 UNKNOWN USER  
90008 PROFILE SUCCESSFULLY ADDED  
90009 ADD PROFILE FAILED  
90010 PROFILE SUCCESSFULLY DELETED  
90011 DELETE PROFILE FAILED  
90012 DEFAULT PROFILE SUCCESSFULLY CHANGED  
90013 NEW PASSWORD MUST DIFFER FROM OLD  
90014 INVALID PASSWORD  
90015 INVALID USER ID  
90016 PROFILE NAME ALREADY EXISTS  
90017 PROFILE SUCCESSFULLY MODIFIED  
90018 SELECTED CONTRACT ALREADY IN PROFILE  
90019 SELECTED PRODUCT ALREADY IN PROFILE  
90020 SELECTED EXTERNAL UNDERLYING ALREADY IN PROFILE  
90021 PRODUCT FOR SELECTED CONTRACT ALREADY IN PROFILE
90022 MODIFY PROFILE FAILED
90023 SET DEFAULT PROFILE FAILED
90024 PASSWORD SUCCESSFULLY CHANGED
90025 NEW PASSWORD CONFIRMATION INCORRECT
90026 MAXIMUM NUMBER OF PROFILES REACHED
90027 SELECTED PRODUCT IS NOT A FUTURE
90028 SELECTED PRODUCT IS NOT AN OPTION
90029 INVALID EXCHANGE SELECTED
90030 INVALID CONTRACT
90031 INVALID VALIDITY DATE
90032 NO RECORDS MATCH FILTER
90033 NO ROW SELECTED
90034 USER NOT LOGGED IN
90035 SELECT EXCHANGE FROM THE MENU BAR
90036 NO QUOTES MATCHING SELECTION CRITERIA
90037 QUOTE DELETED
90038 INVALID COMBINATION
90039 NO ORDERS MATCHING SELECTION CRITERIA
90040 ORDER DELETED
90041 NO FILTER SELECTED
90042 NO SETTLEMENT PRICE FOUND
90043 NO TRADES MATCHING SELECTION CRITERIA
90044 NO CONTRACT SELECTED
90045 MASS QUOTE ENTRY WAS SUCCESSFUL
90046 NOT ALL QUOTES ENTERED SUCCESSFULLY
90047 QUOTE HELD
90048 QUOTE RELEASED
90049 EXERCISE PRICE (BUY) IS INVALID
90050 EXERCISE PRICE (SELL) IS INVALID
90051 ASK PRICE MUST BE GREATER THAN BID PRICE
90052 TRANSACTION PENDING
90053 CONTRACT ALREADY IN LISTBOX
90054 COMBINATION CONTRACT IS INVALID
90055 IPS PRODUCTS INVALID
90056 MATCHER FLAG INVALID
90057 SUPERVISION MSG STREAM OUT OF SEQUENCE
90058 EXECUTION CONF STREAM OUT OF SEQUENCE
90059 SL INSIDE MKT STREAM OUT OF SEQUENCE - REFRESH SCREEN
90060 DL INSIDE MKT STREAM OUT OF SEQUENCE - REFRESH SCREEN
90061 ORDER BK DEPT STREAM OUT OF SEQUENCE
90062 PRODUCT STATE STREAM OUT OF SEQUENCE - REFRESH SCREEN
90063 SL ORDER CONF STREAM OUT OF SEQUENCE - REFRESH SCREEN
90064 DL ORDER CONF STREAM OUT OF SEQUENCE - REFRESH SCREEN
90065 TRADE CONF STREAM OUT OF SEQUENCE - REFRESH SCREEN
90066 SL QUOTE CONF STREAM OUT OF SEQUENCE - REFRESH SCREEN
90067 DL QUOTE CONF STREAM OUT OF SEQUENCE - REFRESH SCREEN
90068 TICKER BRDCST STREAM OUT OF SEQUENCE - REFRESH SCREEN
90069 EXCHANGE SERVICE (EUREX) AVAILABLE
90071 EXCHANGE SERVICE (EUREX) NOT AVAILABLE
90073 PRODUCT ALREADY IN LISTBOX
90074 PROFILE/EVENT ALREADY IN LISTBOX
90075 AUDIO FILE NOT FOUND
90076 INVALID AUDIO FILE
90077 EXPORTING FAILED
90078 LAST ORDER NO LONGER IN BOOK
90079 OTC BLOCK TRADE IS ALREADY APPROVED
90080 NOT ALL OTC BLOCK TRADES SUCCESSFULLY ENTERED OR MODIFIED
90081 NOT ALL OTC BLOCK TRADES SUCCESSFULLY DELETED
90082 NOT ALL OTC BLOCK TRADES SUCCESSFULLY APPROVED
90083 MAXIMUM NUMBER OF NETPOS ENTRIES REACHED
90084 MAXIMUM NUMBER OF AUDIO ENTRIES REACHED
90085 NO ORDERS MATCHING FILTER CRITERIA
90086 NO QUOTES MATCHING FILTER CRITERIA
90087 NO TRADES MATCHING FILTER CRITERIA
90088 NO ORDER AVAILABLE FOR MAINTENANCE
90089 NO COMBINATION SELECTED
90090 TIME TO MUST BE LARGER OR EQUAL THAN TIME FROM
90091 PRICE TO MUST BE LARGER OR EQUAL THAN PRICE FROM
90092 NOT CONNECTED
90093 INVALID MEMBER IN TRADER ID
90094 BLOCK TRADE REQUEST(S) SUCCESSFUL
90095 EXPORT SUCCESSFUL
90096 EUREX APPLICATION VERSION MISMATCH
90097 DISPLAY SERVER LOGIN ID TOO SHORT FOR EUREX LOGIN
90098 APPLICATION VERSION MISMATCH
90099 BACK OFFICE INFO STREAM OUT OF SEQUENCE - REFRESH SCREEN
90100 GIVE UP/TAKE UP STREAM OUT OF SEQUENCE - REFRESH SCREEN
90101 STREAM OUT OF SEQUENCE
90102 PRINT JOB SUBMITTED
90103 PRINT JOB CANCELLED
90104 QUOTE REQUEST SUBMITTED
90105 CROSS REQUEST SUBMITTED
90106 BASIS TRADE DEFAULTS RETRIEVED
90107 BASIS TRADE RETRIEVED
90108 BASIS TRADE ENTERED
90109 BASIS TRADE MODIFIED
90110 BASIS TRADE DELETED
90111 BASIS TRADE APPROVED
90112 EFP TRADE ENTERED
90113 EFP TRADE MODIFIED
90114 EFP TRADE DELETED
90115 EFP TRADE RETRIEVED
90116 EFP TRADE APPROVED
90117 OTC BLOCK TRADE(S) SUCCESSFULLY ENTERED OR MODIFIED
90118 OTC BLOCK TRADE(S) SUCCESSFULLY APPROVED
90119 OTC BLOCK TRADE(S) SUCCESSFULLY DELETED
90120 MARKET NEWS SUCCESSFULLY RETRIEVED
90121 EFP TRADE RETRIEVED, TRADE ALREADY APPROVED
90122 BASIS TRADE RETRIEVED, TRADE ALREADY APPROVED
90123 OTC BLOCK TRADE RETRIEVED, TRADE ALREADY APPROVED
90124 MARKET NEWS LIST SUCCESSFULLY RETRIEVED
90125 NO MARKET NEWS AVAILABLE
90126 RETRIEVING PRODUCT
90127 RETRIEVING EXTERNAL UNDERLYINGS
90128 WAITING FOR MISSED RESPONSE
90129 ALL ORDERS DELETED
90130 NOT ALLOWED FOR MORE THAN ONE CONTRACT
90131 OTC BLOCK TRADE SUCCESSFULLY RETRIEVED
90132 NO ORDERS OR QUOTES MATCHING SELECTION CRITERIA
90133 NO ORDERS OR QUOTES MATCHING FILTER CRITERIA
90134 INQUIRY STOPPED BY USER
90135 MISSING TRADER ID
90136 MEMBER ALREADY SELECTED
90137 NOT ALL NOTIFICATIONS SUCCESSFULLY ENTERED
90138 NOT ALL EXERCISES SUCCESSFULLY ENTERED
90139 QUOTE REQUEST SUBMITTED FOR
90140 NOT ALL ABANDONS SUCCESSFULLY COMPLETED
90141 PROFILE ONLY CONTAINS OPTIONS, OPTIONS ARE NOT ALLOWED
90142 ERROR IN SECURITY PROFILE
90143 ALL QUOTES DELETED
90144 TRADER MaxOrdQty CAN’T BE GREATER THAN MEMBER MaxOrdQty
90145 NOT ALL RELATIONSHIPS SUCCESSFULLY ENTERED
90146 RELATIONSHIPS SUCCESSFULLY ENTERED
90147 RELATIONSHIPS SUCCESSFULLY RETRIEVED
90148 RELATIONSHIPS SUCCESSFULLY MODIFIED
90149 RELATIONSHIPS SUCCESSFULLY ENTERED AND MODIFIED
90150 NOT ALL RELATIONSHIPS SUCCESSFULLY ENTERED AND MODIFIED
90151 NOT ALL RELATIONSHIPS SUCCESSFULLY MODIFIED
90152 OTC VOLA TRADE SUCCESSFULLY RETRIEVED
90153 OPTION TRADE SUCCESSFULLY RETRIEVED
90154 OTC VOLA TRADE HAS ALREADY BEEN APPROVED
90155 OTC VOLA TRADE(S) SUCCESSFULLY ENTERED OR MODIFIED
90156 OTC VOLA TRADE(S) SUCCESSFULLY APPROVED
90157 OTC VOLA TRADE(S) SUCCESSFULLY DELETED
90158 NOT ALL OTC VOLA TRADE(S) SUCCESSFULLY ENTERED OR MODIFIED
90159 NOT ALL OTC VOLA TRADE(S) SUCCESSFULLY APPROVED
90160 NOT ALL OTC VOLA TRADE(S) SUCCESSFULLY DELETED
90161 RELATIONSHIP FOR MEMBER ALREADY IN LISTBOX
90162 GIVE-UP OF OTC BLOCK TRADES NOT ALLOWED IN ORDER SCOPE
90163 GIVE-UP OF OTC VOLA TRADES NOT ALLOWED IN ORDER SCOPE
90164 GIVE-UP OF EFP TRADES NOT ALLOWED IN ORDER SCOPE
90165 TAKE-UP OF OTC BLOCK TRADES NOT ALLOWED IN ORDER SCOPE
90166 TAKE-UP OF OTC VOLA TRADES NOT ALLOWED IN ORDER SCOPE
90167 TAKE-UP OF EFP TRADES NOT ALLOWED IN ORDER SCOPE
90168 NOT ALL REPORTS SUCCESSFULLY ENTERED
90169 FAILURE TO LOAD MEMBER INFORMATION
90170 FAILURE TO LOAD MEMBER LIST
90171 FAILURE TO LOAD NCM LIST
90172 FAILURE TO LOAD EXCHANGE RATE TABLE
90173 FAILURE TO LOAD EXTERNAL UL EXCH LIST
90174 FAILURE TO LOAD PRODUCT LIST
90175 PRIM CLG MBR CAN ONLY BE SET TO ONE RELATIONSHIP
90176 CHANGES MUST SUBMIT BEFORE MODIFY PRIM CLG MBR
90177 PRIM CLG MBR MODIFICATION MUST SUBMIT BEFORE EXECUTE OTHER CHANGES
90178 NO OPTIONS IN PROFILE
90179 LOGIN ABORTED
90180 THE SUBGROUP IS INVALID
90181 NO OPTIONS AND STOCK FUTURES IN PROFILE
90182 TRAILING BLANKS WILL NOT BE SAVED
90183 APPLICATION LOGGED INTO OUTDATED BUSINESS DAY
90184 NOT ALL POSITION TRANSFERS SUCCESSFULLY PROCESSED
90185 QUANTITY MUST BE MULTIPLE OF ROUND LOT
90186 ASK QUANTITY MUST BE MULTIPLE OF ROUND LOT
90187 BID QUANTITY MUST BE MULTIPLE OF ROUND LOT
90188 OTC VOLA TRADE RETRIEVED, TRADE ALREADY APPROVED
90189 STRING NOT FOUND
90190 WRAPPED AROUND
90194 NO CONTRACT OR PRODUCT IN PROFILE, ONLY CONTRACTS AND PRODUCTS ARE ALLOWED
90195 USER SESSION LOST
90196 TRADE TYPE IS INVALID FOR SOME PROFILE ENTRIES
90197 ALERT PERCENTAGE EXCEEDED
90198 NO HELD QUOTES IN SELECTION
90199 EXPORT ABORTED
90200 AT LEAST ONE COLUMN SHOULD BE DISPLAYED
90201 FREE DEPOSIT QUANTITY EXCEEDED
90202 NO VALID DATA IN PROFILE
90203 SELECTION CONTAINS READ-ONLY ACCESS LEVELS
90204 NO BACKEND RESPONSE RECEIVED YET
90205 TABLE IS EMPTY
90206 DATE IS IN THE PAST
90207 SUCCESSFULLY SUBSCRIBED TO BROADCAST STREAM
90208 NO RECORDS FOUND
90209 MASTER DATA INITIALIZED
90210 MASTER DATA INITIALIZING FAILED
90211 INVALID INQUIRY FOR CURRENT PRODUCT STATE
90212 DETAIL LOADING FAILED
90213 NOT ALL PRODUCTS HAVE BEEN (DE-)ASSIGNED - PLEASE CHECK AND REINQUIRE
90214 ENTERED ISIN IS NOT A STANDARD ISIN
90215 ISIN CHECKSUM ERROR
90216 NO UNDERLYING AVAILABLE
90217 NOT ALL STRATEGY REQUESTS ENTERED SUCCESSFULLY
90218 OPTION QUANTITY OF THIS PRODUCT EXCEEDS MAXIMUM
90219 UL QUANTITY OF THIS PRODUCT EXCEEDS MAXIMUM
90220 STRATEGY DELETED
90221 NO TRANSACTION FOR GIVEN NUMBER AVAILABLE
90222 STRIKE PRICE DOES NOT EXIST
90223 STRATEGY ORDER CONF STREAM OUT OF SEQUENCE - REFRESH SCREEN
90224 PRICE ROUNDED, WAS:
90225 STRATEGIES SUCCESSFULLY ENTERED
90226 NOT ALL STRATEGIES SUCCESSFULLY ENTERED
90227 STRATEGY INSIDE MKT STREAM OUT OF SEQUENCE - REFRESH SCREEN
90228 STRATEGY QUOTE CONF STREAM OUT OF SEQUENCE - REFRESH SCREEN
90229 NO STRATEGY SELECTED
90231 EFS TRADE RETRIEVED
90232 EFS TRADE ENTERED
90233 EFS TRADE MODIFIED
90234 EFS TRADE DELETED
90235 EFS TRADE APPROVED
90236 EFS TRADE RETRIEVED, TRADE ALREADY APPROVED
90238 EFP-FIN TRADE RETRIEVED
90239 EFP-FIN TRADE ENTERED
90240 EFP-FIN TRADE MODIFIED
90241 EFP-FIN TRADE DELETED
90242 EFP-FIN TRADE APPROVED
90243 EFP-FIN TRADE RETRIEVED, TRADE ALREADY APPROVED
90245 NOT ENOUGH STRIKE PRICES AVAILABLE
90246 CONTRACT VERSION INVALID
90247 STRATEGY NOT POSSIBLE FOR THIS PRODUCT
90248 CHANGE OF SUBGROUP NOT ALLOWED
90249 GIVE-UP OF OTC EFP-FIN TRADES NOT ALLOWED IN ORDER SCOPE
90250 GIVE-UP OF OTC EFS TRADES NOT ALLOWED IN ORDER SCOPE
90251 GIVE-UP OF OTC BASIS TRADES NOT ALLOWED IN ORDER SCOPE
90252 TAKE-UP OF OTC EFP-FIN TRADES NOT ALLOWED IN ORDER SCOPE
90253 TAKE-UP OF OTC EFS TRADES NOT ALLOWED IN ORDER SCOPE
90254 TAKE-UP OF OTC BASIS TRADES NOT ALLOWED IN ORDER SCOPE
90255 TRADER ID INCOMPLETE
90256 NOT ALL RECORDS SUCCESSFULLY PROCESSED
90257 RECORDS SUCCESSFULLY IMPORTED:
90258 NO VALID CONTRACT FOUND FOR RECORD
90259 WRONG FILE FORMAT IN RECORD
90260 DISPLAY DECIMALS MISMATCH IN RECORD
90261 NO ROW FOUND FOR RECORD
90262 NO VALID DATA SELECTED
90263 INVALID HEADER - IMPORT ABORTED
90264 COLUMN ALREADY EXIST IN TABLE.
90265 COLUMN SUCCESSFULLY ADDED
90266 COLUMN COULD NOT BE REMOVED
90267 DATA IMPORT FAILED - PLEASE CHECK FORMAT
90268 DATE IS LIMITED TO [number] DAYS IN FUTURE
90269 MODE SWITCH NOT ALLOWED
90270 CUST(OMER) FIELD NOT SET
90271 THERE ARE UNTRANSFERRED ORDERS LEFT
90272 STRATEGY OTC BLOCK TRADE CAN NOT BE CHANGED TO OTC BLOCK TRADE
90273 OTC BLOCK TRADE CAN NOT BE CHANGED STRATEGY TO OTC BLOCK TRADE
90274 ON BEHALF OF MEMBER IS MISSING
90275 INVALID VALUE IN COLUMN:[col] ROW:
90276 TICK SIZE ERROR IN COLUMN:[col] ROW:
90277 NO ROWS MATCH FILTER CRITERIA
90278 DATE IS LIMITED TO [number] DAYS IN PAST
90279 CONTRACT NOT AVAILABLE ON BOTH EXCHANGES
90280 TRADER ID IS MISSING OR INCOMPLETE
90281 MAX VALUE MUST NOT BE LOWER THAN MIN VALUE
90282 ROW SUCCESSFULLY CLEARED
90283 NOTHING CHANGED - TABLE UP TO DATE
90284 MULTIPLE IMPORT OF CONTRACT IN RECORD
90285 UNDERLYING DISPLAY DECIMALS MISMATCH IN RECORD
90286 PRODUCT DISPLAY DECIMALS MISMATCH IN RECORD
90287 ORDER DISCARDED:
90288 THEORETICAL PRICE EXCEEDS MAXIMUM PRICE IN RECORD
90289 UNDERLYING PRICE EXCEEDS MAXIMUM PRICE IN RECORD
90290 MODE SWITCH NOT ALLOWED: THERE ARE UNTRANSFERRED ORDERS LEFT
90291 NO TAGGED ORDERS FOUND
90292 SYNTAX ERROR IN EXPRESSION
90293 NO DESTINATION DIRECTORY SELECTED
90294 EXPORT FILE COULD NOT BE CREATED
90295 ERROR WHILE EXPORTING INTO FILE:
90296 EXPORT DIRECTORY COULD NOT BE CREATED
90297 DESTINATION DIRECTORY IS WRITE PROTECTED
90298 EXPORT ERROR:
90299 EXPORT STOPPED
90300 EXPORT COMPLETED
90301 LOADING FAILED
90302 COLUMN [[col]] CANNOT BE DELETED
90303 IMPORT COMPLETED
90304 HEADER ROW IS INVALID:
90305 FILE DOES NOT CONTAIN ANY DATA:
90306 NUMBER OF COLUMN DOESN'T MATCH:
90307 DESTINATION DIRECTORY DOES NOT EXIST:
90308 FILE INSTEAD OF DIRECTORY WAS SELECTED:
90309 IMPORT FILE DOES NOT EXIST:
90310 DIRECTORY INSTEAD OF FILE WAS SELECTED:
90311 FILE IS NOT READABLE:
90312 ORDER MIGHT NOT BE SUCCESSFULLY WRITTEN INTO FILE
90313 NO VALID FILE(S) SELECTED
90314 GIVE-UP OF OTC EFP-INDEX FUTURES TRADES NOT ALLOWED IN ORDER SCOPE
90315 TAKE-UP OF OTC EFP-INDEX FUTURES TRADES NOT ALLOWED IN ORDER SCOPE
90316 FAILURE TO LOAD MEMBER RELATIONSHIP LIST
90317 FALBACK TO LOAD NCM LIST
90318 NCM LIST LOADED
90319 FLEXIBLE OPTION BRDCST STREAM OUT OF SEQUENCE - REFRESH SCREEN
90320 EFP-IDX TRADE RETRIEVED
90321 EFP-IDX TRADE ENTERED
90322 EFP-IDX TRADE MODIFIED
90323 EFP-IDX TRADE DELETED
90324 EFP-IDX TRADE APPROVED
90325 EFP-IDX TRADE RETRIEVED, TRADE ALREADY APPROVED
90326 NO DYNAMICALLY UPDATED CONTRACTS AVAILABLE
90327 NO OWN ORDER AT THIS LIMIT AVAILABLE
90328 NO OWN ORDER AT THIS LIMIT AVAILABLE
90329 TABLE CLEARED
90330 ORDER SUCCESSFULLY SUSPENDED
90331 SUSPENDED ORDER SUCCESSFULLY DELETED
90332 SUSPENDED ORDER SUCCESSFULLY MODIFIED
90333 SUSPENDED ORDER NOT FOUND
90334 NO UNDERLYING PRICE AVAILABLE
90335 LST PRC RETRIEVED
90336 PRV STL PRC RETRIEVED
90337 PRICES ROUNDED, WERE:
90338 INVALID DATA IN ROB LOGS
90339 AT LEAST ONE NEXT DIVIDEND IS REQUIRED
90340 SECURITY NOT FOUND, CONTINUE TO CREATE NEW SECURITY
90341 LIMIT OF 120 DIVIDENDS REACHED
90342 NO OPTION PRODUCTS IN PROFILE
90343 GFD ORDERS WITH TInd=EOC WILL NOT BE TRANSFERRED
90344 NO LAST TRADE PRICE
90345 NO SECOND LEGS FOR SELECTED COMBINATION TYPE
90346 GROUP NAME ALREADY EXISTS
90347 REGULAR QUOTE(S) HELD: $prod$ // $prod$ will be replaced during runtime
90348 NO REGULAR QUOTES TO HOLD: $prod$ // $prod$ will be replaced during runtime
90349 STRATEGY QUOTE(S) HELD: $prod$ // $prod$ will be replaced during runtime
90350 NO STRATEGY QUOTES TO HOLD: $prod$ // $prod$ will be replaced during runtime
90351 MARKET-ON-CLOSE ORDERS WILL NOT BE EXPORTED
90352 DUPLICATE ENTRIES REJECTED
90353 SELECTION REQUIRED FOR PROFILE
90354 NO CHANGE REQUESTED
90355 INSTRUMENT IS NOT ASSIGNED
90356 USER HAS INSUFFICIENT RALS FOR THIS ACTION
90357 INSTRUMENT GROUP SUCCESSFULLY ADDED
90358 INSTRUMENT GROUP SUCCESSFULLY DELETED
90359 ONLY EQUITIES ARE ALLOWED
90360 ADJUSTMENT SUCCESSFULLY COMPLETED
90361 OPEN OTC TRADE SUCCESSFULLY ENTERED
90362 OPEN OTC TRADE SUCCESSFULLY APPROVED
90363 NO LICENSE AVAILABLE
90364 INSTRUMENT SUCCESSFULLY ADDED (Instr. $instr$ at $exch$) // $inst$ and $exch$ will be replaced during runtime
90365 INSTRUMENT SUCCESSFULLY DELETED (Instr. $instr$ at $exch$) // $inst$ and $exch$ will be replaced during runtime
90366 OPEN OTC TRADE SUCCESSFULLY DELETED
90367 CONTINUOUS AUCTION XERVICE NOT AVAILABLE
90368 CORRECTED QUOTE IND TIME
90369 HELD &what& SUCCESSFULLY ADDED
90370 HELD &what& SUCCESSFULLY MODIFIED
90371 HELD &what& SUCCESSFULLY DELETED
90372 USER SUCCESSFULLY ADDED
90373 USER SUCCESSFULLY MODIFIED
90374 USER SUCCESSFULLY DELETED
90375 AUTHORIZATIONS SUCCESSFULLY MODIFIED
90376 ERROR IN LOADING AUTHORIZATION DATA
90377 SOME RESOURCE ACCESS LEVELS WERE NOT MODIFIED
90378 INSTRUMENT WATCH SUCCESSFULLY ADDED
90379 INSTRUMENT WATCH SUCCESSFULLY DELETED
90380 INSTRUMENT WATCH SUCCESSFULLY MODIFIED
90381 INSTRUMENT WATCH SUCCESSFULLY ACTIVATED
90382 INSTRUMENT WATCH SUCCESSFULLY DEACTIVATED
90383 EXCEEDED NUMBER OF WATCHES PER INSTRUMENT
90384 EXCEEDED NUMBER OF TOTAL WATCHES
90385 TRIED TO INSERT DUPLICATE WATCH
90386 PUBLIC QUOTE SUCCESSFULLY ENTERED
90387 MATCHING RANGE SUCCESSFULLY ENTERED
90388 NO ExeQty AVAILABLE FOR PREFILLING
90389 TO ENABLE ACCEPT PRESS HIT, USEEXEPRC OR TAKE BUTTON TO PREFILL QTY
90390 PRODUCT OR CONTRACT NOT INQUIRED IN BLOCK AUCTION WINDOW
90391 TRADER ID MUST BE ENTERED
90392 MAXIMUM NUMBER OF PROFILE ENTRIES EXCEEDED
90393 NO QUOTES FOR DELETION FOUND
90394 DUPLICATE KEY FOUND - ROW: [row] COLUMN:
90395 IMPORTING FILE...
90396 ERROR IN INPUT FILE - ROW: [row] COLUMN:
90397 NOT ALL ORDERS SUCCESSFULLY IMPORTED
90398 PRODUCT NOT ASSIGNED
90399 PRODUCT ALREADY ASSIGNED
90400 NO UNDERLYING PRICE FOR LEPO CONTRACT AVAILABLE
90401 NO VALID DATA FOUND IN INPUT FILE
90401 NOT ALL STATE TRANSITIONS SUCCESSFUL
90402 ALL SL ORDER CONF STREAM OUT OF SEQUENCE - REFRESH SCREEN
90403 ALL DL ORDER CONF STREAM OUT OF SEQUENCE - REFRESH SCREEN
90404 ALL STRATEGY ORDER CONF STREAM OUT OF SEQUENCE - REFRESH SCREEN
90500 ALL RECORDS SUCCESSFULLY IMPORTED
90501 NOT ALL RECORDS SUCCESSFULLY IMPORTED
90502 CAN'T READ INPUT
90503 TABLE IMPORT ERROR
90510 UNKNOWN HEADER KEY
90511 CAN'T FIND HEADER - IMPORT ABORTED
90513 CAN'T FIND TABLE RECORDS
90515 INCOMPLETE RECORD IMPORTED
90517 DUPLICATE RECORDS - IMPORT ABORTED
90518 RECORD HAS MANUAL CHANGES
90519 IMPORTED RECORD IS NOT INQUIRED
90520 INVALID FIELD FORMAT
90521 IMPORTED RECORD IS NOT EDITABLE
90522 IMPORTED RECORD HAS TOO MANY CHANGED VALUES
90603 IMPORTED PRODUCT HAS MORE AS ONE FINAL SETTLEMENT PRICE:
90607 SUCCESSFULLY ENTERED MASS QUOTE HOLD: &&
90608 PENDING MODIFICATION
90609 Record && does not contain any valid data
90610 Record && does not contain any valid data
90611 PLEASE REINQUIRE TO REFRESH SCREEN
90612 FAST MARKET
90613 INSTRUMENT SUSPENDED
90614 EXTENDED AUCTION CALL
90615 VOLATILITY INTERRUPTION
90616 EXTENDED VOLATILITY INTERRUPTION
90617 EXTENDED VOLATILITY INTERRUPTION IS FROZEN
90618 MARKET ORDER INTERRUPTION
90619 CROSSING CALL STARTED
90620 CLOSING CROSSING CALL STARTED
90621 KNOCKED OUT
90622 KNOCK OUT REVOKED
90623 INSTRUMENT UNSUSPENDED
90624 INSTRUMENT STATE UNDEFINED. PLEASE REINQUIRE
90650 CONFIGURATION SUCCESSFULLY RESET TO DEFAULT
90651 NO PARALLEL MS AND NON-MS USER LOGIN ALLOWED
90652 RECORD SUCCESSFULLY MODIFIED
90653 RECORD SUCCESSFULLY ADDED
90654 Invalid Exchange or Instrument
90711 PRICE IS HALF-TICK, RES MUST BE IOC
90712 START DATE MUST BE EQUAL OR PRIOR TO END DATE
90713 MAXIMUM OF 500 ENTRIES REACHED
90714 INSIDE MARKET STREAM OUT OF SEQUENCE - REFRESH SCREEN
90715 TICKER STREAM OUT OF SEQUENCE - REFRESH SCREEN
90716 QUOTE REQUEST STREAM OUT OF SEQUENCE - REFRESH SCREEN
90717 STATE STREAM OUT OF SEQUENCE - REFRESH SCREEN
90718 SUPERVISION MSG STREAM OUT OF SEQUENCE - REFRESH SCREEN
90719 PRIVATE RECOVERABLE STREAM OUT OF SEQUENCE - REFRESH SCREEN
90720 TABLE CONTAINS INVALID DATA
90721 TABLE ALREADY CONTAINS 30 ROWS, NO MORE ROWS WILL BE ADDED
90722 BUY QUANTITY DOES NOT MATCH SELL QUANTITY
90723 TRADE ENTERED SUCCESSFULLY
90724 TRADE MODIFIED SUCCESSFULLY
90725 TRADE DELETED SUCCESSFULLY
90726 TEMPLATE (&&) ADDED SUCCESSFULLY
90727 TEMPLATE (&&) DELETED SUCCESSFULLY
90728 TEMPLATE (&&) MODIFIED SUCCESSFULLY
90729 NO SECURITY PROFILE DEFINED FOR MEMBER
90730 NO INSTRUMENTS IN INSTRUMENT GROUP
90731 MARKET RESET FOR &&: NON PERSISTENT ORDERS HAVE BEEN DELETED
90732 MARKET RESET FOR &&: QUOTES HAVE BEEN DELETED
90733 SELECTED PRODUCT GROUP HAS NO ELEMENTS
90734 START DATE MUST BE EQUAL OR AFTER CURRENT BUSINESS DATE
90735 ADDITIONAL FILTER CRITERIA REMOVED
90736 PRICE AND/OR QUANTITY ALERT - CONFIRMATION REQUIRED
90738 MiFID REPORT SUCCESSFULLY ENTERED/PUBLISHED
90739 MiFID REPORT SUCCESSFULLY CONFIRMED
90740 MiFID REPORT SUCCESSFULLY DELETED
90741 DELETION DUE TO MARKET REALLOCATION; PLEASE CHECK YOUR TRADES
91000 COPY MEMBER ASSIGNMENT: INTERSECTION OF PRODUCT GROUPS IS IN SYNC
91001 MEMBER LIST UPDATE SUCCESSFUL, BUT NO MEMBER SELECTED FOR INQUIRY
91002 MEMBER LIST UPDATE SUCCESSFUL, BUT GROUP NOT ASSIGNED TO MEMBER
91003 MEMBER LIST IS EMPTY FOR THE SELECTED FILTER CRITERIA
91004 EBI BLOCK TRADES NOT ALLOWED IN ORDER SCOPE
91005 DYNAMIC SUBSCRIPTION CONTAINS NO DATA DURING CURRENT STATE
91006 NO MATCHING DATA FOUND
91007 PLEASE USE CURRENT DAY TREE FOR GROUP SELECTION
91008 EVAL PCT HAS CHANGED
91009 SELECTED PRODUCT GROUP HAS PENDING PRODUCT MOVES
91010 DUPLICATE KEY IN PREVIOUS EDITED LINE
91011 DUPLICATE KEY
91012 COLL TRN STREAM OUT OF SEQUENCE - REFRESH SCREEN
91013 MARGIN REQUIREMENT INFORMATION STREAM OUT OF SEQUENCE - REFRESH SCREEN
91014 SELECTED RECORD ALREADY APPROVED
91020 MAPPING ALREADY EXISTS
91030 NO PRODUCTS LEFT AFTER FILTERING
91031 DUPLICATE RECORD REJECTED
91032 RECORD DOES NOT MATCH FILTER CRITERIA
91040 ONE OR MORE ERRORS OCCURRED, CHECK MESSAGE LOG FOR DETAILS
91050 ZERO VALUE NOT ALLOWED
91052 PIN CLEARED -> RIGHTS WERE SET TO DEFAULT
91054 DEFAULT RIGHT CHANGED -> UNCONFIGURED TRADERS UPDATED
91056 DEFAULT PIN CLEARED -> ALL DEFAULT RIGHTS RESET
91057 INSUFFICIENT PRIVILEGES FOR USING POSITION TRANSFER BULK LOAD
91058 EITHER LONG OR SHORT MUST BE FILLED
91060 BOTH LONG AND SHORT NOT ALLOWED WITH ORIGINAL TRADE PRICE
91062 TOTAL CASH AMOUNT CALCULATION FAILED
91063 UPDATING ZERO COST QUANTITIES FAILED
91064 LONG AND SHORT QUANTITIES MUST BE EQUAL
91065 INSUFFICIENT POSITION
91066 ZERO COST QUANTITY EXCEEDED
91067 COLLATERAL POOL ALREADY EXISTS
91068 COLLATERAL POOL RELATION ALREADY EXISTS
91070 REQUEST CONTAINS INVALID RECORDS, CLICK HIGHLIGHTED ROWS FOR DETAILS
91071 NO POOLS FOR CURRENT SELECTION AVAILABLE YET
91072 NO CSDS FOR CURRENT SELECTION AVAILABLE
91073 NO SECURITY MOVEMENT FOR CURRENT SELECTION AVAILABLE
91074 ERRORS OCCURRED WHILE PROCESSING REQUEST
91075 DUPLICATE KEYS
91076 RECORD SUCCESSFULLY REMOVED
91077 DUPLICATE RECORD REJECTED
91078 PAST HOLIDAYS IGNORED
91079 PROCESS COMPLETE - ERRORS OCCURRED - CHECK TABLE
91080 MAXIMUM OF 5000 PROCESSED ROWS LIMIT REACHED - PROCESS AGAIN
91081 MASS QUOTE ENTRY NOT SUPPORTED FOR TRADER WILDCARD