

MoC – Market on Close

Listed Solution for Basis Trading

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1 Basis Trading

About Basis Trading

Today, futures trading for MoC in Europe takes place mainly in the OTC market

- Agreement on the basis (difference between current futures price minus the current cash index level) occurs mainly in the Inter-Dealer-Broker market
- Market participants enter the futures trades into the Eurex system only after the closing level of the index is available

The final futures price has usually two decimal points

- The quotation of the basis in EURO STOXX 50[®] index futures is usually between 0.10 and 0.25 ticks, and
- The closing index of the EURO STOXX 50[®] has 2 decimals

Current way of trading has several drawbacks

- High slippage costs
- No straight-through-processing and higher manual effort (transactions must be worked at least twice)
- High operational effort on client side
- Risk management possible only after the index close as the transactions can only be entered into the Eurex system after the complete price is available

MoC transactions have a higher likelihood of slippage costs as the traded price usually deviates from the calculated final futures price

- To achieve the exact final futures price, one MoC transaction must be split into several trades, as the final price is more granular than the tick size of the index futures
- MoC transactions need to have sufficient size to be able to be split due to the respective minimum block trade size
- If the size is not sufficiently large, MoC transactions are entered into the orderbook to achieve the index close price by averaging around the time of the index cash close determination
- As a result, only very large transactions can avoid slippage costs

2 MoC Future on Euro STOXX 50[®]

Product Summary for MoC future (FES1)

Key Drivers & Objectives

Increase efficiency for market participants

- Straight-through-process for market on close transactions to reduce front office workload
- After the basis has been traded, Eurex will automatically add the index close level to the agreed basis (initial basis futures price) once the cash market index close is available

Enhance market transparency and consolidate liquidity of current OTC markets

- Order book trading to offer immediate liquidity and price information
- Off-book transactions to facilitate bilateral transactions of larger scale

Elimination of slippage risk for market on close transactions

- Smaller tick size of MoC futures to offer more precise pricing
- Cash market index close level will be offered according to market conventions

Immediate availability of index futures after settlement

- Delivery of underlying to occur intra-day and will be tradable immediately

Immediate risk management by Eurex Clearing

- MoC trades will immediately after the transaction of the basis be included into the risk management system of market participants
- CCP to mitigate counterparty risk

Possible Applications

Hedging/trading of financial instruments benchmarked against the index close

- Exchange Traded Funds
- Index options and structured products
- OTC swaps and options
- Cash equitization and balance sheet management

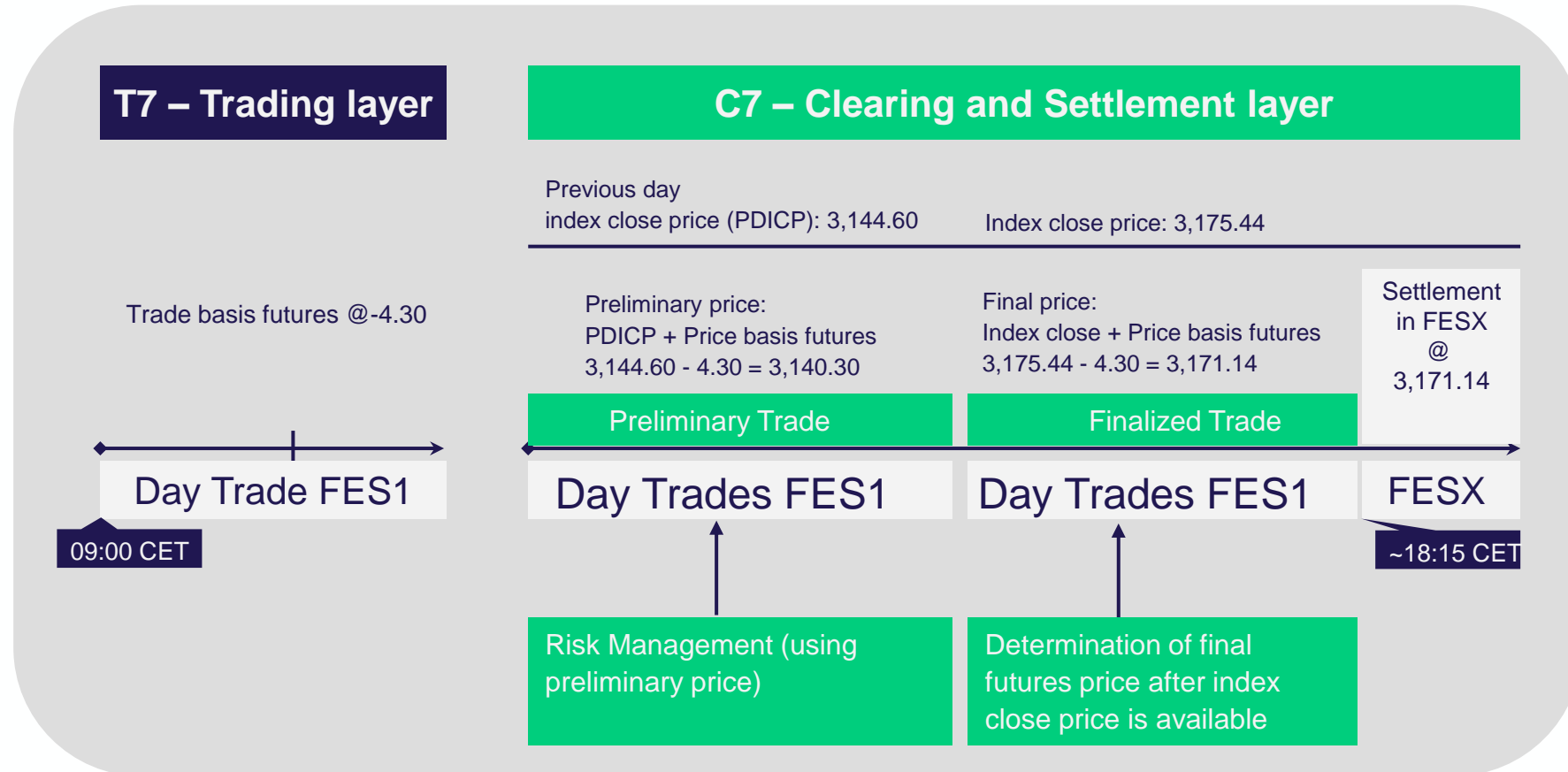
Product Structure (1/2)

	Description
Underlying	<ul style="list-style-type: none">▪ EURO STOXX 50® index futures (FESX)▪ Additional index futures may be listed at a later stage
Trading	<ul style="list-style-type: none">▪ Execution of the MoC futures will be possible in the order book and via the Eurex Trade Entry Services (e.g. Block Trades)▪ Own product ID for MoC futures to process non-final trades intraday as not the complete information to determine the futures price of the underlying futures is available at the time of trading▪ MoC futures are settled on a daily basis after the cash index close is available (daily futures)<ul style="list-style-type: none">• Up to nine months of the underlying EURO STOXX 50® index futures will be available for MoC transactions• After the end of the trading day all remaining orders will be deleted• No trading in MoC futures will be offered on the last trading day of the maturing underlying futures
Tick sizes	EUR 0,10 compared to EUR 1.00 for EURO STOXX 50® index futures
Price quotation	<ul style="list-style-type: none">▪ In the Eurex trading system T7, only the bases will be traded▪ The price of the basis may become negative in the Eurex trading system T7▪ However, in the Eurex clearing system C7, the price will always be positive due to addition of the previous day index close price (PDICP) as preliminary

Product Structure (2/2)

	Description
Final settlement price	<ul style="list-style-type: none">▪ For determination of the final settlement price of the MoC futures the traded price of the basis will be added to the official index close▪ The exact index close value of the EURO STOXX 50® index with two decimals will be used▪ Based on the final settlement price, each transaction in the underlying futures will create a position in the EURO STOXX 50® index futures and the transaction becomes final
Miscellaneous	<ul style="list-style-type: none">▪ After conclusion of a transaction in the Eurex MoC futures, a counterparty will be mandatorily settled into the underlying futures▪ Give-up/take-up will be possible at any time▪ No close-out transactions will be possible, e.g. two transactions of 100 contracts long and 100 contract short will be individually settled (netting-out would occur on the underlying futures only)▪ Exception will be mistrades which will lead to a cancellation of the transaction of the basis futures▪ The price of the opened position of the EURO STOXX 50® index futures will be with two decimals and deviates from the regular tick size in this index future

Process Flow



Contract Specifications

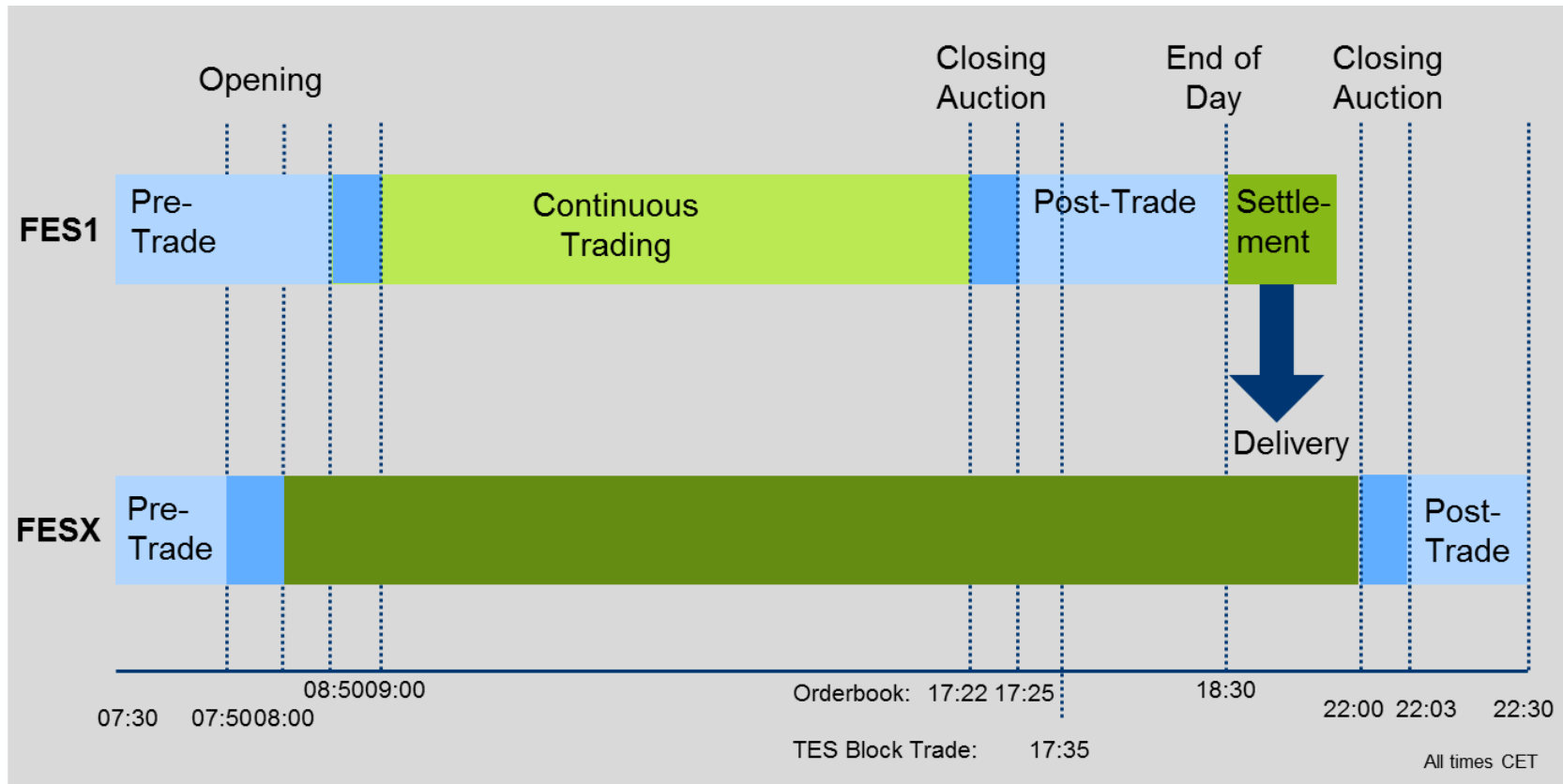
Eurex MoC Futures on Euro STOXX 50[®] index futures

	Description
Underlying futures	Euro STOXX 50 [®] index futures (FESX)
Contract size	1 contract
Settlement	Transaction-based, physical settlement of the Euro STOXX 50 [®] index futures Settlement occurs from the traded maturity of the FES1 into the corresponding maturities of the FESX
Delivery	Intraday delivery into underlying futures (FESX)
Offered contracts	First three maturities of the underlying index futures (up to 9 months)*
Tick Size	0.10 index points (represents EUR 1 of the underlying futures) compared to 1.0 index points for FESX
Contract Quotation	Price of the basis in index points, and may be positive or negative
Trading Hours	Order book: 09:00 – 17:25 CET, including closing auction TES block trade entry: 09:00 – 17:35 CET
Trading holidays	Identical to underlying futures. No trading on the final settlement day of the underlying futures
Final Settlement Day	Each Trading Day
Final Settlement Price	The Final Settlement Price is established by Eurex on the Final Settlement Day of the contract and is determined as the official closing value of the Euro STOXX 50 [®] index plus the traded basis price of the Eurex MoC futures
Min. TES Block Trade Size	100 contracts

* FESX has a term of up to 24 months

Trading Phases

Timetable



Your benefits trading Basis Futures at Eurex



Easy Access & Transparency

- Quotation of the basis in +/- index points equal to OTC market offering market standards
- **Equal access** for all market participants to order book (no minimum size required)
- **Higher transparency** of the basis price via publicly available order book
- **TES Block trading** available
- Min block trade size for Eurex MoC Futures on Euro STOXX 50[®] futures: 500 contracts



Lower Risks & Costs

- **No slippage costs** with futures pricing at market standards (Futures: 0.10 index points, Index: 2 decimals)
- **Lower tracking error** for smaller sized orders executed at more accurate prices compared to the usually used average pricing method around the cash market close
- **Lower transaction costs** compared to the OTC market
- **Immediate risk management** by Eurex Clearing CCP will reduce operational risk



Higher Efficiency

- **Less transactions and better pricing capabilities** reduce the need to split trades in the underlying index futures
- Euro STOXX 50[®] Index futures (FESX) **immediately available intraday** after settlement around 18:30 CET
- **Fully automated process** compared to current OTC solution with transactions to be processed manually and handled twice (at time of agreement and after the index close is available)

3 Pricing and Reporting

Fee & Pricing

FES1 in EUR	M-Account	P-Account	A-Account
Order book	0.00	0.00	0.00
TES Block Trade	0.00	0.00	0.00

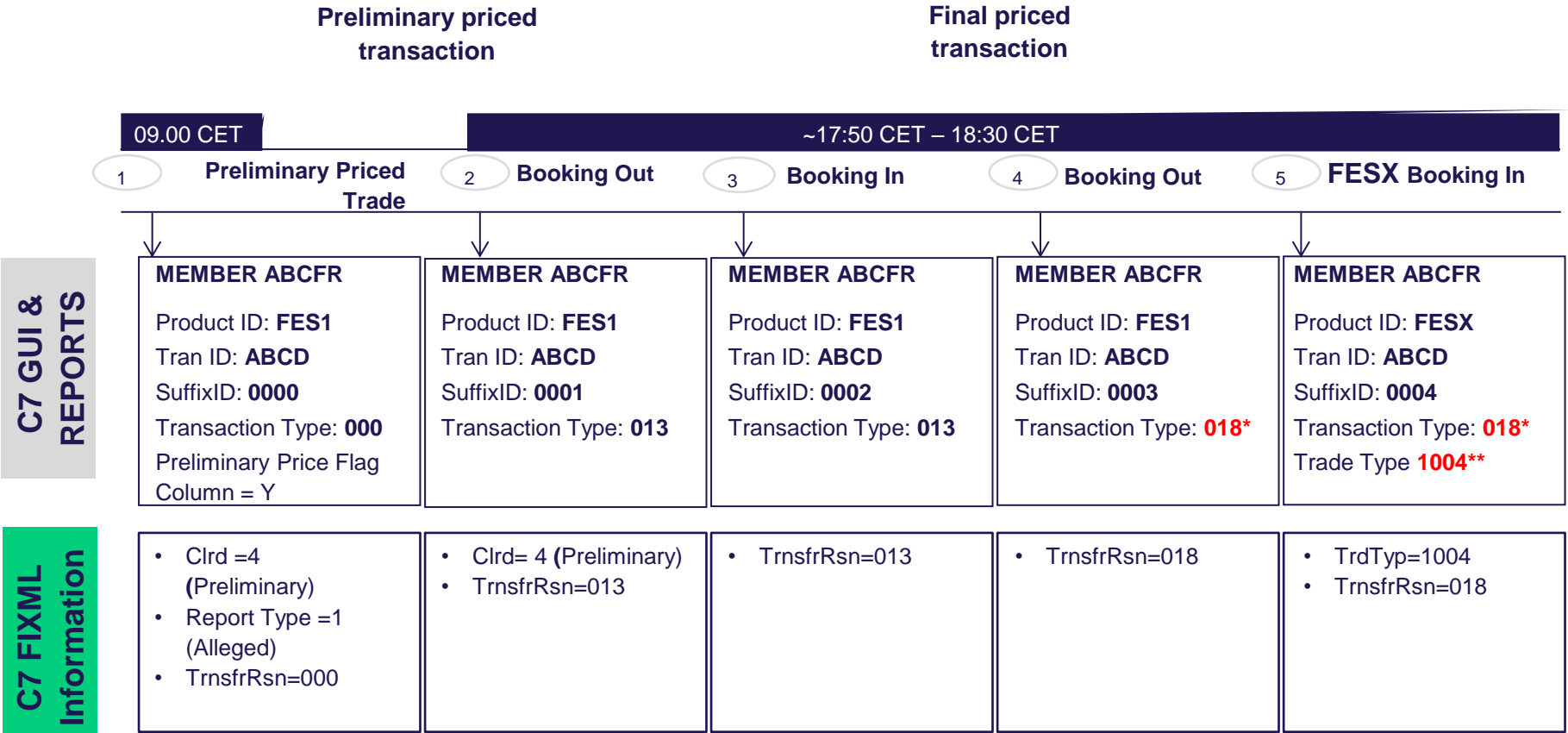
FESX in EUR	M-Account	P-Account	A-Account
Order book	0.32	0.32	0.38
TES Block Trade	0.48	0.48	0.56

Transaction Reporting Requirements

- The transaction reporting requirements for Eurex MoC futures were discussed in the ESMA working group
- BaFin informed Eurex about the results of this discussion and requested to inform Eurex' clients accordingly
- Eurex understands the transaction reporting requirements for the Basis Futures and the corresponding underlying futures as follows:

Relevant Regulatory Act	Reporting Requirements at t+1
EMIR Art. 9	<ul style="list-style-type: none"> • As only the 'end of day'-state of a transaction is reported for EMIR Art 9 the transactions of the Basis Futures are not reported at all • Thus, only the final state with the underlying futures FESX is reported with the final price (Step 5 next page)
MIFIR (MIFID II) Art. 26 Trading Focus	<ul style="list-style-type: none"> • Transaction of the original Basis Futures (FES1) with final price only (Step 3 next page) • Settlement transaction of Underlying Futures (FESX) not required • Please note: original Basis Futures transactions (<u>before</u> Give up) have to be reported with the final price
	<p>Reasoning BaFin:</p> <ul style="list-style-type: none"> • The buy/sell transaction of a FES1 already creates a binding agreement • Usage of individual ISINs for both products • Always original transaction has to be reported for MIFIR

Clearing FES1 Full Service Transaction



* Transaction type for transaction based settlement for GUI & Reports, (FIXML) = Transfer Reason

** Trade Type for MoC FESX GUI, Reports & FIXML

3 Reportable FES1 transaction (see slide 11)

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