
EUREX
Architects of trusted markets
STOXX®
Total Return Futures
Listed Solution for Implied
Repo Trading
October 2026

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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**

STOXX® TRF Product Suite



EURO STOXX® 50 Index Total Return Futures

- Leveraging Eurex expertise in TRF and expand in the largest European TRF market
- Capacity to hedge EURO STOXX® 50 structured products risk at Eurex
- Calendar spread trading opportunities on the repo term structure

EURO STOXX® Banks Index Total Return Futures

- Is a Benchmark for the Bank sector in the Eurozone
- The index is a preferred instrument across structured products and ETF issuers
- Multiplier 50 EUR per index point

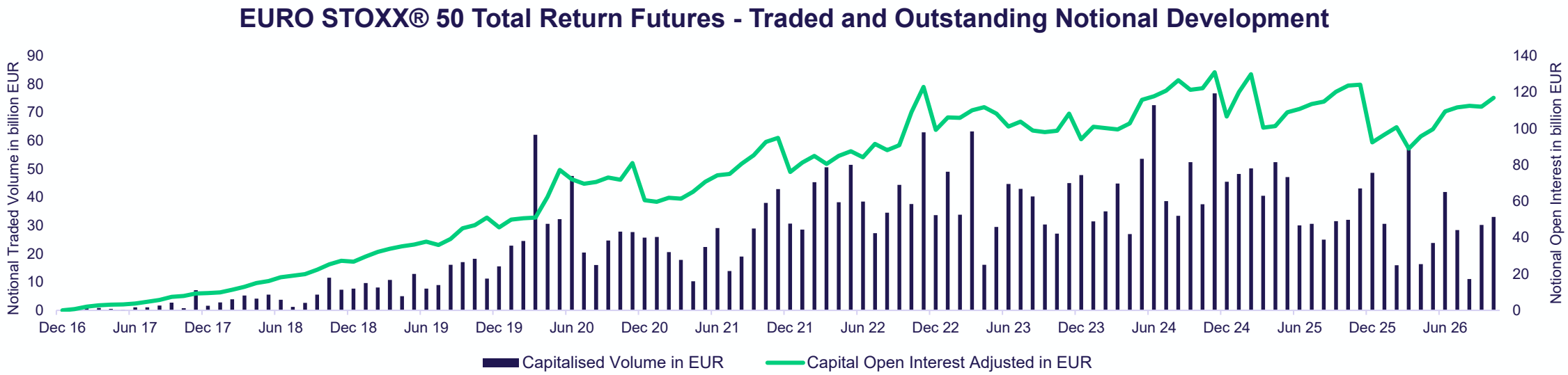
EURO STOXX® Select Dividend 30 Index Total Return Futures

- The index comprises the 30 high-dividend-yielding companies across the 11 Eurozone countries
- The index is a preferred instrument across structured products and ETF issuers

STOXX® Europe 600 Index Total Return Futures

- The index comprises the stocks of the 600 largest companies in Europe
- Enables broader equity exposure that is not restricted to the Eurozone

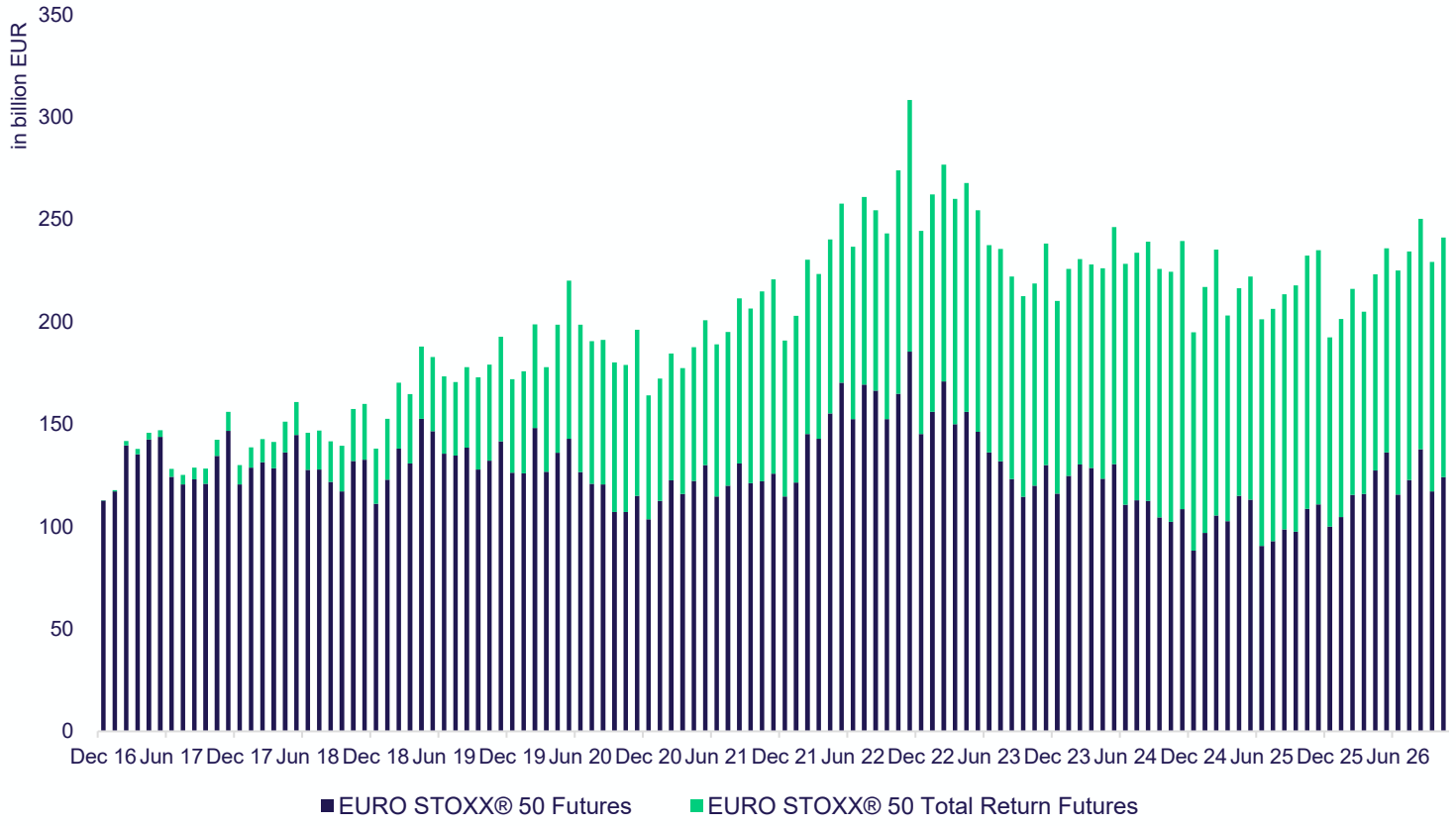
EURO STOXX® 50 Total Return Futures (1/2)



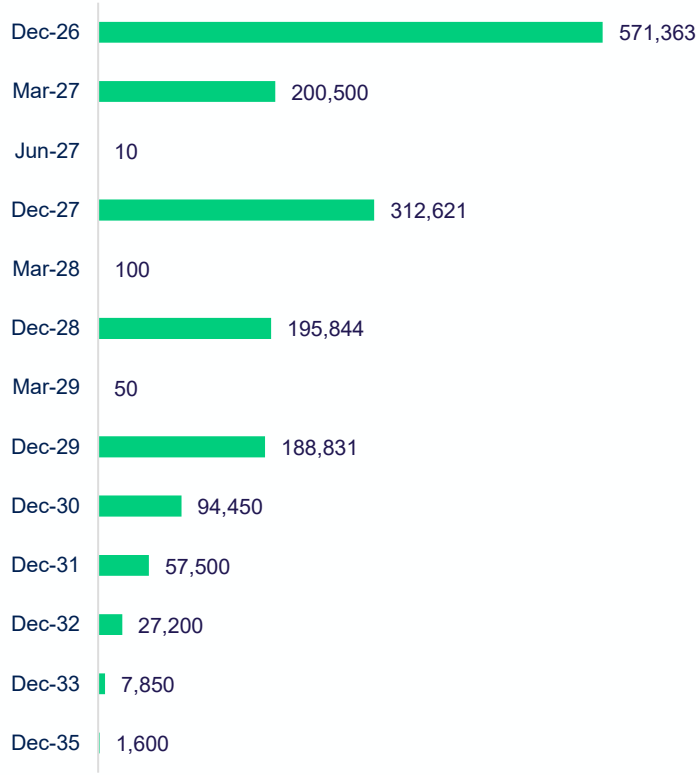
Year	Traded Contracts	YoY Change	Daily Average	Order Book Share	No of Trades	Market Share			Capital Volume in million EUR	Open Interest
						Agent	MM	Principal		
2026	4,152,422	-34%	19,495	0.1%	2,045	72%	23%	5%	289,142	1,657,919
2025	7,716,212	-20%	30,499	0.1%	3,859	69%	24%	7%	479,495	1,379,371
2024	9,600,789	4%	37,798	0.1%	3,862	68%	26%	6%	548,524	1,873,005
2023	9,227,278	-16%	36,185	0.1%	3,431	71%	24%	6%	470,107	1,759,790
2022	10,947,466	70%	42,597	0.0%	4,393	70%	27%	3%	493,003	2,166,268
2021	6,445,575	-35%	25,178	0.0%	2,460	70%	28%	2%	299,720	1,526,916
2020	9,884,445	169%	38,763	0.1%	2,866	64%	33%	3%	362,387	1,470,026
2019	3,668,361	115%	14,499	0.2%	1,471	60%	34%	5%	141,269	1,086,360
2018	1,705,583	214%	6,741	0.6%	725	58%	37%	5%	61,280	810,805
2017	543,845	79877%	2,133	0.4%	269	52%	48%	0%	19,907	257,042
2016	680	-	3	26.5%	12	37%	63%	0%	21	680

EURO STOXX® 50 Total Return Futures (2/2)

Monthly Outstanding Notional Development
EURO STOXX® 50 Futures vs. EURO STOXX® 50 TRFs

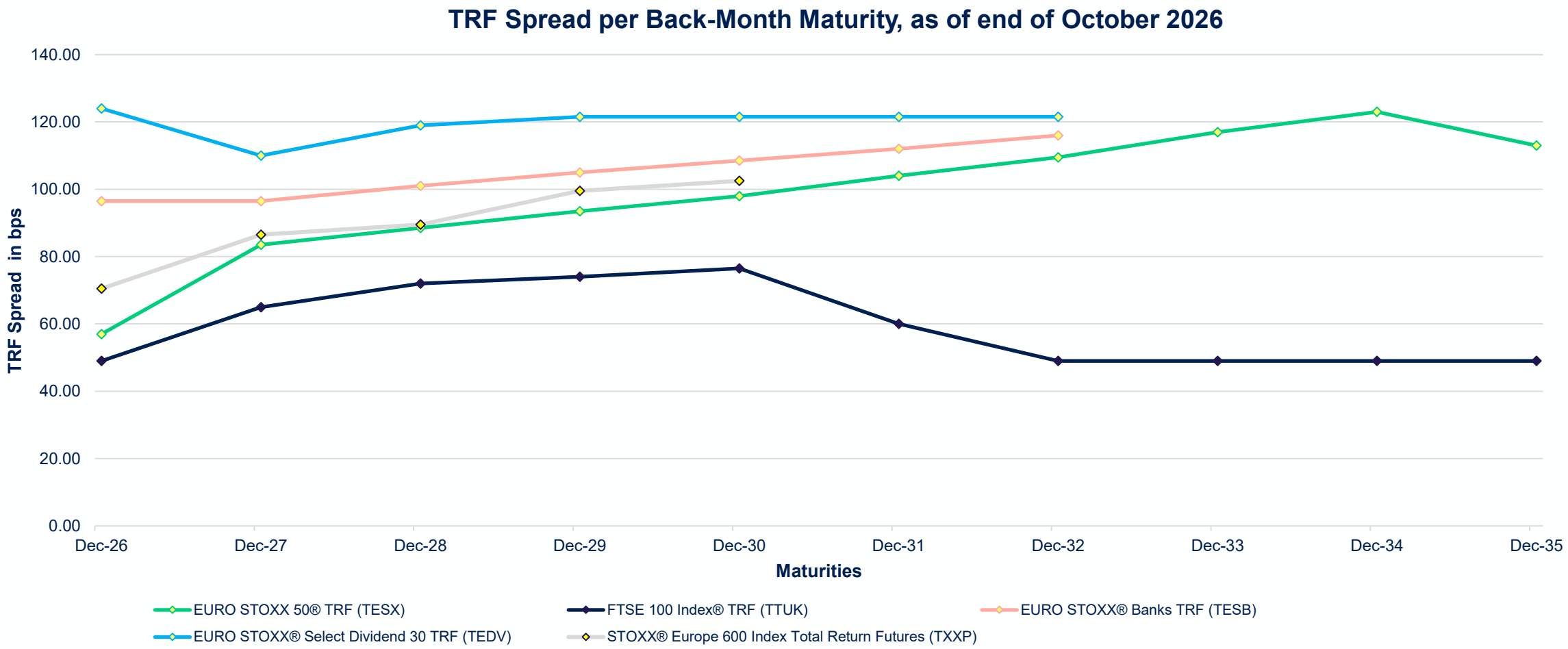


Open Interest by end of October 2026 per maturity
in contracts



Total Return Futures – Term Structure

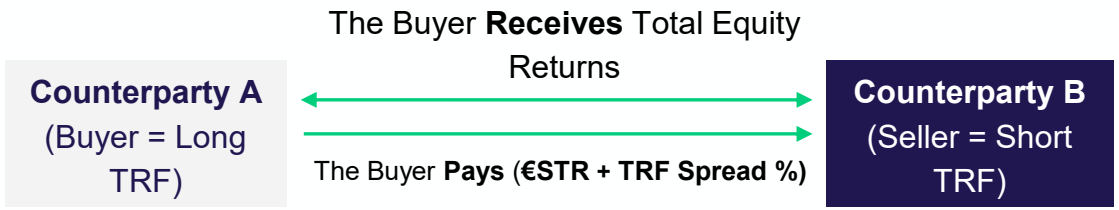
Relative steepness of the term structure provides spread trading opportunities



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® 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: • 21 quarterly months of the March, June, September and December cycle • Subsequent 5 annual December expiries		
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: ▪ 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 ▪ 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		
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 (SXBDD) Euro Short Term Rate (€STR)			EURO STOXX® Select Dividend 30 Index (SD3E) EURO STOXX® Select Dividend 30 Distribution Point Index (SD3EDD) Euro Short Term Rate (€STR)		
Contract Multiplier	EUR 50 per index point			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	6 years and 11 months: • 8 quarterly months of the March, June, September and December cycle • Subsequent 5 annual December expiries			6 years and 11 months: • 8 quarterly months of the March, June, September and December cycle • Subsequent 5 annual December expiries		
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: ▪ 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 ▪ 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					
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® Banks Index Futures (FESB) on Expiration Day			FSP of the EURO STOXX Select Dividend 30 Index Futures (FEDV) 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 – TXXP

Specifications	STOXX® Europe 600 Index TRF	XPSA Index	0#TXXP:
Underlying Indices	STOXX® Europe 600 Index (SXXP), STOXX® Europe 600 Distribution Points Index (SXXPDD), Euro Short-Term Rate (€STR)		
Contract Multiplier	EUR 50 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 SXXP 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	4 years and 11 months: • 4 quarterly months of the March, June, September and December cycle • Subsequent 4 annual December expiries		
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: ▪ 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 trades are executed in the closing auction, then the Daily Settlement TRF Spread is determined based on the average bid-ask spread of the respective contract month; ▪ 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		
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 STOXX® Europe 600 Index Futures (FXXP) 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	30 contracts		

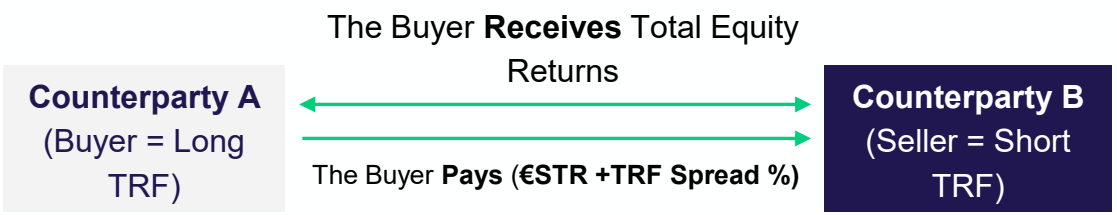
Motivation & Examples (1/2)

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-dividends-are-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/ex-en/find/news/The-rise-of-TRFs-how-funds-use-them-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)

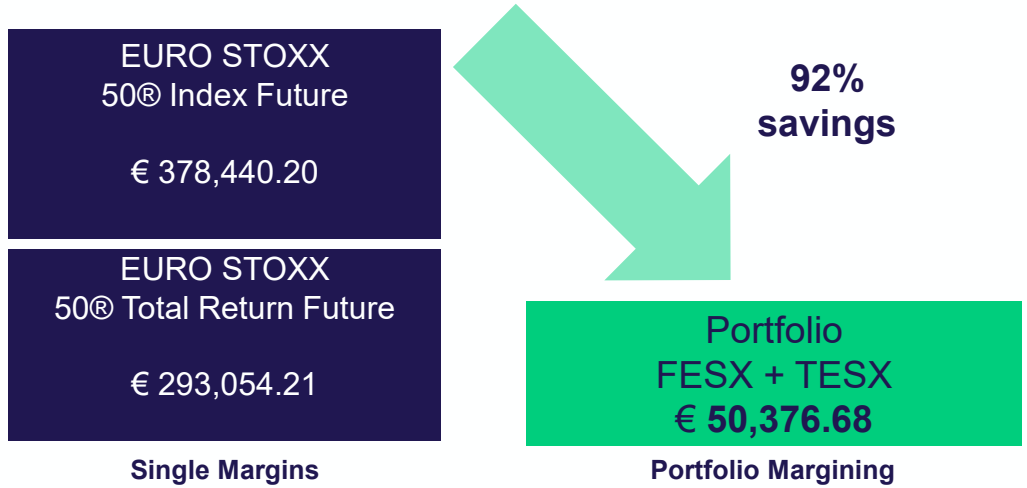
Eurex can offer significant margin offsets between TRF and equity derivatives in PRISMA. The majority of delta for TRS are done using listed equity index products such as index futures, synthetics forward (using listed options) and dividend futures.

Portfolio	Product Long	Product Short	# Long	#Short	IM	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**	**€50,376.68**	**92%***
EURO STOXX 50® Total Return Future	TESX	0	109	December 2021	**€ 293,054.21**		

* 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
→ 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	M	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.

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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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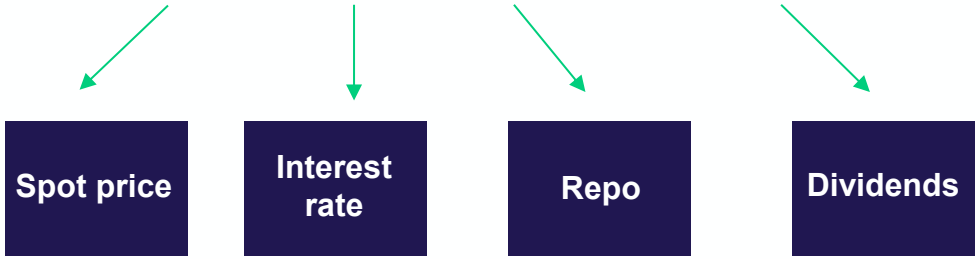
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Appendix

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About Implied Repo Rate (1/2)

$$F_T = S_0 \text{ x } (1 + r - (\text{repo} + \text{dividend yield}))^T$$



- 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

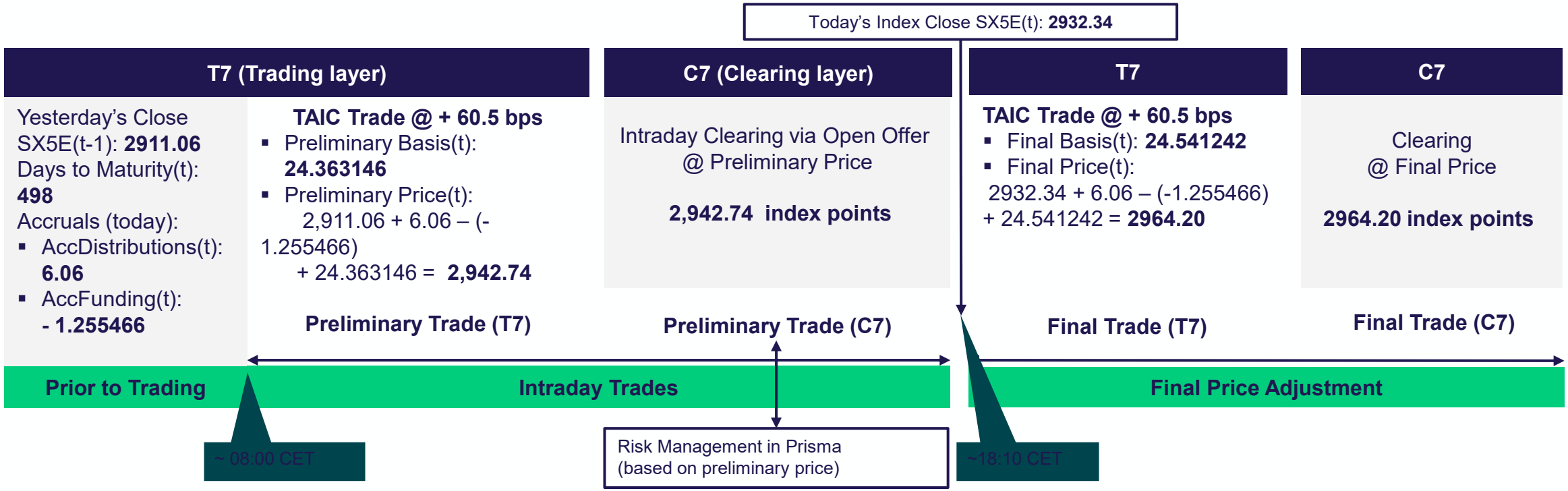
- Short future or forward
- Long put / Short call
- Short a total return swap
- Any exotic option that is short the market

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



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 Execution

- **Step 2**: Once the order is executed at the TRF spread, the Eurex system calculates the "Traded Futures Price" based on the:
  Equity index and Traded Basis.
  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.

Expiration

- **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 https://www.stoxx.com/index-details?symbol=SX5EDD
- 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 Recovery

- As noted the new distribution SX5EDD index will not be adjusted (i.e. no negative index points applied in case of a 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 Close vs. Trade at Market

- TRF handling entails two types of trades using the same product code:
  Trade at Index Close (TAIC) based on daily index close of the EURO STOXX 50® (SX5E)
  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 Systems

- 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: