X-pand into the Future

eurex circular 266/06

Date: Frankfurt, December 21, 2006
Recipients: All Eurex Members and Vendors
Authorized by: Peter Reitz

⚠ **Action required** ⚠ **High priority**

Credit Futures: Introduction on March 27, 2007

Contact: Mehtap Dinc, Product Strategy, tel. +49-69-211-1 72 84

Content may be most important for:

➲ All departments

Attachments:

1. Eurex iTraxx® Future - Simulation Guide
2. Margining Example – Credit Futures

Summary:

In their session on December 13, 2006 the Management Boards of the Eurex Exchanges decided on the introduction of Credit Futures on the iTraxx® Europe 5-year index series.

Introduction will take place on **March 27, 2007**.

Besides, the Management Boards of the Eurex Exchanges decided to introduce Credit Futures on the iTraxx® Hi Vol and iTraxx® Crossover 5-year index series either as of the same date or shortly afterwards.

Eurex Deutschland
Neue Börsenstraße 1
60487 Frankfurt/Main
Mailing address:
60485 Frankfurt/Main
Germany

T +49-69-211-1 17 00
F +49-69-211-1 17 01
customer.support@
eurexchange.com
Internet:
www.eurexchange.com

Management Board:
Thomas Lenz, Michael Peters,
Andreas Preuß, Peter Reitz,
Jürg Spillmann

ARBN: 101 013 361

Credit Futures: Introduction on March 27, 2007

1. Introduction Date

In their session on December 13, 2006 the Management Boards of the Eurex Exchanges decided on the introduction of Credit Futures on the iTraxx® Europe 5-year index series, iTraxx® Hi Vol 5-year index series and iTraxx® Crossover 5-year index series.

Introduction of futures contracts on the iTraxx® Europe 5-year index series will take place on Tuesday, March 27, 2007. Introduction of futures contracts on the iTraxx® Hi Vol 5-year index series and iTraxx® Crossover 5-year index series is scheduled either for the same date or shortly afterwards. The exact date will be communicated in due time in a separate circular.

2. Product Codes

Product	Code	ISIN	WKN
iTraxx® Europe 5-year index Future	F5E0	DE000A0LLV01	A0LLV0
iTraxx® Hi Vol 5-year index Future	F5H0	DE000A0LLV35	A0LLV3
iTraxx® Crossover 5-year index Futures	F5C0	DE000A0LLV68	A0LLV6

3. Trading Hours*

	Pre-Trading	Trading	Post-Trading	Close of trading (on the Last Trading Day)
iTraxx® Europe 5-year Index Future	07:30 – 08:30	08:30 – 17:30	17:30 – 19:00	17:00
iTraxx® Hi Vol 5-year Index Future	07:30 – 08:30	08:30 – 17:30	17:30 – 19:00	17:00
iTraxx® Crossover 5-year Index Futures	07:30 – 08:30	08:30 – 17:30	17:30 – 19:00	17:00

* all times in CET

4. Transaction Fees

	Order book transaction
iTraxx® Europe 5-year Index Future	0.40 EUR
iTraxx® Hi Vol 5-year Index Future	0.40 EUR
iTraxx® Crossover 5-year Index Futures	0.40 EUR
Single name iTraxx® Europe 5-year Index Future	0.10 EUR
Single name iTraxx® Hi Vol 5-year Index Future	0.10 EUR
Single name iTraxx® Crossover 5-year Index Futures	0.10 EUR

5. Designated Market-Making

As Designated Market Maker, Eurex Members agree to continuously enter bid and ask prices (quotes) for a specific minimum amount of contracts during a fixed period of time while maintaining maximum spreads.

The details of the Designated Market-Making program will be published in a separate circular. We ask all members interested in Designated Market-Making to contact Mehtap Dinc, Eurex, Product Strategy, at tel. +49-69-211-1 72 84 or e-mail: mehtap.dinc@eurexchange.com.

6. Simulation

The futures contract on the iTraxx® Europe 5-year series is available in simulation since December 15, 2006. For further information on the product setup for simulation purposes and the processes used in simulation, please refer to the attached Simulation Guide.

7. Overview Credit Futures Contracts

7.1. Underlying

Credit futures contracts are based on the unfunded (CDS) form of the iTraxx® Europe, iTraxx® Hi Vol and iTraxx® Crossover 5-year index series. The iTraxx® indices are calculated by the International Index Company (IIC). iTraxx® index series consist of a number of reference entities (n) with a fixed coupon. At any given time the nominal value in euro of the underlying index series is defined as the product of the contract value of the futures contract, multiplied by the basis reflecting the $\sum n_{i,}$ whereby n_i represents the weight of the i-th reference entity in the index which has not experienced an actual credit event at the given point in time. As long as there is no actual credit event, $\sum n_i$ is equivalent to the basis of 100 percent. The underlying index series has a pre-defined maturity date, which will be after the final settlement day of the credit future. For information on the composition of the indices and the weighting of the individual reference entities within the separate indices, please refer to the website **www.indexco.com**.

7.2 Credit Events

In conjunction with credit futures contracts, there are the following two types of credit events:

- **Actual Credit Event**

With regard to futures contracts a credit event is considered to have occurred for a reference entity of the credit index, if the International Swaps and Derivatives Association (ISDA) publishes a CDS protocol for a reference entity that is a constituent in the underlying index series of the futures contract. An actual credit event for the iTraxx® 5-year index futures is effective on the next exchange day.

- **Anticipated Credit Event**

An anticipated credit event in terms of the credit futures contracts has occurred, if the index provider, without an actual credit event, issues a new version of the underlying index series of the futures contract provided this new version contains a zero weight for at least one reference entity of the underlying index series.

7.3 Processes after the Occurrence of a Credit Event

After the occurrence of a credit event, the affected reference entity will remain part of the underlying of the listed futures contracts. On the exchange day following the day an anticipated credit event or an actual credit event has occurred, new futures contracts on the new version of the underlying iTraxx® series will be available in addition to the futures contracts tradable at that time. This new version of the underlying iTraxx® series will comprise at least one reference entity with a zero weight. The contract specifications of the futures contracts based on the new version of the underlying index series correspond to the specifications of the already listed iTraxx® 5-year Index Futures. If credit events in the underlying series occur after the introduction of the additional futures contracts, the described procedures will be applicable for all tradable Credit Futures contracts.

7.4 Final Settlement of F5E0, F5H0 and F5C0 Products

On the Last Trading Day, the Final Settlement Price is determined in percent with **four** decimal places (to ensure greatest accuracy with respect to the underlying market) as the sum of

- the basis
- the present value of the underlying index series
- the accrued premium based on the coupon of the underlying index series and,
- if applicable, the proportional recovery rate of the reference entity in the underlying index series, which has experienced an actual credit event

Basis:

The basis is determined as the $\sum n_i$, whereby n_i is the weight of the i'th reference entity in the index and the sum is only determined from the weights of the reference entities, which have not experienced an actual credit event at the given point in time. As long as no credit event has taken place, $\sum n_i$ equals a basis of 100.

Present Value:

The present value of the underlying index series results from the change of the credit spread in relation to the basis. The present value calculation on the final settlement day is based on the official iTraxx® Index Levels as published by IIC at 17:00 CET and the deal spread (coupon) of the underlying index series. The mid spread reflecting the mid point between the bid and ask spreads of the official iTraxx® Index Levels are considered for the present value calculation. The official iTraxx® Index Levels are published on the website **www.indexco.com**.

Premium:

The premium is accumulated daily, or, on weekends or holidays, for two or more days in advance. The premium rate is identical to the coupon of the underlying index series and remains unchanged over the entire period of a future's maturity month. It is calculated daily on the basis of those reference entities in the index that have not experienced an actual credit event. The accrued premium is calculated by means of the following formula, based on the act/360 interest rate methodology:

$$B/100 * C/100 * x/360$$

B = Basis
C = Coupon in percent
X = Number of actual days since the effective date of the underlying index series

The proportional recovery rate of the reference entity that has experienced an actual credit event is calculated by means of the following formula:

$$RR * w / 100$$

w = Original weight of the reference entity in the underlying index series, which experienced a real credit event in percent
RR = Recovery Rate in percent

The recovery rate corresponds to the final price as determined by the provisions of the ISDA CDS protocol.

Final settlement for the F5E0, F5H0 and F5C0 products depends on the day on which the final price (recovery rate) is determined for the reference entity, which experienced an actual credit event:

a) Price determination of the reference entity's recovery rate, according to the ISDA CDS protocol, takes place prior to the final settlement of the iTraxx® 5-year Index Futures:

The reference entity's recovery rate will be comprised in the final settlement price of the iTraxx® 5-year Index Future, as explained above.

b) Price determination of the reference entity's recovery rate, according to the ISDA CDS protocol, takes place after final settlement of the iTraxx® 5-year Index Futures:

If the price determination of the reference entity which experienced a credit event takes place after the final settlement date of the iTraxx® 5-year Index Futures, the reference entity which experienced a credit event will be transferred into a new futures contract that exclusively consists of this particular reference entity as the underlying value (Single Name Credit Future).

The final settlement price of the iTraxx® 5-year Index Futures will exclusively be determined on the basis of the reference entities in the index which did not experience an actual credit event.

Additionally, Eurex will automatically generate a position in the Single Name Credit Future, the size and direction (long/short) of which are equivalent to the position held by the exchange member on the last trading day, after close of trading, in the respective iTraxx® 5-year Index Futures.

A Single Name Credit Future will be tradable at the Eurex Exchanges up to the date on which the final price is determined according to the provisions of the ISDA CDS protocol. The final settlement price of the Single Name Credit Future will be equivalent to the final price determined by the provisions of the ISDA CDS protocol for this particular reference entity. For the final price determination with regard to the ISDA CDS protocol, regulations and publications of ISDA will apply upon announcement of a CDS protocol; these are available under **www.isda.org**.

8. Overview Contract Specifications

This chapter contains an overview of the contract specifications. The detailed Contract Specifications for Futures Contracts and Options Contracts at Eurex Deutschland and Eurex Zürich as well as the Clearing Conditions of Eurex Clearing AG will be published in a separate circular shortly.

Underlying	The current iTraxx® Europe 5-year index series, iTraxx® Hi Vol 5-year index series and the iTraxx® Crossover 5-year index series in unfunded form at the time of introduction of the respective futures expiration month
Contract Value	EUR 100,000
Settlement	Cash settlement based on the Final Settlement Price, payable on the first exchange trading day following the Last Trading Day

Price Quotation	**In percentage, with three decimal places for the iTraxx® Europe 5-year Index Futures and with two decimal places for the iTraxx® Hi Vol and iTraxx® Crossover 5-year Index Futures as the sum of** - the basis, determined as the $\sum n_i$, whereby n_i represents the weight of the i'th reference entity in the index, which has not experienced an actual credit event - the present value calculated on the basis - the accrued premium since the effective date of the underlying index series based on the coupon fixed for the underlying index series and, - if applicable, the proportional recovery rate of the i'th reference entity in the underlying index series which experienced an actual credit event
Minimum Price Change	iTraxx® Europe 5-year index series: 0.005 percent; this equals a value of EUR 5.00 iTraxx® High Vol 5-year index series and iTraxx® Crossover 5-year index series: 0.01 percent; this equals a value of EUR 10.00
Expiration Months	The nearest semi-annual month of the March and September cycle
Daily Settlement Price	Volume-weighted average price of all trades that occurred during the final minute of trading. If less than five trades have occurred during this period, the volume-weighted average price of the five last trades of the day, provided they are not older than 15 minutes. If such a price cannot be determined, or if the price so determined does not reasonably reflect the prevailing market conditions, Eurex will establish the official settlement price.
Last Trading Day/ Final Settlement Day	The fifth exchange day following the twentieth calendar day of the respective expiration month, if this is an exchange trading day and provided, that on this day IIC publishes the official index levels; otherwise the exchange trading day which immediately follows this day is applicable.
Final Settlement Price	In percentage, with four decimal places as the sum of - the basis determined as the $\sum$ ni , whereby ni represents the weight of the i'th reference entity in the underlying index series, which has not experienced an actual credit event - The present value of the underlying index series resulting from the change of the credit spread in relation to the basis. The present value calculation on the final settlement day is based on the official iTraxx® Index Levels as published by IIC at 17:00 CET and the deal spread (coupon) of the underlying index. The mid spread reflecting the mid point between the bid and ask spreads of the official iTraxx® Index Levels are considered for the present value calculation. - the accrued premium calculated from the effective date of the underlying index series based on the coupon fixed for the underlying index series and, - if applicable, the proportional recovery rate of the reference entity in the underlying index series, which has experienced an actual credit event.

	The calculated Final Settlement Price will be determined with four decimal places and rounded to the next possible price interval (0,0005; 0,001 or a multiple thereof). **After the occurrence of an actual credit event, in cases where the final price (recovery rate) of the affected reference entity will be determined after the Final Settlement Day** The Final Settlement Price will only be determined on the basis of those reference entities that have not experienced an actual credit event. Additionally, on the last trading day, Eurex will automatically generate a position in the Single Name Credit Future, that in size and direction (long/short) corresponds with the position an exchange trading member has held in the respective iTraxx® 5-year Index Future after end of trading on the last trading day.

If an actual credit event occurs and the final price determination takes place after the Final Settlement Day of the iTraxx® 5-year Index Futures, the reference entity, for which ISDA has announced the CDS protocol, becomes the underlying of a separate futures contract (Single Name Credit Future). The following table contains an overview of the contract specifications for Single Name Credit Futures:

Underlying	Reference entity which has experienced an actual credit event
Contract Value	Proportional contract value of the reference entity in the index, who has experienced a credit event (e.g. Euro 100.000 / 125 = Euro 800 for reference entities of the iTraxx® Europe 5-year series)
Settlement	Cash settlement based on the Final Settlement Price, payable on the first exchange trading day following the Last Trading Day.
Price Quotation	In percent with one decimal place
Minimum Price Change	0.1 percent; the EUR value differs depending on the contract value which will be determined shortly prior to introduction of the Single Name Futures Contract
Expiration Months	One month
Last Trading Day	The day on which the final price for the reference entity, which suffered an actual credit event is determined according to the procedure defined in the ISDA CDS protocol
Final Settlement Day	The fifth day following the final price determination day as announced in the ISDA CDS protocol
Daily Settlement Price	Volume-weighted average of the prices of all trades concluded during the last trading minute before 17:30 CET, insofar as in this time span more than five trades have been concluded. If this is not the case, the settlement price will be calculated from the volume-weighted average of the prices of the last five trades that have been concluded before 17:30 CET, if they are not older than 15 minutes. If such price determination is not possible, or the price determined in this way does not reflect actual market conditions, Eurex will determine the settlement price.
Final Settlement Price	On the last trading day, Eurex determines the Final Settlement Price at 17:00 CET. The Final Settlement Price is fixed with three decimal places and equals the final price determined according to the provisions of the ISDA CDS protocol.

Frankfurt, December 21, 2006

Eurex iTraxx® Future

Simulation Guide

© Eurex 2007

CONTENTS

Eurex iTraxx® Future 1

Simulation Guide 1

1 Overview 3

2 General information 4

2.1 Credit Default Swap 4

2.1.1 CDS general 4

2.1.2 CDS Mechanics 4

2.1.3 CDS Spreads 4

2.1.4 Credit Events 5

2.2 Eurex Futures on iTraxx® Europe 5 year Index Series 5

2.3 Pricing – bond-like price quotation 7

2.4 Events 7

2.4.1 Anticipated Credit Event 7

2.4.2 Actual Credit Event 8

2.5 Product overview for a futures contract based on a reduced number of reference entities (124 name contract) 10

2.5.1 Overview Single Name Credit Future 11

3 Simulation 12

3.1 General information 12

3.2 Test products - Overview 13

3.3 Test scenarios 14

3.3.1 Scenario 1 - Final price determination according to the CDS protocol takes place prior to the expiration date of the Index Futures 14

3.3.2 Scenario 2 - Final price determination according to the CDS protocol takes place after the expiration date of the Index Futures 15

3.4 Margining for the single name 16

1 Overview

The simulation guide provides an overview of the Credit Future function and the planned test activities for the new Eurex iTraxx® Europe 5 year Index Future which will be introduced in the Eurex production environment on March 27, 2007.

This guide describes the product characteristics and product functionality together with the associated test activities planned in the Eurex simulation.

2 General information

2.1 Credit Default Swap

2.1.1 CDS general

A credit default swap (CDS) is a form of insurance against credit risk and is a privately negotiated bilateral contract. The buyer of protection pays a fixed premium to the seller of protection for a period of time for a specified reference entity and if certain credit events occur, the protection seller pays compensation to the protection buyer. A “credit event” can be a bankruptcy of a company, failure to pay or a restructuring event. If no credit event occurs during the term of the swap, the protection buyer continues to pay the premium until the maturity of the CDS. In contrast, should a credit event occur at some point in time before the contract’s maturity, the protection seller pays the nominal to the protection buyer; the protection buyer in return will deliver bonds with a face value of the nominal for physically settled transactions.

CDSs are used to gain exposure to credit risk. While the risk profile of a CDS is similar to a corporate bond of the reference entity, there are some important differences. A CDS does not require an initial funding, which allows leveraged positions. Moreover, a CDS transaction can also be entered if a cash bond of the reference entity with a particular maturity is not available. Furthermore, by entering a CDS as a protection buyer, a ‘short’ position in the reference credit can easily be created.

As a result of all of these attributes, CDSs can be a valuable tool for diversifying or hedging a portfolio.

2.1.2 CDS Mechanics

In a credit default swap, the buyer and the seller of protection enter into a contract where the protection buyer pays a fixed premium for protection against a certain credit event. There is no exchange of nominal; the only cash flow results from premium payments which are paid in quarterly arrears unless a credit event occurs.

2.1.3 CDS Spreads

The premium paid by the protection buyer to the seller is quoted in basis points per annum of the contract’s notional value and is usually paid quarterly. Note that these spreads are not the same type of concept as “yield spread” of a corporate bond to a government bond. Rather, CDS spreads are the annual price of protection quoted in basis points of the notional value. Periodic premium payments allow the protection buyer to deliver the defaulted bond at par or to receive the difference of par and the bond’s recovery value. Therefore, a CDS is similar to a put option written on a corporate bond. As with a put option, the protection buyer is protected from losses incurred by a decline in the value of the bond as a result of a credit event.

2.1.4 Credit Events

The 2003 credit derivatives definitions of the International Swaps and Derivatives Association (ISDA) encompass six types of credit events. However, the following credit events are mostly applicable:

- Bankruptcy
- Failure to Pay
- Restructuring

Bankruptcy, the clearest concept of all, is the reference entity's insolvency or inability to repay its debt. Failure-to-Pay occurs when the reference entity, after a certain grace period, fails to make payment of principal or interest. Restructuring refers to a change in the terms of debt obligations that are adverse to the creditors.

2.2 Eurex Futures on iTraxx® Europe 5 year Index Series

The rapid development of the over-the-counter (OTC) derivatives market in recent years undoubtedly represents one of the most exciting and dynamic developments in the world's financial markets. The next obvious step towards commoditisation is the development of exchange traded credit derivatives. Eurex has worked closely with market participants to deliver the first credit derivative ever listed, a move that will provide a transparent and efficient means of trading credit risk.

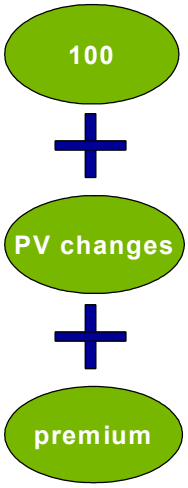
In order to provide market participants access to a broader basket of credit risk, the iTraxx® indices of the International Index Company (IIC) as underlying are deemed to best suite a credit futures contract. The proposed credit futures contract replicates the price behaviour of an OTC iTraxx® index CDS and will be cash settled. In the event that the index provider decides to list an additional index based on a reduced number of reference entities (zero weighting one or more reference entities), Eurex would also additionally list a futures contract based on the newly available version of the underlying index series.

The following table provides an overview of the iTraxx® Europe 5 year index future (125 name future)

Underlying	The recent iTraxx® Europe 5 year index series at introduction of the respective futures contract month
Contract Size	Euro 100,000
Minimum Price Change	0.005 % representing a value of EUR 5
Quotation	In percent, with three decimal places, expressed as the sum of - **100** (basis representing the sum of the weights across the reference entities in the underlying index series which have not experienced an actual credit event) - present value of the underlying index series reflecting credit spread changes in the underlying - accrued constant premium (premium starts to accrue on the effective date of the underlying index and continues to accrue until the last trading/expiration day of the futures contract)
Contract Term	The nearest semi-annual month of the March and September cycle will be available for trading;
Deal spread at initiation of contract	Coupon fixed for respective iTraxx® series
Last Trading Day/Expiration Day	The 5th exchange trading day following the 20th of the respective expiry month
Final settlement price	Formula based cash settlement, rounded to **four** decimal places, expressed as the sum of - **100** ((basis representing the sum of the weights across the reference entities in the underlying index series which have not experienced an actual credit event) - present value of the underlying index series reflecting credit spread changes in the underlying. The present value calculation on the final settlement day is based on the official iTraxx® index levels as published by IIC and the deal spread (coupon) of the underlying index series. The mid spread reflecting the mid point between the bid and ask spreads of the official iTraxx® index levels are considered for the present value calculation - accrued constant premium (premium starts to accrue on the effective date of the underlying index and continues to accrue until the last trading/expiration day of the futures contract)

2.3 Pricing – bond-like price quotation

The price of a credit future consists of several components. The figure below describes how the price is determined.



A static base number of 100 which is reduced if there is a default by the defaulted name's weighting

- Reflects consequences of a credit event: e.g. reduced to 99.2 in case of one default and a 0.8% weighting of the defaulted name
- Could be compared to the par price of a funded credit portfolio with no interest rate risk

Includes PV reflecting spread changes in the underlying

- Fluctuates with credit spread changes
- Implied spread could easily be backed out of the futures price

Includes accrued carry element which is corrected if there is a default

- Linear increasing pricing effect over the lifetime of the future
- Reflects daily protection payment
- 40bp deal spread results in a semi-annual carry effect of the future of 0.20 per 100
- If a default occurs carry calculation is adjusted accordingly

2.4 Events

2.4.1 Anticipated Credit Event

In the case of deterioration in the liquidity of an index due to the distress of an entity or an anticipated credit event in relation to an entity, IIC may decide to publish a new version of the underlying index series based on a reduced number of reference entities (i.e. zero weighting one or more reference entities). In this case, Eurex will also list a futures contract based on the new version of the underlying index series in addition to the existing futures contract. Applying this to the iTraxx® Europe 5 year Index Future and assuming one reference entity with a zero weighting, a futures contract based on 125 reference entities as well as a futures contract based on 124 reference entities would be available for trading.

The reference entity which suffered a credit event remains in the 125 name contract until the expiration date.

2.4.2 Actual Credit Event

In terms of the futures contract, an actual credit event occurs if ISDA publishes a CDS protocol for one of the reference entities being a constituent in the underlying index series. The day following the publication of a CDS protocol by ISDA, Eurex will list a futures contract based on a reduced number of reference entities (124 names) in addition to the 125 name contract. Contingent product IDs will already be set-up in advance to be prepared for the occurrence of credit events.

Following procedures will apply to the 125 name contract:

1. Final price determination according to the ISDA CDS protocol takes place prior to the expiration date of the iTraxx® Europe 5-year Index Futures

The final price (recovery rate) of the reference entity in the underlying index series, which suffered a credit event, will be considered as an additional element of the final settlement price of the 125 name index future. The final settlement price of the 125 name futures contract will be expressed in % with four decimals as the sum of:

- 99.2 (basis representing the sum of the weights across the 124 reference entities in the underlying index series which have not experienced an actual credit event)
- Present value of the underlying index series in relation to the basis of 99.2
- Accrued premium. The premium starts to accrue on the effective date of the underlying index series up until to and including the day an actual credit event occurs on the basis of 100; the exchange day following the occurrence of an actual credit event, the premium will continue to accrue on the basis of 99.2 (only for the reference entities in the underlying index which have not experienced a credit event)
- The proportional recovery rate of the reference entity that has experienced an actual credit event by means of the following formula

$$RR * w / 100$$

w = Original weight of the reference entity in the underlying index series

RR = Recovery rate in percent

2. Final price determination according to the ISDA CDS protocol takes place after the expiration date of the iTraxx® Europe 5-year Index Futures

The final settlement price of the 125 name futures contract will be expressed in % with four decimals as the sum of

- 99.2 (basis representing the sum of the weights across the 124 reference entities in the underlying index series which have not experienced an actual credit event)
- Present value of the underlying index series in relation to the basis of 99.2
- Accrued premium. The premium starts to accrue on the effective date of the underlying index series up until to and including the day an actual credit event occurs on the basis of 100; starting the exchange day following the occurrence of an actual credit event, the premium will continue to accrue on the basis of 99.2 (only for the reference entities in the underlying index which have not experienced a credit event)

The final settlement price will not include the value of the reference entity which experienced a credit event. Instead, after the end of trading on the final settlement day, the reference entity which experienced a credit event will be separated from the 125 name future and a new futures contract based on this single reference entity will be created in the Eurex system.

- A long/short position in the single name futures contract will be automatically created in the overnight batch processing corresponding to the position of the 125 name contract at expiration
- The position in the single name futures contract will be created with a trade price of zero
- The settlement price of the single name futures contract at position creation will be the theoretical recovery rate
- As a result, the first variation margin movement will be the difference between the settlement price entered and the single name credit futures trade price of zero

The single name futures contract will cease trading on the day the final settlement price according to the ISDA CDS protocol is determined. The expiration day of the single name futures contract is the fifth exchange trading day after the scheduled final price determination date according to the ISDA CDS protocol.

Contingent product IDs for the single name credit futures will already be set-up in order to be prepared for the occurrence of credit events. These products will be set-up with an expiration date equal to the last trading day of a calendar month. As soon as the ISDA CDS protocol has been published announcing a date for the determination of the final price, the expiration date of the contingent products will be adjusted to reflect the correct expiration date prior to allowing these products for trading. The expiration date will be changed to reflect a date, which is on the 5th exchange day following the final price determination date. The position in the single name credit future will be created in the contract month which is equal to the month of the expiration date.

2.5 Product overview for a futures contract based on a reduced number of reference entities (124 name contract)

If an anticipated or actual credit event occurs, a futures contract based on a reduced number of reference entities (e.g.124 names) will additionally be available for trading. The contract specifications are identical to the original futures contract, with the exception that

- the nominal value figure is reduced from 100 by the weight of the single reference entity of 0,8 to 99,2 and
- present value as well as premium calculations are based on a reduced nominal value

Quotation	In percent, with three decimal places, expressed as the sum of - 99.2 (basis representing the sum of the weights across the reference entities in the underlying index series which have not experienced an actual credit event) - present value of the underlying index series reflecting credit spread changes in the underlying - accrued constant premium (premium starts to accrue on the effective date of the underlying index and continues to accrue until the last trading/expiration day of the futures contract)
Final settlement price	- **99.2** ((basis representing the sum of the weights of the reference entities in the underlying index series which have not experienced an actual credit event) - present value of the underlying index series reflecting credit spread changes in the underlying. The present value calculation on the final settlement day is based on the official iTraxx® index levels for the new version of the underlying index series (124 reference entities) as published by IIC and the deal spread (coupon) of the underlying index series. The mid spread reflecting the mid point between the bid and ask spreads of the official iTraxx index levels are considered for the present value calculation - accrued constant premium (premium starts to accrue on the effective date of the underlying index and continues to accrue until the last trading/expiration day of the futures contract)

2.5.1 Overview Single Name Credit Future

Underlying	Reference entity experiencing a credit event
Contract Size	Euro 800
Minimum Price Change	0,1%, equivalent to a value of EUR 0.80
Quotation	Recovery rate, expressed in percent to three decimal places.
Contract Term	One calendar month; depending on the day the final price determination has been scheduled according to the provisions in the ISDA CDS protocol, this will either be the calendar month corresponding to the month of the final price determination date or one of the following two months.
Last Trading Day	The last trading day is the day on which the final price is determined according to the provisions of the ISDA CDS protocol.
Expiration Day	Expiration day is the fifth exchange day following the scheduled final price determination date according to the provisions of the ISDA CDS protocol.
Final settlement price	Eurex will determine the final settlement price at 17:00 CET on the last trading day based on the reference price as determined according to the provisions in the ISDA CDS protocol.

3 Simulation

3.1 General information

Several credit futures will be set up in the Eurex Simulation environment to test the products prior to their introduction.

- FIC5 and FID5 - *Eurex iTraxx® Europe futures based on 125 names*
- FIC4 and FID4 - *Eurex iTraxx® Europe futures based on 124 names*
- FIC3 and FID3 - *Eurex iTraxx® Europe futures based on 123 names*
- FD01, FD02, FD03 – *single name futures (if separation becomes necessary)*

	Expiration Cycle	Expiration Dates	Introduction of back month contract for FIC5 and FID5 only
FIC5, FIC4, FIC3	Jan - Jul	Jan 25, 2007	JUL 07 – Jan 18, 2007
FID5, FID4, FID3	Feb - Aug	Feb 22, 2007	AUG 07 – Feb 15, 2007

If no credit event occurs, only the FIC5 and FID5 are tradable. All other products are set to hold and remain in the hold status.

The back month contract (JUL07) for the contingent futures products based on 124 and 123 names will be introduced in the batch run after the JAN07 contract has expired (batch on 25th of Jan, 2007). Thus, the back month contracts will be available on the business day following the 25th of Jan, 2007, but set to product state “Hold” until an anticipated or actual credit event occurs. The same logic applies to the Aug07 series.

The contingent single name futures contracts FD01/FD02/FD03 will be set up with 3 consecutive expiration months. The expiration dates for the single name futures contracts will be set to the last business day of the respective month by default. In contrast to the ***Eurex iTraxx® Europe futures*** three series/contracts are available all the time, but set to product state “Hold” as long as no activation of a single name futures contract becomes necessary. A single name futures contract will only be created if an actual credit event occurs and the final price determination according to the ISDA CDS protocol takes place after the expiration date of the iTraxx® Europe 5 year index futures. For each exchange participant holding a position in the iTraxx® Europe 5-year Index future at the end of the last trading day, the same position will be automatically created in the new single name futures contract based on the separated reference entity.

The final settlement price for the single name futures contract will be determined on the date when the final price for the respective reference entity is determined according to the provisions of the ISDA CDS protocol. Based on certain provisions in the CDS protocol, this process can however be spread over 5 business days. The expiration date of the single name futures contract will therefore be on the 5th business day after the scheduled final price determination date as announced in the ISDA CDS protocol.

Note that in case of activation of the single name futures contract, three series will be available for trading. Due to technical restrictions within Release 9.0, trading in the unused series can not be prevented and will be excluded from trading by rules & regulations.

All futures in product state “Hold” will be available in the theoretical price file with a settlement price equal to the minimum tick size

Eurex will initially pre-assign the above mentioned products to its members. Member’s security administrators also initially need to assign the products to their traders or on a demand basis.

3.2 Test products - Overview

Eurex iTraxx® Europe futures based on 125 names		
ProdID	ISIN	Name
FIC5	DE0SIMFIC506	FIC5 iTraxx® Europe fut 125
FID5	DE0SIMFID504	FID5 iTraxx® Europe fut 125
Eurex iTraxx® Europe futures based on 124 names		
FIC4	DE0SIMFIC407	FIC4 iTraxx® Europe fut 124
FID4	DE0SIMFID405	FID4 iTraxx® Europe fut 124
Eurex iTraxx® Europe futures based on 123 names		
FIC3	DE0SIMFIC308	FIC3 iTraxx® Europe fut 123
FID3	DE0SIMFID306	FID3 iTraxx® Europe fut 123
single name futures (in case separation becomes necessary)		
FD01	DE0SIMFD0103	FD01 iTraxx® Europe fut default
FD02	DE0SIMFD0202	FD02 iTraxx® Europe fut default
FD03	DE0SIMFD0301	FD03 iTraxx® Europe fut default

Where FIC (5,4,3) represents the Jan/Jul cycle and FID(5,4,3) represents the Feb/Aug cycle.

Contingent product IDs will already be set-up in case these events occur.

3.3 Test scenarios

The test scenarios for simulation purposes are explained in the following sections.

3.3.1 Scenario 1 - Final price determination according to the CDS protocol takes place prior to the expiration date of the Index Futures

If the final price for the reference entity which experienced an actual credit event is determined prior to the expiration date of the iTraxx® Europe 5-year Index Future, the final settlement price of the futures contract will account for the proportional recovery rate of the reference entity in question.

Simulation – Futures FIC5/FIC4 are affected

Timeline	Process
Jan 10, 2007	Publication of CDS protocol for company ABC by ISDA
Jan 11, 2007	Eurex will allow trading in the iTraxx® Europe Future FIC4 (based on 124 names)
Jan 17, 2007	Final price will be determined for company ABC according to the provision in the ISDA CDS protocol

After the final price has been determined on Jan 17, 2007, the recovery component of the FIC5 futures contract will be fixed until the expiration date.

The final settlement price of the FIC5 product will be expressed in percent with four decimal places as the sum of

- 99.2 (basis representing the sum of the weights across the 124 reference entities in the underlying index series which have not experienced an actual credit event)
- Present value of the underlying index series in relation to the basis of 99.2. The official IIC levels for the new version of the underlying index series (for 124 reference entities) and the deal spread (coupon) of the underlying series will be used to calculate the present value.
- Accrued premium. The premium starts to accrue on the effective date of the underlying index series up until to and including the day an actual credit event occurs on the basis of 100; the exchange day following the occurrence of an actual credit event, the premium will continue to accrue on the basis of 99.2 (only for the reference entities in the underlying index which have not experienced a credit event)
- The proportional recovery rate of the reference entity that has experienced an actual credit event by means of the following formula

RR * w / 100

w = Original weight of the reference entity in the underlying index series

RR = Recovery rate in percent

The recovery rate fluctuates until the date the final price is determined according to the ISDA CDS protocol. From this date onwards, the recovery rate will remain a constant price element of the futures contract until the expiration date

3.3.2 Scenario 2 - Final price determination according to the CDS protocol takes place after the expiration date of the Index Futures

If the final price for the reference entity which experienced an actual credit event is determined after the expiration date of the iTraxx® Europe 5-year Index Future, the final settlement price of the futures contract will only account for the 124 reference entities which have not suffered an actual credit event, and simultaneously a position will be created in the overnight batch in a single name credit futures, which is based on the reference entity which suffered the actual credit event.

Simulation– Futures FID5/FID4/FD01 are affected

Timeline	**Process**
Feb 13, 2007 (Final Price determination according to the CDS protocol on March 6 2007)	Publication of CDS protocol for company DEF by ISDA;
Feb 14, 2007	Eurex will allow trading in the iTraxx® Europe Future FID4 (based on 124 names)
Feb 20, 2007	Change expiration date for FD01 from March 29, 2007 to March 13, 2007;
Feb 22, 2007	Expiration Day of FID5; final settlement of FID5 based on credit spread for 124 names. Expiration Day of FID4;
Feb 22, 2007 – overnight batch	Creation of long/short position in FD01 MAR07 contract equivalent to the position in FID5 at the end of trading on expiration date with a trade price of zero; daily settlement price corresponding to current recovery rate
Mar 6, 2007	Final price will be determined for company

	ABC according to the terms in the CDS protocol

3.4 Margining for the single name

Special attention is required for the margin requirements with regard to the single name futures contract. There will be a worst case calculation for the “Additional Margin” requirement for this single name futures contract from the day of creation:

- Depending if there is a long or short futures position, a different margin requirement will be calculated
- As a result the margin requirement changes on a daily basis and needs to be obtained through the theoretical price file as for option contracts

The margin requirement for the single name futures contract is always calculated with the worst-case scenario totaling up to a 100% and down to 0.1 %.

The smallest price movement corresponds to 0.1% which equals EUR 0.80,-. The maximum loss that can occur with one contract is € 790, 20 based on the contract value.

Assuming that the single name future will be booked into the members account at a recovery value after the index has expired; following examples can be given to illustrate the additional margin requirements. (See attachment: Margining examples – Credit Futures).

Margining Example - Credit Futures

Product Parameter	
tick size *iTraxx Europe125*® Future	0.005
tick value *iTraxx Europe125*® Future	5.000
margin parameter - absolut *iTraxx Europe125*® Future	0.26
tick size Single Name Future	0.100
tick value Single Name Future	0.800
margin parameter - absolut Single Name Future	100
maximum price Single Name Future	100
minimum price Single Name Future	0.1
short position *iTraxx Europe125*® Future	100

Margining Example – Credit Futures (cont.)

Event			intraday announcement of ISDA CDS protocol				Test iTraxx Europe125 Future expiration date		final price determination according to the ISDA CDS protocol for the reference entity which experienced a credit event					Single Name Future expiration date
Business days	t-6	t-5	t-4	t-3	t-2	t-1	t	t+1	t+2	t+3	t+4	t+5	t+6	t+7
trade price *iTraxx Europe125® Future*	100.225			1.)			0	4.)						
settlement price *iTraxx Europe125® Future*	100.250	100.280	100.290	100.250	100.250	100.260	100.270							
settlement price Single Name Future	0.1	0.1	0.1	0.1	0.1	0.1	40.000	39.000	43.000	43.000	43.000	43.000	43.000	43.000
variation margin *iTraxx Europe125®* Future	-2,500	-3,000	-1,000	4,000	0	-1,000	-1,000							
variation margin Single Name Future							-32,000	800	-3,200	0	0	0	0	0
variation margin - aggregated	-2,500	-3,000	-1,000	4,000	0	-1,000	-33,000	800	-3,200	0	0	0	0	0
				2.)										
additional margin requirement *iTraxx Europe125®* Future	26,000	26,000	26,000	26,000	26,000	26,000		3.)						
additional margin requirement Single Name Future							48,000	48,800	0	0	0	0	0	0

1.) decrease in settlement price due to a credit event. In addition, the iTraxx Europe Index future based on 124 names will be available for trading on the next business date

2.) Margin parameter could be adjusted due to the decrease in the settlement price

3.) additional margin worst case: the settlement price increases to 100.

=(100-40)*8*100 = 48000

Additional margin requirement for the single name future on the first day, as the spin off of the defaulted name takes place at the end of the day

4.) position creating in the single name future will be done at the end of the day - position in the single name future will be generated with a trade price of 0