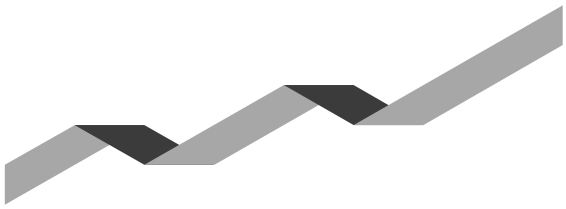
Deutsche Börse



Year 2000 Project

Simulation

Simulation Script

Part III: Business Processes – Derivatives Market

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1 Introduction

This section contains an overview of simulation activities in the derivatives market segment, followed by a brief description of the general flow of a simulation day, and an overview of the remaining chapters of the cash market script.

1.1 Overview

The derivative market business processes comprise those processes that are initiated within the scope of Year 2000 Simulation in Eurex®. Specifically, this includes order entries and exercises in Eurex® as well as clearing activities and the pledging of collateral in CASCADE.

Order entry will generally take place on the first three of five online days of each simulation cycle: 29/12/1999, 30/12/1999 and 03/01/2000. No orders will be entered on 04/01/2000 and 05/01/2000, since these simulation dates will only be used for the verification of trading and clearing results.

The simulation guidelines listed below cover the individual simulation days according to different participant groups. Participant groups are as follows:

- Eurex® Participants
- CASCADE Participants



The scripts set out minimum requirements. Participants are requested to enter the transactions described in the script, using the prescribed simulation instruments or products on the specified trading dates. During simulation, additional entries can be made. This is recommended.

TPF will also be integrated into the simulation, without any action required by individual participants. TPF is used to distribute prices and indices of the simultaneous cash market simulation to the Eurex® ticker. The system will store the last records after the close of trading in the cash market.

1.2 Procedures

The overview shown below summarises the standard processing flows for the transactions described, on each simulation day.

Day	Participants	Activities
T	Eurex®	Creation of positions by entering order and trades in Eurex®
T	Eurex®	Exercise of options in Eurex®
T+1 (morning)	Eurex®	Verification of reports (positions, exercises)
T+2	CASCADE	Verification of correct physical deliveries, using the settlement data carrier
T+3 (morning)	Eurex®	Verification of reports (clearing)

Table 1: Standard flow of derivatives market transactions

As a rule, a trade date is equal to a simulation day.

1.3 Structure of Scripts

In order to verify the successful processing of trades entered on the previous day, as well as the correct processing of collateral deposits, access will be required to Eurex® as well as to the clearing systems. For this reason, in addition to the script for Eurex®, a separate script has been added for CASCADE participants.

The scripts provide a day-to-day guideline of required simulation activities. The overview of the online trading hours for each simulation day is followed by a description of trade entries and the verification of results to be carried out by Eurex® and CASCADE participants.

In order to be able to track transactions, a unique ID is assigned to each transaction, providing a reference from the entry of the trade involved through to subsequent verification in related systems. The transaction descriptions provided in the appendix (refer to Simulation Script Part V: Appendix, chapter 2.2 Derivatives Market) reflect the connection between the entry and processing of the transactions during the simulation period, across all systems involved.

2 Eurex® Participants

2.1 General Information

The focus of the simulation activity is on the following business processes:

- Entry of orders and OTC trades in the Eurex® system
- Trade management
- Option exercises and assignments, as well as verification of related clearing
- Verification of the correct pledging of collateral for instruments held in collective safe custody

The following two tables are used to describe the activities on each simulation day:

- The **table "Eurex® Activity"** is used to describe order and trade entries to be carried out on the respective day.
- The **table "Verification of Entries"** describes the verification activities based upon previously entered orders and trades.

The individual steps comprised in the business processes are described in the script. The outline has, however, dispensed with excessive details assuming that parties involved have sufficient knowledge of the system.

In order to establish certain positions, it may be necessary to make arrangements with other simulation participants. In this case, please contact the counterparty concerned. The appendix contains a list of all Eurex® participants (refer to Simulation Script Part V: Appendix, chapter 3 Simulation Participants).



Within the scope of trading activities in Eurex®, participants should ensure that they enter into both long and short positions, especially for equity options involving physical deliveries. For this purpose, long and short positions should be entered into in different series to avoid the netting of own position in the event of exercises.

2.1.1 Simulation Days

Eurex® participants will be involved in the simulation of derivatives market business processes on the following days:

Cycle	Weekday	Simulation day	Trade date
Cycle #1	Monday	10/05/1999	29/12/1999
	Tuesday	11/05/1999	30/12/1999
	Friday	14/05/1999	03/01/2000
	Monday	17/05/1999	04/01/2000
	Tuesday	18/05/1999	05/01/2000
Cycle #2	Thursday	20/05/1999	29/12/1999
	Friday	21/05/1999	30/12/1999
	Tuesday	25/05/1999	03/01/2000
	Wednesday	26/05/1999	04/01/2000
	Thursday	27/05/1999	05/01/2000
Cycle #3	Monday	31/05/1999	29/12/1999
	Tuesday	01/06/1999	30/12/1999
	Friday	04/06/1999	03/01/2000
	Monday	07/06/1999	04/01/2000
	Tuesday	08/06/1999	05/01/2000
Cycle #4	Thursday	10/06/1999	29/12/1999
	Friday	11/06/1999	30/12/1999
	Tuesday	15/06/1999	03/01/2000
	Wednesday	16/06/1999	04/01/2000
	Thursday	17/06/1999	05/01/2000
Cycle #5	Monday	21/06/1999	29/12/1999
	Tuesday	22/06/1999	30/12/1999
	Thursday	24/06/1999	03/01/2000
	Monday	28/06/1999	04/01/2000
	Tuesday	29/06/1999	05/01/2000

Table 2: Eurex® simulation days and trade dates

2.1.2 Trading Hours

On simulation days, Eurex® will be available online from 07:00 - 16:00. This is the time available for the order and trade entries prescribed in the script for the respective simulation day.

The graph shown below illustrates the Eurex® trading schedule in the course of simulation. Generally, the half-hour pre-trading period starting at 07:30 will be followed by a pre-opening period of approx. 10 minutes for all products. The post trading period will start at 15:00 and will last for one hour.

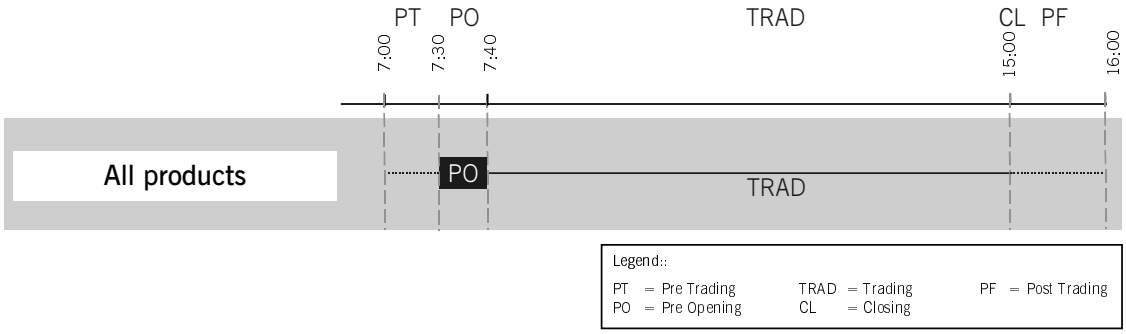


Figure 1: Eurex® trading schedule

2.1.3 Reports

Eurex® reports are an important tool for the checking of simulated transactions.

The following list is a compilation of the reports required for the verification of simulation activities. Please make sure to subscribe to these reports on the first trade date (29/12/1999). Additional reports may be requested according to requirements. Participants should note that the subscription to reports will have to be renewed for each simulation cycle.

Report ID	Eurex® report
CB010	Position Detail Report / Position Detail Report (raw data)
CB130	Give-Up Trade History
CB140	Accepted Give-Up Trades
CB150	Take-Up Trade History
CB160	Accepted Take-Up Trades
CD010	Daily Cash Account Statement
CD020	Daily Security Movement and Coverage
CE070	Daily Exercise and Assign Summary Report
CE071	Option on Futures Exercise Assignment Summary
CE080	Pending Delivery
CE100	Settled Delivery
CE110	Eurex-DBC Delivery List Sell
CE111	Eurex-DBC Delivery List Buy
TC530	Daily Quote Maintenance
TC540	Daily Order Maintenance
TC545	OTC Block Trade Maintenance
TC550	Open Order Detail
TC810	Daily Trade Confirmation

Table 3: Eurex® reports

2.2 Trade Date 29 December 1999



The trade date for this simulation day is the penultimate trade date of 1999.

The focus of this simulation day is on the opening of positions at Eurex®. Participants should make sure to establish both long and short positions. To prevent exercises against a participant's own position, positions should be opened in different series.

Also, participants should ensure that the required reports as set out in chapter 2.1.3 Reports

have been subscribed to.



Simulation hours	07:00 -16:00
Trade date	29/12/1999

ID	Eurex® Activity	Products
DMTP01	Opening of long and short positions	OSTK (SIE)
DMTP01	Opening of long and short positions	OSTK (CSGN)
DMTP01	Opening of long and short positions	OGBM
DMTP01	Opening of long and short positions	OEU3
DMTP02	Opening of long and short positions	FDAX
DMTP02	Opening of long and short positions	FSMI
DMTP02	Opening of long and short positions	FGBM
DMTP02	Opening of long and short positions	CONF
DMTP13	Opening of a long position	OSTK (SIE)
DMTP15	Opening of a long position	OGBM
DMTP17	Opening of a long position	OSTK (DRB)
DMTP17	Exercise of an equity option (by the holder of a long position)	OSTK (DRB)

2.3 Trade Date 30 December 1999



The trade date for this simulation part is the last trade date of the year.

The focus of this simulation day is on the entry of orders and the opening of positions at Eurex®. Participants should ensure to establish both long and short positions. To prevent exercises against a participant's own position, positions should be opened in different series. In addition, options will be exercised.

In addition, the previous day's reports – as set out in chapter 2.1.3 Reports– will be verified.



Simulation hours	07:00 -16:00
Trade date	30/12/1999

ID	Eurex® Activity	Products
DMTP01	Opening of long and short positions	ODAX
DMTP01	Opening of long and short positions	OSMI
DMTP02	Opening of long and short positions	FLI3
DMTP02	Opening of long and short positions	LIB3
DMTP03	Entry of a limit buy order valid until 05/01/2000, with the limit set to ensure no matching takes place	FEU3
DMTP04	Entry of a buy order (GTC) for a futures combination, with the limit set to ensure no matching takes place	FEU3
DMTP11	Opening of an agent account (A1) position	ODAX
DMTP12	Opening of an agent account (A1) or proprietary account (P1, P2) position	FGBM
DMTP14	Opening of a long position	OSTK (SIE)
DMTP16	Opening of a long position	OGBM
DMTP18	Opening of a long position	OSTK (DRB)
DMTP13	Exercise of an equity option by the holder of a long position	OSTK (SIE)
DMTP15	Exercise of a futures option by the holder of a long position	OGBM
DTMP18	Exercise of an equity option by the holder of a long position	OSTK (DRB)

Eurex® Participants

ID	Verification of entries	Products
DMTP01	Verification of reports TC810, TC530, TC540, TC550 and CB010 to ascertain that all entries were successful	OSTK (SIE)
DMTP01	Verification of reports TC810, TC530, TC540, TC550 and CB010 to ascertain that all entries were successful	OSTK (CSGN)
DMTP01	Verification of reports TC810, TC530, TC540, TC550 and CB010 to ascertain that all entries were successful	OGBM
DMTP01	Verification of reports TC810, TC530, TC540, TC550 and CB010 to ascertain that all entries were successful	OEU3
DMTP02	Verification of reports TC810, TC530, TC540, TC550 and CB010 to ascertain that all entries were successful	FDAX
DMTP02	Verification of reports TC810, TC530, TC540, TC550 and CB010 to ascertain that all entries were successful	FSMI
DMTP02	Verification of reports TC810, TC530, TC540, TC550 and CB010 to ascertain that all entries were successful	FGBM
DMTP02	Verification of reports TC810, TC530, TC540, TC550 and CB010 to ascertain that all entries were successful	CONF
DMTP17	Verification of reports CE110 and CE111 to ascertain that the delivery instructions were entered correctly	OSTK (DRB)

2.4 Trade Date 3 January 2000



This is the first trade date of the year 2000. The simulation will focus on the entry of orders and trades as well as trade management (Historic Trade Transfer, Historic Give-Up) in Eurex®.

In addition, the reports from the previous year – as set out in chapter 2.1.3 Reports – will be verified.



Simulation hours	07:00 -16:00
Trade date	03/01/2000

ID	Eurex® Activity	Products
DMTP03	Deletion of open orders	FEU3
DMTP04	Activation of futures combination order; Deletion of orders	FEU3
DMTP05	Opening of long and short positions	OSTK (SIE)
DMTP05	Opening of long and short positions	OSTK (CSGN)
DMTP05	Opening of long and short positions	ODAX
DMTP05	Opening of long and short positions	OSMI
DMTP05	Opening of long and short positions	OGBM
DMTP05	Opening of long and short positions	OEU3
DMTP06	Opening of long and short positions	FDAX
DMTP06	Opening of long and short positions	FSMI
DMTP06	Opening of long and short positions	FGBM
DMTP06	Opening of long and short positions	CONF
DMTP06	Opening of long and short positions	FLI3
DMTP06	Opening of long and short positions	LIB3
DMTP07	Entry of quotes by market-makers, using the TRAD interface. Opening of long and short positions	OGBM
DMTP07	Entry of quotes by market-makers, using the TRAD interface. Opening of long and short positions	CONF
DMTP08	Entry of buy and sell stop orders, with stop limits close to the last traded price. Entry of limit orders triggering the stop orders. Verify that the stop orders have been triggered and are active in the market, as market orders.	FDAX

Eurex® Participants

ID	Eurex® Activity	Products
DMTP09	Entry of a block trade in agreement with another participant. The buyer of the option will enter the trade, with the seller ratifying the trade.	ODAX
DMTP10	Entry of a basis trade in agreement with another participant. The buyer of the futures contracts will enter the trade, with the seller ratifying the trade.	FGBM, DE0001134955
DMTP11	Give-up of the trade dated 30/12/1999 in agreement with another participant. Verification of correct details on screen N010	ODAX
DMTP12	Transfer of the trade dated 30/12/1999 into today's trades. Verification of correct details on screens F050/F100	FGBM
DMTP19	Opening of a long position	OSTK (DRB)
DMTP14	Exercise of an equity option by the holder of a long position	OSTK (SIE)
DMTP16	Exercise of a futures option by the holder of a long position	OGBM
DMTP19	Exercise of an equity option by the holder of a long position	OSTK (DRB)

ID	Verification of entries	Products
DMTP01	Verification of reports TC810, TC530, TC540, TC550 and CB010 to ascertain that all entries were successful	ODAX
DMTP01	Verification of reports TC810, TC530, TC540, TC550 and CB010 to ascertain that all entries were successful	OSMI
DMTP02	Verification of reports TC810, TC530, TC540, TC550 and CB010 to ascertain that all entries were successful	FLI3
DMTP02	Verification of reports TC810, TC530, TC540, TC550 and CB010 to ascertain that all entries were successful	LIB3
DMTP03	Verification of report TC550 to ascertain that all entries were successful	FEU3
DMTP04	Verification of report TC550 to ascertain that all entries were successful	FEU3
DMTP13	Verification of report CE070 to ascertain the correctness of exercises	OSTK (SIE)
DMTP15	Verification of report CE071 to ascertain the correctness of exercises	OGBM
DMTP18	Verification of reports CE110 and CE111 to ascertain that the delivery instructions were entered correctly	OSTK (DRB)
DMTP20	Verification of report CD020 to ascertain that collateral has been posted correctly	DE0001090017

2.5 Trade Date 4 January 2000



This is the second trade date of the year 2000. The simulation focus is on the verification of reports, as set out in chapter 2.1.3 Reports.



Simulation hours	07:00 -16:00
Trade date	04/01/2000

ID	Verification of entries	Products
DMTP03	Verification of report TC540 to ascertain that the deletion was successful	FEU3
DMTP04	Verification of report TC540 to ascertain that the deletion was successful	FEU3
DMTP05	Verification of reports TC810, TC530, TC540, TC550 and CB010 to ascertain that all entries were successful	OSTK (SIE)
DMTP05	Verification of reports TC810, TC530, TC540, TC550 and CB010 to ascertain that all entries were successful	OSTK (CSGN)
DMTP05	Verification of reports TC810, TC530, TC540, TC550 and CB010 to ascertain that all entries were successful	ODAX
DMTP05	Verification of reports TC810, TC530, TC540, TC550 and CB010 to ascertain that all entries were successful	OSMI
DMTP05	Verification of reports TC810, TC530, TC540, TC550 and CB010 to ascertain that all entries were successful	OGBM
DMTP05	Verification of reports TC810, TC530, TC540, TC550 and CB010 to ascertain that all entries were successful	OEU3
DMTP06	Verification of reports TC810, TC530, TC540, TC550 and CB010 to ascertain that all entries were successful	FDAX
DMTP06	Verification of reports TC810, TC530, TC540, TC550 and CB010 to ascertain that all entries were successful	FSMI
DMTP06	Verification of reports TC810, TC530, TC540, TC550 and CB010 to ascertain that all entries were successful	FGBM
DMTP06	Verification of reports TC810, TC530, TC540, TC550 and CB010 to ascertain that all entries were successful	CONF

ID	Verification of entries	Products
DMTP06	Verification of reports TC810, TC530, TC540, TC550 and CB010 to ascertain that all entries were successful	FLI3
DMTP06	Verification of reports TC810, TC530, TC540, TC550 and CB010 to ascertain that all entries were successful	LIB3
DMTP07	Verification of reports TC530 and TC810 to ascertain that all entries were successful	OGBM
DMTP07	Verification of reports TC530 and TC810 to ascertain that all entries were successful	CONF
DMTP08	Verification of report TC540 to ascertain that all entries were successful	FDAX
DMTP09	Verification of reports TC545, TTC810 and CB010 to ascertain that all entries were successful	ODAX
DMTP10	Verification of reports TC810 and CB010 to ascertain that all entries were successful	FGBM
DMTP11	Verification of reports CB010, CB130, CB140, CB150 and CB160	ODAX
DMTP12	Verification of reports CB010, CB130, CB140, CB150 and CB160	FGBM
DMTP14	Verification of report CE070 to ascertain the correctness of exercises	OSTK (SIE)
DMTP16	Verification of report CE071 to ascertain the correctness of exercises	OGBM
DMTP17	Verification of reports CE080 and CE100 to ascertain correct settlement	OSTK (DRB)
DMTP19	Verification of reports CE110 and CE111 to ascertain that the delivery instructions were entered correctly	OSTK (DRB)
DMTP21	Verification of report CD020 to ascertain that collateral has been posted correctly	DE0001090017

2.6 Trade Date 5 January 2000



This is the third trade date of the year 2000. The simulation focus is on the verification of reports, as set out in chapter 2.1.3 .



Simulation hours	07:00 -16:00
Trade date	05/01/2000

ID	Verification of entries	Products
DTMP18	Verification of reports CE080 and CE100 to ascertain correct settlement	OSTK (DRB)

3 CASCADE Participants

3.1 General Information

The focus of the simulation activities for CASCADE participants is on the following business processes:

- Verification of physical deliveries in the event of exercises, using the exercise data carriers as well as the settlement list / data carrier(s)
- Release of instructions in CASCADE
- Pledging of collateral for instruments held in collective safe custody

The following two tables are used to describe the activities on each simulation day:

- The **table "CASCADE Activity"** describes the verification and release of instructions in CASCADE.
- The **table "Verification of Entries"** describes the verification activities related to the physical delivery of Eurex® exercises.

The individual steps are outlined in the script. The outline has, however, dispensed with excessive details assuming that parties involved have sufficient knowledge of the system.

3.1.1 Simulation Days

CASCADE participants will be involved in the simulation of derivatives market business processes on the following days:

Cycle	Weekday	Simulation day	Trade date
Cycle #1	Tuesday	11/05/1999	30/12/1999
	Friday	14/05/1999	03/01/2000
	Monday	17/05/1999	04/01/2000
	Tuesday	18/05/1999	05/01/2000
Cycle #2	Friday	21/05/1999	30/12/1999
	Tuesday	25/05/1999	03/01/2000
	Wednesday	26/05/1999	04/01/2000
	Thursday	27/05/1999	05/01/2000
Cycle #3	Tuesday	01/06/1999	30/12/1999
	Friday	04/06/1999	03/01/2000
	Monday	07/06/1999	04/01/2000
	Tuesday	08/06/1999	05/01/2000
Cycle #4	Friday	11/06/1999	30/12/1999
	Tuesday	15/06/1999	03/01/2000
	Wednesday	16/06/1999	04/01/2000
	Thursday	17/06/1999	05/01/2000
Cycle #5	Tuesday	22/06/1999	30/12/1999
	Thursday	24/06/1999	03/01/2000
	Monday	28/06/1999	04/01/2000
	Tuesday	29/06/1999	05/01/2000

Table 4: CASCADE simulation days and trade dates

3.1.2 Trading Hours

On simulation days, CASCADE will be available online from 07:00 -13:00. This is the time available for the online activities prescribed in the script for the respective simulation day. For CASCADE participants, the 1st SDS batch will take place at 09:00, the 2nd SDS batch at 10:30, and the RTS deadline will be at 12:00.

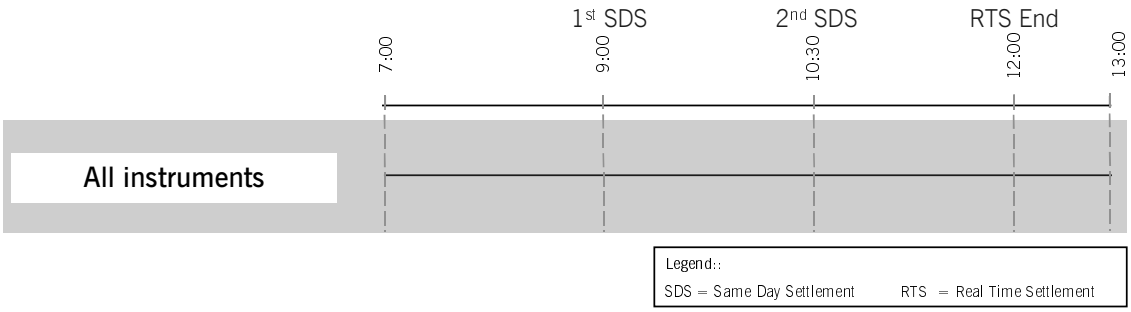


Figure 2: CASCADE simulation schedule

3.1.3 Reports

CASCADE participants will have to verify the following data carriers:

- Exercise data carrier
- Settlement data carrier, settlement list

The reports for the verification of pledged collateral will be generated in Eurex®. The corresponding verification activities are described in chapter 2 Eurex® Participants.

3.2 Trade Date 30 December 1999



This is the last trade date in 1999. The focus of the simulation activities is on the pledging of collateral and the verification of the exercise data carrier.



Simulation hours	07:00 -13:00
Trade date	30/12/1999

ID	CASCADE Activity	Instruments
DMTP17	Removal of the settlement block, using the KVAS-SA command (if required)	804610
DMTP20	Pledging of collateral into the Eurex® pledged securities account with DBC, using the online transaction KVEE-WE (RTS), or LIMA message MT523. Removal of the settlement block, using the KVAS-SA command (if required)	109001

ID	Verification of entries	Instruments
DMTP17	Verification of the exercise data carrier to ascertain the correct transmission of the exercised instrument	804610

3.3 Trade Date 3 January 2000



This is the first trade date of the year 2000. The focus of the simulation activities is on the pledging of collateral and the verification of the exercise and settlement data carriers.



Simulation hours	07:00 -13:00
Trade date	03/01/2000

ID	CASCADE Activity	Instruments
DMTP18	Removal of the settlement block, using the KVAS-SA command (if required)	804610
DMTP21	Pledging of collateral into the Eurex® pledged securities account with DBC, using the online transaction KVEE-WE (RTS), or LIMA message MT523. Removal of the settlement block, using the KVAS-SA command (if required)	109001

ID	Verification of entries	Instruments
DMTP13	Verification of the exercise data carrier to ascertain the correct transmission of the exercised instrument	723600
DMTP18	Verification of the exercise data carrier to ascertain the correct transmission of the exercised instrument	804610
DMTP17	Verification of the settlement data carrier or settlement list, with a particular focus on the correct booking of securities	804610

3.4 Trade Date 4 January 2000



This is the second trade date of the year 2000. The focus of the simulation activities is on the verification of the exercise and settlement data carriers.



Simulation hours	07:00 -13:00
Trade date	04/01/2000

ID	CASCADE Activity	Instruments
DMTP19	Removal of the settlement block, using the KVAS-SA command (if required)	804610

ID	Verification of entries	Instruments
DMTP14	Verification of the exercise data carrier to ascertain the correct transmission of the exercised instrument	723600
DMTP19	Verification of the exercise data carrier to ascertain the correct transmission of the exercised instrument	804610
DMTP18	Verification of the settlement data carrier or settlement list, with a particular focus on the correct booking of securities	804610

3.5 Trade Date 5 January 2000



This is the third trade date of the year 2000. The focus of the simulation is on the verification of the settlement data carrier.



Simulation hours	07:00 -13:00
Trade date	05/01/2000

ID	Verification of entries	Instruments
DMTP19	Verification of the settlement data carrier or settlement list, with a particular focus on the correct booking of securities	804610