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# EURO STOXX® Total Return Futures

Listed Solution for Implied Repo Trading

June 2024

## Agenda

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# **Challenges in the Current Market Environment**

## **Uncleared Margin Rules**

UMRs drive the swaps market from **OTC to listed** Buy-side clients are becoming more aware of **margin optimization** allowing for increased leverage and profits

## **Trading Fragmentation**

- Holding positions across multiple exchanges etc. implies illiquid markets and higher costs of trading
- Absence or insufficient use of margin offsets

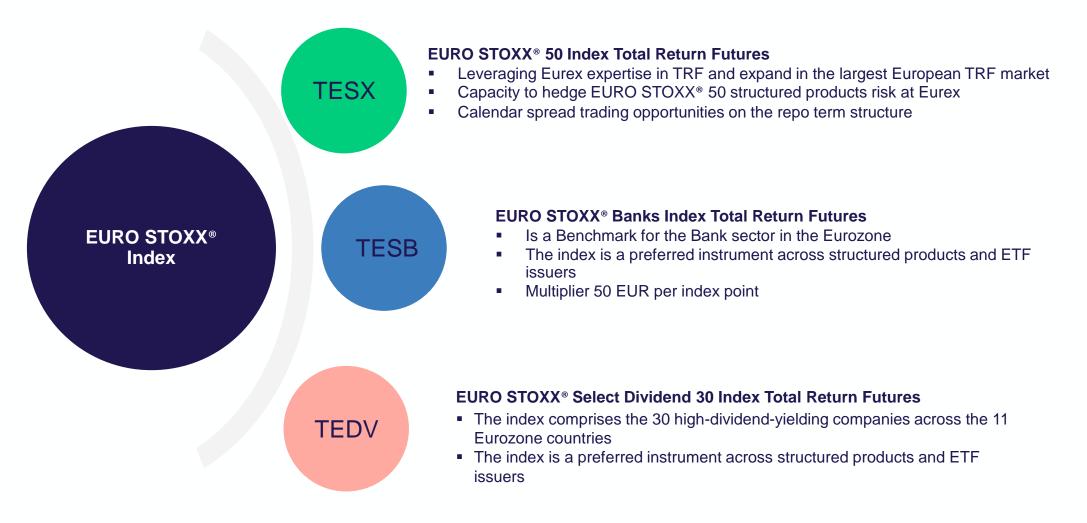
### **Financing Risk During Dividend Season**

Stressed market conditions generate **uncertainty over** dividend payments

Due to **uncertainty over repo levels** and **large financing risks**, the quarterly future rolls are historically volatile Market Players Need...

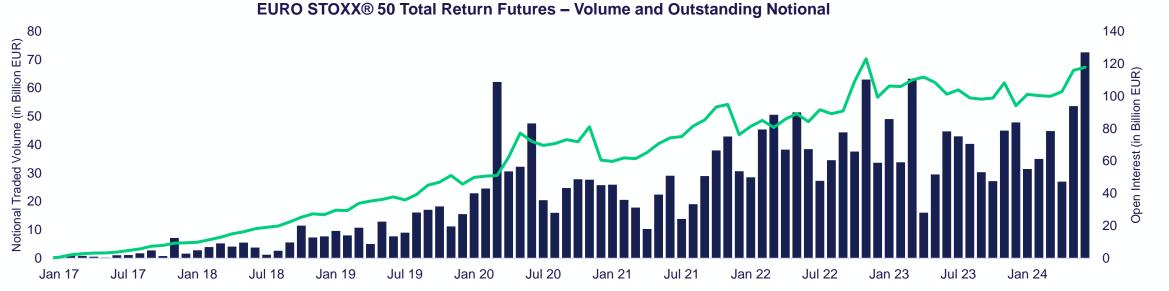
Flexibility of the OTC market with operational exchange efficiency Ability to reduce counterparty risk and mitigate capital, collateral and balance sheet pressures Price transparency and anonymity of the trade Advantage of the largest liquidity pool for TRFs, Margin compression and increased synergies with Index Futures & TRFs on the same platform An alternative for the regular price index future as Delta One Beta replacement with short term TRFs An instrument with less pricing sensitivity to dividends compared to price return futures Attract new clients eager to invest in repo as a new asset class

## **EURO STOXX® TRF Product Suite**



# **EURO STOXX® 50 Total Return Futures**

## Volumes since launch

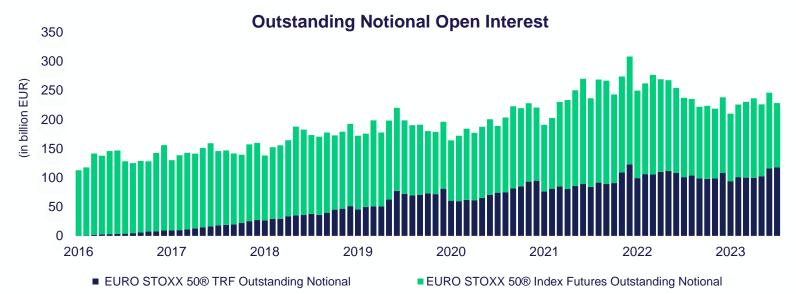


Notional Traded Volume

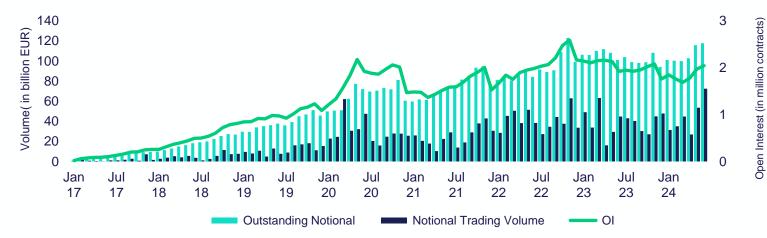
Notional Open Interest

Year Volume		Volume YTD Daily Av	Volume YTD Change			Daily Average Volume			Order Book Share %	No. of Trades		Market Shar Trading Volum			Market Shar Clearing Volum		Open Interest
	Volume	volume		Snare %		Agent	MM	Principal	Agent	MM	Principal						
2024	4,609,622	20.47%	36,584	0%	1,852	67%	27%	6%	24%	29%	47%	2,042,736					
2023	9,227,278	3.86%	36,328	0%	3,452	71%	24%	6%	19%	28%	53%	1,759,790					
2022	10,947,466	69.84%	42,597	0%	4,408	70%	27%	3%	18%	35%	47%	2,166,268					
2021	6,445,575	-34.79%	25,178	0%	2,469	70%	28%	2%	16%	40%	44%	1,526,916					
2020	9,884,445	169%	38,763	0%	2,866	64%	33%	3%	16%	47%	37%	1,470,026					
2019	3,668,361	115.08%	14,499	0%	1,476	60%	34%	5%	21%	48%	31%	1,086,360					
2018	1,705,583	214%	6,741	1%	728	58%	37%	5%	17%	46%	37%	810,805					
2017	543,845	79877.21%	2,133	1%	270	52%	48%	0%	20%	47%	33%	257,042					

# **EURO STOXX® 50 Total Return Futures**









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## **Total Return Futures – Term Structure**

Relative steepness of the term structure provides spread trading opportunities



TRF Settlement Spread per Back-Month Maturity, as of end of June 2024

Source: Eurex

**EUREX** 

## **Product Structure (1/2)**

- Total Return Futures structure ("TR Futures / TRF")
  - Total Return Futures based on:
    - EURO STOXX 50® Index (SX5E)
    - (a new) EURO STOXX 50<sup>®</sup> Dividend / Distribution points index (SX5EDD) and
    - €STR
  - "Pay-as-you-go" structure with daily distributions and funding paid out via the variation margin.
  - TRF Spread executed in basis points via the T7 trading system is converted in index points in order to determine the futures price in index points
  - Order book and off-book trading (via Trade Entry Services) within the Eurex T7 trading system via two trade types:
    - Trade at Index Close **(TAIC)** with an equity strike level based on index close (e.g. SX5E Close).
    - Trade at Market **(TAM)** based on custom-defined equity strike level provided by the investor.

# **Product Structure (2/2)**



- TRF contracts will represent the theoretical exposure to the underlying index (i.e. its component basket) at trade date assuming holding to expiry.
- The holder of a long position will receive the distributions associated with holding the cash basket, against which they will pay the funding associated with this purchase.
- The cost of funding will be made up in part by the overnight funding rate (€STR)and the traded TRF Spread. This spread represents the additional rate required by the seller over €STR until expiry.

 TRF will be quoted and traded in spread terms to insulate the financing component in a transparent manner for the dealers / clients who want to play the repo rate:

(Equity Performance + Distributions) = (Funding + TRF Spread) "Quoted" TRF Spread = Equity Performance + Distributions – Funding

- The Traded Basis will be converted in conjunction with the accrued distributions and accrued funding into a Traded Futures price.
- Total returns will be incorporated into the Daily Settlement price and the daily profit and loss will be paid as a daily cash-flow via the regular variation margin process.

# **Contract Specifications – TESX**

Specifications	EURO STOXX® 50 Index TRF VHOA Index 0#TESX:
Underlying Indices	EURO STOXX 50®Index (SX5E), EURO STOXX 50® Distribution Point Index (SX5EDD), Euro Short-Term Rate (€STR)
Contract Multiplier	EUR 10 per index point
Quotation (TRF Spread) in basis points	TRF Spread as annualized rate expressed in basis points with one decimal (+ / - / 0)
Minimum TRF Spread Change	+/- 0.5 basis points
TRF Spread Conversion	The TRF Spread will be converted within the T7 system into TRF futures prices expressed in index points
Trade Types: TAIC & TAM	Trade at Index Close ("TAIC") with a strike price based on Close SX5E index Trade at Market ("TAM") with a custom-defined strike price
Accrued Distributions & Funding	The distribution and funding rate payments will be accumulated (i.e. "Accruals Approach") since the launch of the TRF offering and will be added to the TRF futures price in index points. The daily changes in the distributions and funding payments are paid out daily via the variation margin ("Daily Cash Flows" approach).
Contract Months	9 years and 11 months: <ul> <li>21 quarterly months of the March, June, September and December cycle</li> <li>Subsequent 5 annual December expiries</li> </ul>
Settlement	Cash settlement, payable on the first exchange day following the Final Settlement Day
Daily Settlement TRF Spread (basis points)	Used to calculate the daily settlement price and determined as follows: <ul> <li>The TRF Spread traded via the closing auction between 17:25 – 17:30 CET. If no trades - will be determined based on the average bid-ask spread. If no average bid-ask spread, then will be determined as the volume-weighted average TRF Spread of all transactions executed during the last 30 minutes of continuous trading</li> <li>If no price can be determined according to the above the Daily Settlement TRF Spread will be determined based on a theoretic (fair) TRF Spread for the respective contract</li> </ul>
Last Trading Day	The Eurex trading day immediately preceding the Expiration day
Expiration Day	3rd Friday of each expiration month if this is an exchange day; otherwise, the immediately preceding exchange day
Final Settlement Price (FSP)	Established by Eurex on Expiration Day and it is based the following components: Final Settlement Price of Regular Price Index Future, accrued distributions and accrued funding until the expiry date, in Index Points
FSP Reference Price Index Future	FSP of the EURO STOXX 50® Index Futures (FESX) on Expiration Day
Trading Hours	Order book (TAC): 08:15 – 17:30 CET Trade Entry Services (TAIC & TAM): 8:15 – 22:00 CET Last trading day trading until: 17:30 CET
Minimum Block Trade Size	100 contracts

# **Contract Specifications – TESB & TEDV**

Specifications	EURO STOXX® Index Total Return Futures							
-	EURO STOXX® Banks TRF	IUIA Index	0#TESB:	EURO STOXX® Select Dividend 30 Index TRF	IULA Index 0	#TEDV:		
Underlying Indices	EURO STOXX® Banks Index (SX7E) EURO STOXX® Banks Distribution Point Index (SXBD Euro Short Term Rate (€STR)	D)		EURO STOXX® Select Dividend 30 Index (SD3E) EURO STOXX® Select Dividend 30 Distribution Point Index (SD3EE Euro Short Term Rate (€STR)	) )			
Contract Multiplier	EUR 50 per index point			EUR 10 per index point				
Quotation (TRF Spread) in basis points	TR	F Spread as annu	alized rate ex	pressed in basis points with one decimal (+ / - / 0)				
Minimum TRF Spread Change			+,	- 0.5 basis points				
TRF Spread Conversion	The TRF Spre	ead will be convert	ed within the	T7 system into TRF futures prices expressed in index points				
Trade Types: TAIC & TAM	Trade at Index Close ("TAIC") with a strike price based on Close SX5E index Trade at Market ("TAM") with a custom-defined strike price							
Accrued Distributions & Funding	The distribution and funding rate payments will be accumulated (i.e. "Accruals Approach") since the launch of the TRF offering and will be added to the TRF futures price in index points. The daily changes in the distributions and funding payments are paid out daily via the variation margin ("Daily Cash Flows" approach).							
Contract Months	<ul> <li>6 years and 11 months:</li> <li>8 quarterly months of the March, June, September and December cycle</li> <li>Subsequent 5 annual December expiries</li> <li>6 years and 11 months:</li> <li>8 quarterly months of the March, June, September and December cycle</li> <li>Subsequent 5 annual December expiries</li> </ul>							
Settlement	Cas	h settlement, paya	able on the fir	st exchange day following the Final Settlement Day				
Daily Settlement TRF Spread (basis points)	<ul> <li>Used to calculate the daily settlement price and determined as follows:</li> <li>The TRF Spread traded via the closing auction between 17:25 – 17:30 CET. If no trades - will be determined based on the average bid-ask spread. If no average bid-ask spread, then will be determined as the volume-weighted average TRF Spread of all transactions executed during the last 30 minutes of continuous trading</li> <li>If no price can be determined according to the above the Daily Settlement TRF Spread will be determined based on a theoretic (fair) TRF Spread for the respective contract</li> </ul>							
Last Trading Day	The Eurex trading day immediately preceding the Expiration day							
Expiration Day				change day; otherwise, the immediately preceding exchange day				
Final Settlement Price (FSP)				on Day and it is based the following components: ued distributions and accrued funding until the expiry date, in Index P	Points			
FSP Reference Price Index Future	FSP of the EURO STOXX <sup>®</sup> Banks Index Futures (FESI on Expiration Day	B)		FSP of the EURO STOXX Select Dividend 30 Index Futures (FED	V) on Expiration Day			
Trading Hours		Trade	Entry Service	(TAC): 08:15 – 17:30 CET s (TAIC & TAM): 8:15 – 22:00 CET day trading until: 17:30 CET				
Minimum Block Trade Size				100 contracts				

# Motivation & Examples (1/2)

## Motivation for Buyers (Long Equity)

- TRFs offer immediate exposure to the EURO STOXX 50® Index without requiring the full capital
- TRFs allow synthetic buying of the underlying assets without the need for portfolio management of the individual components

### Motivation for Sellers (Long Repo)

- TRFs offer the ability to transfer the market risk of the portfolio of an investor
- TRFs offer the ability to benefit from short term repo rate movements e.g. from high repo rates when there is a strong negative outlook on the index



## **Examples**

### **Insurance Company**

 Insurance companies often buy downside portfolio protection e.g., long dated out-of-the money puts. They may wish to hedge their repo risk by selling the long-term implied repos

### Bank

 Banks often sell structured products such as auto-callables where they in effect buy cancellable long-term puts. If the market goes down this extends likely duration and hence, they become short longer forwards. They may wish to hedge by selling the medium to longer term repos.

### **ETF Provider**

 May wish to substitute cash replication with synthetic exposure to the index as this will reduce inventory and collateral management whilst locking in repo rate. The CCP mitigates the counterparty risk

### **Asset Manager**

 An asset manager may believe that the repo curve is too steep, and they can take advantage by selling the longer dated TRF and buying shorter date to take advantage of the difference

# Motivation & Examples (2/2)

### Manage Dividend Risk

 Due to the uncertainty over dividend payments observed during the stressed market conditions in March 2020, market players have traded significant volumes on the short end of the spread curve (Dec20, Dec21), especially over the roll period. It looks like TRFs have been traded as a replacement for the regular price index future because of the unique levels of volatility observed in the basis due to the uncertainty over dividend payments. Given the total return nature of the TRF, there is less pricing sensitivity to dividends in comparison with price return futures (please refer to the following Q&A with Goldman Sachs: https://www.eurex.com/ex-en/find/news/Time-to-Switch-to-Total-Return-Futures-when-dividendsare-uncertain--1994528)

### Calendar Spread trading on the repo term structure

 Hedge funds and to a lesser extend institutional investors (long only asset managers, pension funds), are focused on the trading of calendar spreads to capture the expected alpha from the dislocation of the repo term structure. In a TRF spread, the delta position on the index cancels out, as well as the overnight funding payments. The investor's cash flow depends on the levels of the short-term repo, the long-term repo and the spot level. The repo exposure changes linearly with the spot. This is a typical strategy used by hedge funds or absolute return funds to trade on the calendar spread of two repos with different tenors (please refer to the following interview with BNP Paribas https://www.eurex.com/exen/find/news/The-rise-of-TRFs-how-funds-usethem-to-generate-alpha-1405524)

### **Delta One Beta Replacement**

 TRFs offer further benefits for institutional investors as beta replacement with the short-term TRFs (1Y) because the quarterly future rolls are risky. Funding rates are affected by multiple factors such as dividend distribution & announcement, index reshuffling, corporate events etc. Future rolls are historically volatile, there is uncertainty over repo levels and there is a large financing risk over dense Eurozone dividend season.

# Margin Offsets (1/2)

Eurex can offer significant margin offsets between TRF and equity derivatives in PRISMA. The majority of delta for TRS are done using listed equity index products such as index futures, synthetics forward (using listed options) and dividend futures.

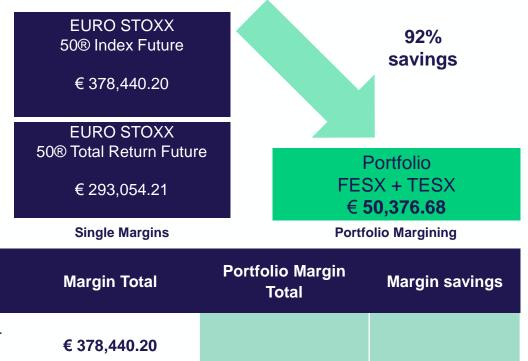
Portfolio	Product Long	Product Short	# Long	#Short	ІМ	IM %	Portfolio effects
FESX 1st	FESX 1st		1		3,005.20	7.50%	
FEXD 1st	FEXD 1st		1		485.14	4.80%	
TRF 1st	TRF 1st		1		3,298.57	7.10%	
TRF 21st	TRF 21st		1		3,350.92	7.09%	
FESX 1st - TRF 1st	FESX 1st	TRF 1st	1	1	351.59		94%*
TRF 1st – TRF 5th	TRF 1st	TRF 5th	1	1	27.97		99%*
TRF 1st – TRF 21st	TRF 1st	TRF 21st	1	1	153.85		97%*
TRF 3rd – TRF 7th	TRF 3rd	TRF 7th	1	1	27.67		99%*
TRF 7th - TRF 3rd, FEXD 2nd	TRF 7th	TRF 3rd , FEXD 2nd	20	10 & 1	33,000.53		65%*

• The calculations have been derived using the envisaged configurations (e.g. Liquidity Add-On, vola floor) and a holding period of 3 days.

 Please keep in mind, that the figures are not productive and should be used as indication only. Especially for the FEXD and the TRF only approximate figures have been determined, since they are not launched in Prisma yet.

# Margin Offsets (2/2)

This is a practical example for both 5 million EUR notional long EURO STOXX 50® index futures (FESX) versus 5 million EUR notional short EURO STOXX 50® Total Return Futures (TESX)



Product	Eurex ID	Long	Short	Maturity	Margin Total	Portfolio Margin Total	Margin savings
EURO STOXX 50® Index Future	FESX	125	0	December 2021	€ 378,440.20	650 276 69	92%*
EURO STOXX 50® Total Return Future	TESX	0	109	December 2021	€ 293,054.21	€50,376.68	<b>3</b> 2 70

\* In compliance with regulations, margin savings are capped at 80%, the exceedance is charged via supplementary margin.

# Pricing

## Pricing for new contracts:

Pricing is configured on standard Eurex elements

- $\rightarrow$  Transaction (Trade) Fee
- → Cash Settlement Fee

Assumption is that initial trade migration will be similar to on-boarding of TRS i.e. large bilaterally negotiated trades introduced using TES – hence Block Trade Fees are equivalent to Orderbook.

Contract	Account	Orderbook	Block Trades
Total Return Futures (Transaction Fee) on STOXX Indices	A/M/P	EUR 0.60	EUR 0.60
Total Return Futures (Cash Settlement) on STOXX Indices	A/M/P	EUR 0.60	EUR 0.60

In addition there is an implementation of a (position) Maintenance Fee which is incorporated due to the potential that positions will be both long term (up to 10 years) and be retained as Open Interest in Clearing (equivalent to an underlying TRS)

Contract – Maintenance Fee	Account	Standard Fee per Contract
Total Return Futures (Maintenance Fee) on STOXX Indices	М	EUR 0.001 Daily (EUR 0.365 p.a.)
	A/P	EUR 0.002 Daily (EUR 0.73 p.a.)

The maintenance fee has been technically implemented on 01 March 2019 and will be charged from then on.

## EUREX

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Total Return Futures (TESX): https://www.eurex.com/ex-en/markets/idx/trf

**Eurex Trade Entry Services / Multilateral Trade Registration (MTR):** https://www.eurex.com/ex-en/trade/eurex-t7-entry-services

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# Thank you!

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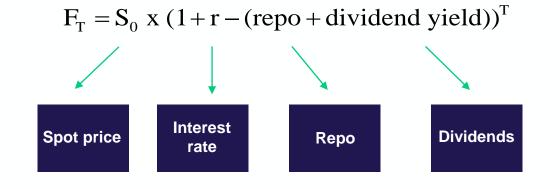
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# Appendix

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# About Implied Repo Rate (1/2)



- The equity repo rate is not just the cost to go short a security, it is at the confluence of derivative pricing, financing needs, new regulation and collateral management.
- Repo is the remainder component of an equity forward's price after spot, interest rate and dividend risks have been stripped out.
- The TRS spread represents the cost of carrying the underlying. Since the seller of TRS loans out the underlying and receives repo, the spread should be equal to "– repo" :

## The lower the repo, the higher the spread of a TRS

Being "Short" a TRS means being "Long" the Implied Repo

# About Implied Repo Rate (2/2)

Virtually every directional derivative has a repo exposure

## Derivatives that have a short repo exposure : Derivatives that have positive delta

- Long future or forward
- Long call / Short put
- Long a Total Return Swap
- Any exotic option that is long the market

## Derivatives that have a long repo exposure : Derivatives that have negative delta

- Short future or forward
- Long put / Short call
- Short a total return swap
- Any exotic option that is short the market

## The repo exposure term is the maturity of the derivative.

This creates a term structure of repo rates given a range of derivatives maturities

# **Example: TAIC Trade Workflow (1/2)**

Until the SX5E Close is known, the TAIC trades are priced as preliminary trades (based on the Index Close value of previous day) C7 sends confirmation about the transaction at the preliminary clearing price C7 to settle TAIC into the same TRF product code (i.e. TESX) at the final settlement price in index points

		Today's Index C	lose SX5E(t): <b>2932.34</b>	
Т7 (	(Trading layer)	C7 (Clearing layer)	Т7	C7
Yesterday's Close SX5E(t-1): <b>2911.06</b> Days to Maturity(t): <b>498</b> Accruals (today): • AccDistributions(t): <b>6.06</b>	<ul> <li>TAIC Trade @ + 60.5 bps</li> <li>Preliminary Basis(t): 24.363146</li> <li>Preliminary Price(t): 2,911.06 + 6.06 - (- 1.255466) + 24.363146 = 2,942.74</li> </ul>	Intraday Clearing via Open Offer @ Preliminary Price 2,942.74 index points	<b>TAIC Trade @ + 60.5 bps</b> • Final Basis(t): <b>24.541242</b> • Final Price(t): 2932.34 + 6.06 - (-1.25546 + 24.541242 = <b>2964.20</b>	@ Final Price
<ul> <li>AccFunding(t):</li> <li>- 1.255466</li> </ul>	Preliminary Trade (T7)	Preliminary Trade (C7)	Final Trade (T7)	Final Trade (C7)
Prior to Trading	Intrada	ny Trades	Final Price	e Adjustment
~ 0	8:00 CET	Risk Management in Prisma (based on preliminary price)	~18:10 CET	

# **Example: TAIC Trade Workflow (2/2)**

## On T7 side

## There will be 2 ETI messages:

- One intraday message:
  - Booking In of the "**Preliminary Trade**" (one deal ID).
- One combined message when conversion is done from Preliminary to Final Price:
  - Booking In "Final Trade" (different deal ID from the Preliminary trade) and Booking Out Preliminary Trade.

## On C7 side

## There will be 3 FIXML messages:

- One intraday message:
  - Booking in "Preliminary Trade"
- Two messages when conversion is done from Preliminary to Final Price:
  - Booking out "Preliminary Trade" (suffix "0001")
  - Booking in **Final Trade** (suffix "0002").

## **Trade Life Cycle**

- The handling of Total Return Futures is similar to basis trading as the order entry, execution and settlement is based on the TRF Spread (i.e. financing cost / Repo), expressed as an annualised rate in +/- basis points\*.
- The main steps regarding the trade and post-trade workflow are the following:

- **Order Entry Step 1**: The members submit the orders by specifying the "Traded TRF Spread" (basis points) for the respective contract month (e.g. + 60.5 bps for DEC16 expiry).
- Trade<br/>ExecutionStep 2: Once the order is executed at the TRF spread, the Eurex system calculates the "Traded<br/>Futures Price" based on the:<br/>Equity index and Traded Basis.<br/>Accrued Distributions and Accrued Funding.
  - **Note:** The Traded Basis is determined based on the conversion of the Traded TRF Spread from basis points into index points.
  - **Clearing** Step 3: The executed trade is cleared immediately via Open Offer based on the respective "Traded Futures Price".
- M-to-M / Daily P/L
   Step 4: The "Daily Futures Settlement Price" is calculated EOD based on the: Close SX5E and Daily Settlement Basis. Accrued Distributions and Accrued Funding. Note: The Daily Settlement Basis is determined based on the conversion of the Daily Settlement TRF Spread from basis points into index points.
  - Step 5: The Daily Profit/Loss (Variation Margin) is calculated based on the settlement prices.
- Step 6: At the contract expiration, any remaining open position will be marked-to-market and cash settled based on the "Final Futures Settlement Price" (i.e. EDSP of FESX futures): At expiration the Traded Basis is zero, hence only the equity index level is taken into consideration.

# **Distribution Index & Extraordinary Handling (1/2)**

## SX5EDD Distribution Index

- As of 30th September a new index has been distributed by STOXX to cover all gross dividends and additionally the amount deducted due to taxation of special cash and stock distributions
  - EURO STOXX 50® Distribution Points index (SX5EDD) published with 2 decimals. Available on Bloomberg & Reuters details <u>https://www.stoxx.com/index-details?symbol=SX5EDD</u>
  - No (periodic) reset to zero of SX5EDD and shall not be adjusted with negative distribution points in case of cancellation of the distributions
  - The base date from (but excluding) 18 Dec 2015 such that SX5EDD should coincide with the date when the existing SX5ED dividend index is reset to zero in December 2015

### Delays / Corrections of SX5E

- The trade processing for TAIC shall be done after the confirmation by STOXX of the official closing level and its input and validation by Market Supervision of the Close SX5E in the T7 system
- Should a correction occur on the same day, the respective level should be reflected in the TAIC trade levels as well. However any amendment after finalisation will require a cash adjustment to be applied

# **Distribution Index & Extraordinary Handling (2/2)**

### Market Disruption

- Eurex can decide to suspend the TAIC trades in the order book should one of the SX5E index constituents be closed, but still to allow off-book trades (both TAIC and TAM)
  - Eurex may decide to suspend of market makers' obligations
  - Equity strike is not adjusted in case of TAIC (i.e. the published value for the Close SX5E shall be used)

# Distribution<br/>RecoveryAs noted the new distribution SX5EDD index will not be adjusted (i.e. no negative index points applied in case of a<br/>distribution cancellation)

- No adjustment of the futures prices so as not to impact the other parties which entered after the ex-date
- The relevant period is between the distribution ex-date and the cancellation date. The impacted parties are the holders of the open interest (long & short) at the close of business on the day before ex-date (i.e. COB Ex-Date 1)
- Any compensation shall be done by Eurex via a cash instruction with a separate booking code

# Member Impact (1/4)

### Access

- No new membership license for TRF required
- All trading members will have access to TRF (should the respective clearing members enable their trading members for the product)

## Accruals

- Daily cash-flows approach based on "accruals handling":
- The total distributions / funding will start accruing into the traded futures price from launch
- The **daily** distributions / funding will be effectively paid out via the daily **variation margin** (as P&L)
  - No change in the calculation of the variation margin as the accruals amounts are included

# Member Impact (2/4)

## Double Notation

- TRF trades entail **double notation** as they are executed based on the **TRF Spread** in basis points:
- Traded TRF Spread can take positive or **negative** values. The internal systems used for listed derivatives would potentially have to be updated to cope with TRF handling
- Once the trade is matched, the T7 trading system will perform a conversion from basis points ("trading notation") into index points ("clearing notation")

Note: the clearing system receives the trades with (positive) futures prices in index points

Trade at Index •	TRF handling entails two types of trades using the same product code:
Close vs. Trade	Trade at Index Close (TAIC) based on daily index close of the EURO STOXX 50® (SX5E)
at Market	Trade at Market (TAM) based on a pre-agreed (custom strike) EURO STOXX 50® index level

 In case of TAIC trades, the handling entails a Preliminary trade and a Final trade: The preliminary feedback from the vendors is that this handling can be supported (i.e. FIS & ION) However, additional IT build effort might be needed on members side

# Member Impact (3/4)

## Regulatory Reporting

- It is envisaged that the Traded TRF Spread is not required in the clearing layer for regulatory reporting purposes (similar to Variance Futures)
- Therefore only the derived Traded Futures Price will be required for regulatory reporting purposes

## Portfolio Margining/Risk TRF are envisaged to be included in the existing equity liquidation group (PEQ01) within PRISMA Initial margin offsets with all equity futures and options included in the liquidation group Dividend futures and options will also be included in the PEQ01 with Prisma Release 5.0 Portfolio simulations via Margin Calculator in production based on Prisma methodology\*

TRF needs to be implemented in member's internal risk systems

# Member Impact (4/4)

### Index Disruption

 In the case of the late delivery of an SX5E index close or in the case that an index is subsequently amended – meaning that TAIC and/or TAM trades and/or the Daily Settlement Price is incorrect
 Eurex will introduce a cash adjustment in respect of the incorrect calculations of traded futures price and any adjustment made to the daily settlement price in respect of open positions

#### Distribution Cancellation/ Recovery In the unlikely event of a dividend cancellation in SX5E (i.e. a dividend has gone ex- but is subsequently not fully paid) – then a cash compensation process shall be done by Eurex: Process will use existing handling in case of wrong final settlement prices on the expiration day Note: the new distribution SX5EDD index will not be adjusted (i.e. no negative index points) No retroactive adjustment of the daily TRF settlement prices will be done by Eurex so as not to impact the other parties

- which have traded after the ex-date
- The relevant period is between the distribution ex-date and the cancellation date:

The impacted parties are the holders of the open interest (long & short) at the close of business on the day before ex-date (i.e. CoB Ex-Date – 1)

The long position holders as of Ex-Date – 1 (CoB) would be debited the cash amount corresponding to the distributions not effectively received (and credited to short position holders)

Impacted parties will be similarly notified as with existing handling for incorrect final settlement prices: