EUREX Architects of trusted markets

The expanding universe of Total Return Futures

Table of contents

This report features interviews with

Antoine Deix Head of Dividend and Repo Solutions, BNP Paribas

Yanis Escudero Head of Delta One Flow Trading, BNP Paribas

Nicole Gilbert Executive Director, Equity Derivatives Trader, Goldman Sachs

Lorenzo Longo Equity Portfolio Manager, Kedalion Capital

Stuart Heath Director, Equity & Index Product Design, Eurex

Elena Marchidann. Vice President, Equity & Index Product Design, Eurex

Introduction

Eurex first launched Total Return Futures (TRFs) in 2016, responding to the increasing cost structure of the Total Return Swaps market. With Uncleared Margin Rules (UCM) imposing new burdens on swap trading, banks were pushed to explore new instruments to augment their margin efficiency and reduce capital costs.

This was not the first time a sell-side and exchange partnership successfully transitioned an OTC product into the listed environment. In 2008, Eurex became the first exchange to list dividend futures as a listed alternative to the dividend swap market that had grown in the 2000s as a vehicle for banks to manage their structured product exposures.

As regulators demanded for stricter capital requirements in the wake of the 2008 global financial crisis, the pressure for more listed alternatives to OTC instruments increased.

In 2016, Eurex launched EURO STOXX 50® TRFs as an exchange-traded instrument that replicated the functions of the TRS market. Pulling off this feat was aided by regulatory impetus, but it required extensive market consultation and design. This involved challenges and compromises for the market participants who structured the transition.

The result was a novel futures product with features that replicated a swap's mechanics while offering the benefits of standardization and margin efficiency that draw market participants to trade listed instruments.

Since the launch of EURO STOXX 50® TRFs, TRFs have become an asset class in its own right. Similar products have since developed around the FTSE 100 and MSCI indexes, each with its own liquidity profiles.

Across all TRFs, the user base has significantly expanded. Initially, sell-side firms drove adoption to minimize repo exposures, but recently, buy-side participants have employed these products for diverse strategies.

The profile of market participants in TRFs now encompasses banks, specialist and multi-strategy hedge funds, asset managers, pension funds, and sovereign wealth funds. In its nine years, the product has evolved from being a balance sheet management tool to one in which various trading strategies have been developed to capture opportunities across the curve.

The result was a novel futures product with features that replicated a swap's mechanics while offering the benefits of standardization and margin efficiency that draw market participants to trade listed instruments.

In this whitepaper, Eurex, which played a crucial role in creating TRFs, explores the current state of the market. The products, use cases, and advantages are thoroughly analyzed with insights from industry experts. These comprise Stuart Heath, Director, Equity & Index Product Design at Eurex, Elena Marchidann, Vice President, Equity & Index Product Design at Eurex, Antoine Deix, Head of Dividend and Repo Solutions at BNP Paribas, Yanis Escudero, Head of Delta One Flow Trading at BNP Paribas, Nicole Gilbert, Executive Director, Equity Derivatives Trader at Goldman Sachs and Lorenzo Longo, Equity Portfolio Manager, Kedalion Capital.

How TRFs work

TRFs were designed to mimic the mechanics of a TRS as closely as possible, a process that brought innovation to the listed marketplace. This involved novel features, such as quoting the futures in basis points, a structure that opened up greater buy-side access.

At a fundamental level, the contracts have the two-legged buyer-payer structure of a swap, which was also a novelty for the exchange-trade market. Buyers receive the return profile of the referenced equity index and pay a negotiated spread over €STR.

Implied equity repo rates determine that spread. The ability to trade implied equity repo has been a crucial driver of TRFs' success, with firms able to gain exposure to the full balance sheet cost of holding physical equity.

As with the TRS, TRF buyers can gain full exposure to an equity index from the EURO STOXX®, FTSE or MSCI index suite. Traders gain exposure to price and dividend exposure through the product, as well as the implied equity repo rate.

MSCI Total Return Futures – An alternative to Total Return Swaps

	Classic Index Futures	Total Return Swaps	Total Return Futures
Exchange listed	✓	–	✓
Liquidity	✓	✓	✓
Transparency	✓	–	✓
Fungible	✓	–	✓
Portfolio margining benefits	✓	–	✓
No counterparty risk	✓	–	✓
No specific valuation required by OTC counterparty	✓	–	✓
No quarterly roll risk	–	✓	✓
Lock in long-term financing	–	✓	✓

“The product works in a nuanced way, because it imagines the trader is sitting with a blank sheet and effectively buying the equivalent of a cash basket of stocks.

Stuart Heath
Director, Equity & Index Product Design, Eurex

“The product works in a nuanced way because it imagines the trader is sitting with a blank sheet in front of them and effectively buying the equivalent of a cash basket of stocks,” says Stuart Heath, Director, Equity & Index Product Design at Eurex.

“Of course, if you want to buy a load of stocks, you’ve got to pay for them, and therefore you’ve got to borrow the money to pay for them. That's how the TRF return profile works. The buyer receives the return on the equities but has to pay the borrowing costs for the cash payment.”

“So, the position underperforms the equity return by borrowing, which has become important with financing levels being quite high at the moment. Then, the trader can isolate the spread over the benchmark rate, which is a key input into pricing. It’s normally buried within the pricing structure of a regular future, but we make it transparent with this product.”

The TRF return profile contrasts with Net Total Return Classic Futures, which reinvest dividend payments into the index. This can present calculation challenges, especially in smaller indexes when a smaller dividend distribution has to be invested across the index. However, despite the greater ease of calculation that TRFs offer, both gross and net total return indexes typically outperform their price equivalents.

This comes on top of the other benefits of a listed environment that futures offer to traders.

“With TRFs, you get the advantages of a listed instrument with the same principles as the total return swap, but also all the advantages of the classic future, which is a listed instrument that has on-screen prices and reduced counterparty risk,” says Antoine Deix, Head of Dividend and Repo Solutions at BNP Paribas.

“It is the best of both listed and OTC worlds. In addition, TRFs offer investors long term maturities, when you can reduce roll risk, reduce dividend risk and lock financing terms in for a longer period.”

“With TRFs, you get the advantages of a listed instrument with the same principles as the total return swap, but also all the advantages of the classic future.

Antoine Deix
Head of Dividend and Repo Solutions, BNP Paribas

> **“Buy-side firms with a beta allocation, can use TRFs to lock up the implied equity repo rate for a much longer duration than with normal futures.**

Lorenzo Longo
Equity Portfolio Manager, Kedalion Capital

The ability to negotiate the financing rate has been fundamental to TRFs’ popularity with traders, who can use the feature to lock low rates into a one or two-year position. This makes TRFs a true beta replacement tool that real money investors, particularly, have increasingly used to reduce their roll risk.

“Buy-side firms with a beta allocation, whichever direction it might be for, can use TRFs to lock up the implied equity repo rate for a much longer duration than with normal futures,” says Lorenzo Longo, Equity Portfolio Manager at Kedalion Capital. “This rewards sophisticated investors who can lock in attractive funding rates for a long period of time and mitigate the sometimes volatile cost of leverage.”

However, the crossover from OTC to listed instrument has not resulted in a like-for-like replication of the TRS. Certain adjustments had to be made to make the TRF tradable on exchange that differentiated it from the TRS.

These include a daily resetting function in the TRF, which was introduced because exchanges need to calculate daily variation margin requirements. The TRS structure traditionally allowed for resetting on a much more customized basis. This permitted swap traders to hold their positions with unrealized PnL, which can lower the trade’s margin burden, depending on the terms of the bilateral agreement. While this is not possible in an exchange-traded marketplace, the greater flexibility OTC markets had offered in this regard has diminished since UMR has been phased in. Now, swap users – from dealers to hedge funds – must hold collateral against the risk of their position. This has reduced the relative burden of exchange margin requirements, where traders have to realize PnL daily.

TRFs are also standardized, with set expiry dates, unlike TRS, where contract maturity is customized according to agreement between counterparties. Standardization has been a major motivation for many OTC market participants to transition to listed markets, even before UMR started to kick in, as it creates fungibility and the associated liquidity benefits for traders in the instrument.

“During periods of volatility, when trading volumes have spiked, buy-side clients have been able to trade the curve at a much greater speed than when trading swaps,” says Elena Marchidann, Vice President, Equity & Index Product Design at Eurex.

“It was so much easier to just trade a TRF with whoever was available. They didn”t need to set up new ISDA agreements, for example, making it much easier to capitalize on the market dislocations. That was effectively enabled by fungibility.”

Other standardization features include Eurex taking on the role of calculation agent for the product. These fully transparent calculations allow for the TRF’s conversion from a spread traded product to an index point one, thus allowing for its transferability from an OTC-like product to a cleared, listed one.

> **During periods of volatility, buy-side clients have been able to trade the curve at a much greater speed than when trading swaps.**

Elena Marchidann
Vice President, Equity & Index Product Design, Eurex

The evolution of EURO STOXX® and FTSE markets

The characteristics of TRFs have been utilized for an expanding range of trading strategies. In recent years, these use cases for the product have deepened as new participants from the buy-side have entered the market. Initially, new entrants were mainly specialist hedge funds trading against the hedging flow of EURO STOXX 50® structured product issuance.

Over time, more participants entered the market. Multi-strategy hedge funds, asset managers, pension funds, and sovereign wealth funds are all now trading TRFs, and a broader range of new trading strategies for the product has emerged and evolved. This expanded further with the introduction of new indices in recent years. While the structured product market initially fueled the adoption of EURO STOXX 50® TRFs, the FTSE 100 TRFs introduction, in contrast, was mainly a reaction to the demand for hedging and the absence of a functional underlying market.

Before Eurex listed its first FTSE 100 TRFs, market participants could only create exposure in a complicated three-legged trade requiring options and synthetic forwards. Due to the lesser weight of structure product issuance in FTSE 100 TRFs, this market typically has a flatter curve structure than the EURO STOXX 50® TRF market.

That does not mean that the EURO STOXX 50® TRF market stood still. It is still the largest TRF segment, mainly driven in recent years by investors taking advantage of distortions caused by the aforementioned structured product issuance. Autocallables have historically dominated this issuance, but capital-guarantee structured products also contributed to notable TRF flow in recent years.

Most structured products provide long market exposure to retail investors. Consequently, banks face short forward exposure that must be hedged with long forward exposure, creating selling pressure on the repo rate. The growing diversity of market participation is evident in the rising demand for long futures. This demand is increasingly fueled by asset managers leveraging TRFs to adopt long positions on equity indexes while minimizing their roll risk.

> **“The shift away from OTC into the listed TRF has led to significant cost savings from a margining perspective.**

Nicole Gilbert
Executive Director, Equity Derivatives Trader, Goldman Sachs

One consequence of this pattern is the rise in calendar spread trading strategies that effectively isolate the repo parameter. The structural advantages of the exchange have supported the popularity of this trend.

“The shift away from OTC into the listed TRF has led to significant cost savings from a margining perspective,” says Nicole Gilbert, Executive Director, Equity Derivatives Trader at Goldman Sachs. “We have seen an uptick in liquidity for the quarterly expiries which provides another avenue to trade calendar spreads ahead of peak roll liquidity of the price return product.”

In calendar spread trades, investors typically sell a long-dated TRF while buying a short-dated one. This eliminates exposure to equity, dividend and rates risk, isolating a long financing spread on the short-term contract and a short financing spread on the long-term contract.

With this position set, the trader can take advantage of the downward slope that is typical of the EURO STOXX 50® TRF curve structure, earning positive carry from the trade. Investors also benefit from the rolldown effect, which generates positive PnL as the position moves in time with the shortening duration of the long-dated TRF.

“We have seen a lot of interest in executing calendar spread trades with TRFs,” says Deix. “A major attraction for doing this has been to monetize moments of stress into the market, when short-term financing moves lower and long-term financing moves higher, creating a very interesting level to enter into a carry trade using TRFs.”

More broadly, the EURO STOXX 50® TRF market has benefited from the increasing diversity of its market participants.

Rise of relative value

More recently, hedge funds have started to use TRFs in relative value trades – using TRFs based on different regional indices to trade on the difference in funding rates between different jurisdictions. Hedge funds have been the primary drivers of these trades, but banks have also participated, using the strategy to hedge ETF exposure.

"TRF positioning is either a reflection of where you expect the roll to settle in forthcoming quarters or a synthetic way to have balance sheet," says Yanis Escudero, head of Delta One Flow Trading at BNP Paribas. "Using a TRF calendar spread means that you can price the balance sheet value for a certain asset, such as US or European stocks."

"With the relative value trade, market participants are assessing the cost of balance sheet across regions and selling US exposure because it is too expensive in terms of funding, while buying Europe exposure, for example."

This not only represents the broadening range of use cases for TRFs but also the expansion beyond a traditionally local focus to a more global one. Instead of concentrating on the curve for a regional index, more market participants are spread trading in the TRF market with a global outlook.

Another reflection of the increasingly global structure of the TRF market has been Eurex's launch of MSCI TRFs in March 2024. Reflecting the increasing desire from hedge funds and asset managers to trade global exposures, these net total return futures were launched as a listed alternative to total return swaps and a hedging vehicle for dividend risk.

"Given the costs associated with OTC derivatives, we think the MSCI TRF will generate cost savings from a margining perspective," says Gilbert.

"TRF positioning is either a reflection of where you expect the roll to settle in forth-coming quarters or a synthetic way to have balance sheet.

Yanis Escudero
Head of Delta One Flow Trading, BNP Paribas

Conclusion

Within nine years, the TRF product expanded well beyond its origins as a popular balance sheet management tool for sell-side firms. Since its launch in 2016, many buy-side firms recognized the product's advantages as a beta replacement tool and a vehicle for trading implied equity repo. This has initiated a virtuous cycle, with new market entrants bringing fresh perspectives on how to trade TRFs and extract profits.

Underpinning this trajectory are the fundamental offerings of the exchange-traded format – transparency, standardization, and margin efficiency. These advantages will increase as the demand for greater workflow efficiency and automation grows across the derivatives industry. In terms of margin, Eurex has a continuous mission to maximize cost savings in this area, with sell-side desks already reporting significant efficiencies.

As the exchange that innovated and brought TRFs to market, Eurex accompanied this evolution at every step of its development. With a keen understanding of market demand and how products fit into the global trading ecosystem, we look forward to supporting the further growth of TRFs in the years to come.

About Eurex

Eurex stands for the leading European derivatives exchange and – with Eurex Clearing – one of the leading central counterparties globally. Being architects of trusted markets characterized by market liquidity, efficiency and integrity, we provide our customers with innovative solutions to seamlessly manage risk. On the trading side, we mastermind the most efficient derivatives landscape by pioneering ingenious products and infrastructures as well as by building 'smart' into technology – offering a global product range, operating the most liquid fixed income markets in Europe and featuring open and low-cost electronic access. As central counterparty, Eurex Clearing builds trusted relationships with and amongst market participants, enabling effective risk management and delivering high efficiencies to clients.

Architects of trusted markets

Contact

EQUITY & INDEX SALES AMERICA
Damien Zinck
T +1-312-544-10 51
damien.zinck@eurex.com

EQUITY & INDEX PRODUCT DESIGN
Stuart Heath
T +44-20-78 62-72 98
stuart.heath@deutsche-boerse.com

Elena Marchidann
T +44-20-78 62-72 65
elena.marchidann@eurex.com

Published by
Eurex Frankfurt AG
Mergenthalerallee 61
65760 Eschborn
Germany

www.eurex.com

ARBN Number
Eurex Frankfurt AG ARBN 100 999 764

Find out more online at
www.eurex.com