EUREX Architects of trusted markets

Equity and Basket Total Return Futures: Bringing futurization to equity financing

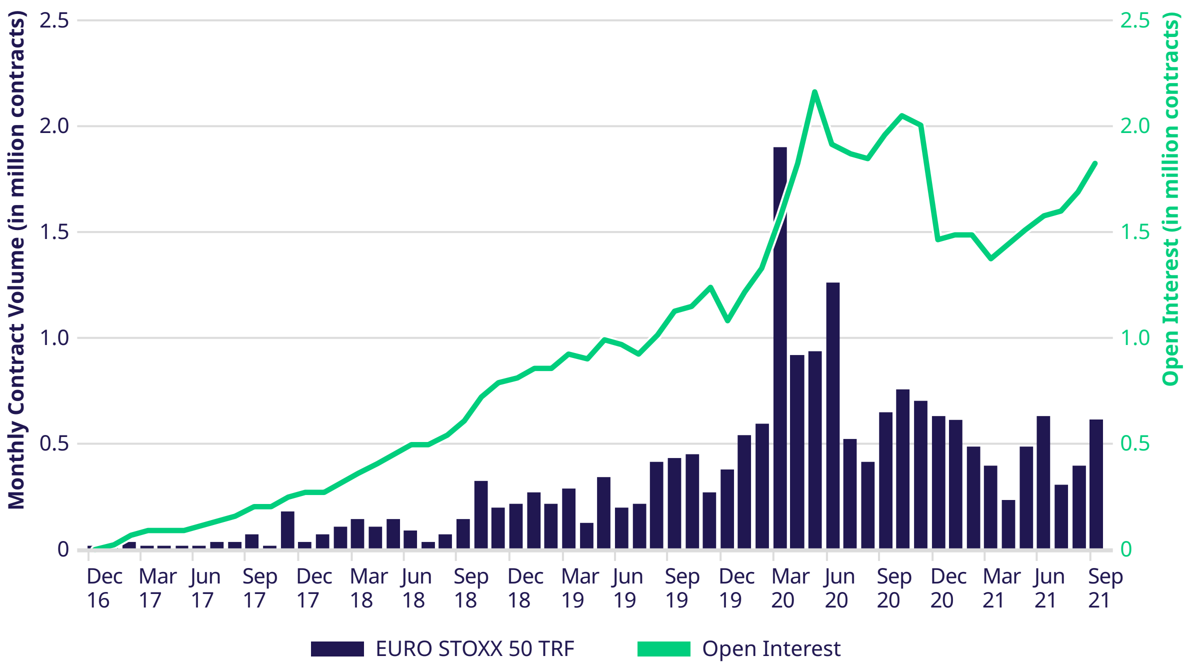
ETRFs and BTRFs

Equity Total Return Futures (ETRF) and Basket Total Return Futures (BTRF) were developed by Eurex in 2019 to provide a collateral-efficient replication of the popular OTC Equity Total Return Swap and to build on the success of Eurex's Total Return Futures portfolio.

As the capital cost of trading in the OTC markets increases, products that offer the benefits of being traded on exchange while replicating the economics of OTC world are increasingly in demand from financial institutions.

Eurex launched Total Return Futures (TRFs) in 2016 creating the first exchange-traded TRF product on the EURO STOXX 50 Index. TRFs replicate the economic performance of a Total Returns Swap, but in a cleared, exchange-traded environment. In March, Eurex complemented the existing Eurex's TRFs suite on three new indices – FTSE 100 Index, EURO STOXX Banks Index and EURO STOXX Select Dividend 30 Index as it seeks to meet growing demand for the TRF products. Today, nearly 50 per cent of EURO STOXX 50 Index OTC market migrated to the Eurex TRF and open interest stands at over EUR 70bn.

TRF – Evolution of Volume and Open Interest



ETRFs represent the next phase of the product build from Eurex and are aimed at the equity financing market, which encompasses repo, swaps and securities lending.

While TRFs allow investors to trade the total returns of an index, ETRFs offer exposure to individual equities. ETRFs can be traded in a basket (BTRF) as a customized packages of one or more ETRFs allowing market participants to construct and modify a basket of positions in a set of underlying reference equities over the lifetime of the trade.

Eurex built the products in close co-operation with BNP Paribas and Goldman Sachs.

Enrico Vlaic, a senior equity finance trader at BNP Paribas, explains: "The motivation to launch ETRFs and BTRFs came off the back of the success in the TRF. We saw that volume was migrating from the OTC market to the listed market and we thought that could be replicated in the financing world," he says.

"The introduction of initial margin on OTC derivatives was also a major factor. Clearing through a CCP allows you to margin a position across others and to trade around your positions to optimize margin, which is very difficult to achieve in the OTC world."

Lorenzo Pasquale Longo, Managing Director, Forwards Trading, at Goldman Sachs adds: "BTRFs and ETRFs are a remarkable milestone in the Equity Finance world, as they introduce a listed and standardized alternative in a market that is still largely traded OTC.

"The ability to optimize margin will only grow in importance as margin rules on non-cleared swaps are phased in to more and more counter-parts over time. Moreover, as we have seen with TRF, the standardized nature of the listed format will open this important portion of the market to players not active in the OTC space, and that can only be beneficial to liquidity and pricing."

What are the benefits of ETRFs and BTRFs?

ETRFs and BTRFs bring several benefits over trading in the OTC markets

1. **Futurization** of the instruments provides a listed alternative to the OTC instruments.
2. **Capital requirements** under UMR, SA-CCR and other regulations are significantly lowered when trading in listed products.
3. **Central clearing** reduces counterparty risk.
4. **Cross-margining** at Eurex Clearing across correlated products brings down the costs of margining.
5. **Standardization** is achieved through the establishment of common methodologies.
6. **Substitution** is a simple process that does not require a new trade or Basket ID.
7. **Increasing liquidity** in less liquid stocks where equity financing is currently hard to get.

The continued introduction of the Uncleared Margin Rules, which have been phased in from 2016, significantly increase the capital and collateral requirements for firms trading bilaterally in the OTC market.

This is resulting in an increased focus on the efficiency of collateral usage and a shift to trading listed products where alternatives to the OTC market are available.

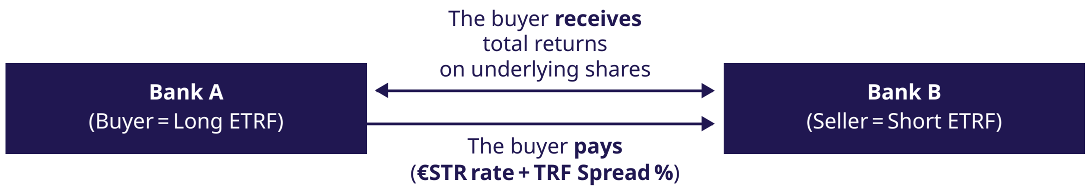
The ETRF/BRTFs fit this mold creating a means of trading an OTC financing position in a listed format, falling outside the scope of the UMR and offering cross margining at Eurex Clearing.

Futurization also brings greater standardization to the products. In the OTC market, swaps are tailor-made to specific trades, which brings some benefits in terms of customizability but limits the scalability and ability to cross-margin the positions.

In addition, the development of listed products has created standards around substitution methodologies. Currently in the OTC world, there are not universally accepted substitution rights, which often have to be negotiated for every confirmation.

There is also variation across the OTC market as to how the rebalancing process is conducted, something which is clarified and standardized by the Eurex BTRF.

How are ETRFs designed?



ETRFs are total return futures that replicate the payoff of an equity swap based on the underlying shares issued by a company included in an eligible index.

The products, which build on the EURO STOXX 50 TRF launched in 2016, follow the OTC total return swap structure being quoted on an annualized spread in basis points representing the premium added to an overnight funding benchmark to determine the financing cost.

The holder of the long position receives the distribution associated with holding the cash equity, against which they will pay the financing cost associated with the purchase.

The financing cost is made up of two parts:

(1) The Euro short-term rate (€STR) as the overnight funding benchmark and

(2) the traded TRF Spread which represents the additional spread required by the seller.

The TRF Spread in basis points is converted by Eurex into a futures price for the ETRF, which is expressed as a price per share. Any dividends as well as overnight funding costs will accrue into the futures price daily to reflect the total returns. Variation margin is paid daily on this change in value.

Traded futures price is determined on any trading day (t) as follows:

ETRF Futures Price (t) = Underlying Equity Price (t) + Traded Basis (t) + Accrued Dividends (t) – Accrued Funding (t)

Traded Basis (t) = Underlying Equity Price (t) × (Traded TRF Spread (t)) × (Days to Maturity (t) / 360)
Underlying Equity Price = Equity Price at Close or a custom defined Equity Price dependent on trade type

How do BTRFs work?

Basket Trades of ETRFs are a customized package of one or more ETRFs traded with the same maturity at the same TRF Spread.

BTRFs are constructed by traders within a set of parameters governing the eligible Buckets, number of underlying stocks, notional amount of each stock, market side and the agreed Profile.

The initial buyer of the BTRF has the right to substitute any ETRF in that basket with another eligible ETRF from the same Bucket at any time and both parties have the right to substitute in case the requirements of the Profile are breached.

What are Buckets and Profiles?

Buckets are used for allocation of individual ETRFs based on the below criteria

Bucket ID	Group description (for information only)		
B1 B2	AA Country Rating AA Country Rating	Not Subject to FTT Not Subject to FTT	Large Cap Mid Cap
B3 B4	AA Country Rating AA Country Rating	Subject to FTT Subject to FTT	Large Cap Mid Cap
B5 B6	Single A Country Rating Single A Country Rating	Not Subject to FTT Not Subject to FTT	Large Cap Mid Cap
B7 B8	Single A Country Rating Single A Country Rating	Subject to FTT Subject to FTT	Large Cap Mid Cap

Buckets and Profiles define the sets and subsets of eligible collateral for each basket across three parameters: the rating of the country of issuance, whether or not the local jurisdiction subjects the share to a special tax (i.e. financial transaction tax, stamp duty or turnover tax) and whether it is a large-cap or mid-cap equity.

When trading an ETRF within a basket, the buyer has the right of substitution within the same Bucket (or Buckets) selected at the point of the initial trade. This is enforced by the T7 trading system.

Profiles are an overlay to the Buckets and determine the acceptable criteria for the ETRFs both at point of the initial trade and for any substitutions.

The Profiles set the parameters for eligibility of Buckets for the basket, the individual Bucket notional value limitations for the underlying shares, ETRFs and basket as a whole, the notional average daily volume as well limitations on exposures of specific ETRFs and sectors within the basket.

Both Buckets and Profiles are agreed between the two counterparties in the initial trade negotiation. Substitution trades must ensure that the resulting basket conforms to the initially agreed Bucket(s) for that trade and to be enforceable must also adhere to the initially agreed Profile.

How do ETRFs and BTRFs trade and clear?

Standalone ETRFs trade in the order-book and trade at the closing price. BTRFs can trade at close or trade at market but must be entered into the T7 trading system as a block trade via the specially designed Trade Entry Service for BTRFs.

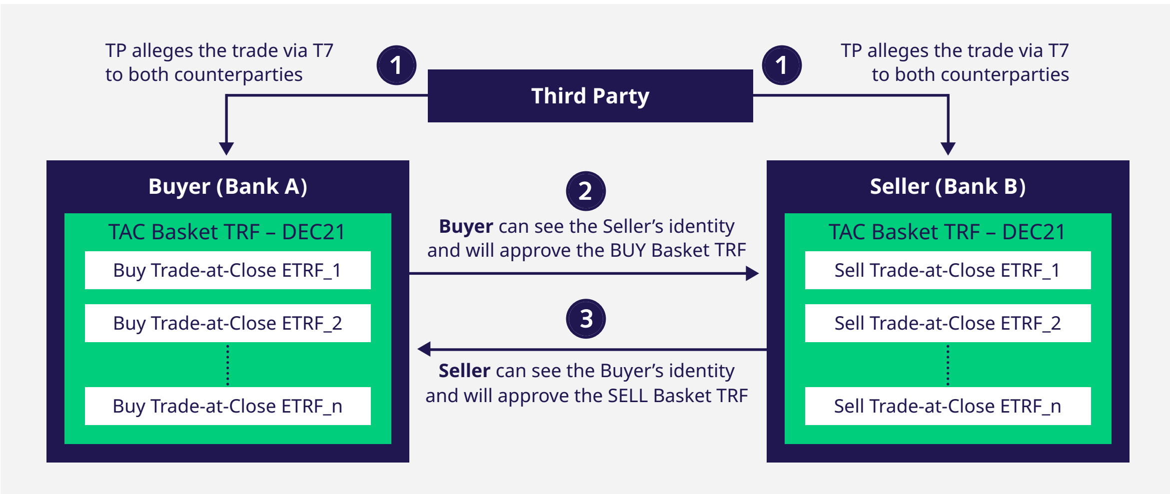
The individual ETRFs that comprise the BTRF are entered as a package into the T7 GUI or via the ETI interface. At trade entry, the trader selects the relevant Bucket/s and the eligible ETRFs that have been mapped to that respective Bucket/s. All ETRFs must have the same expiry and TRF Spread in basis points at entry. The agreed Profile is also allocated to the BTRF at this point.

For each new BTRF, the T7 system will generate a unique basket ID that will remain constant throughout the lifecycle of trade regardless of any subsequent substitutions or increases or decreases.

For direct negotiations, the buyer submits the trade to the seller who approves the trade. For third-party trades, such as those involving an IDB, the third-party alleges the trade via T7 to both counterparties. The buyers and sellers will see each other's identity and the details of the trade before approval.

Direct negotiation:

Third-party trades:



Once approved the trade is passed to the Eurex Clearing's C7 system with the unique basket ID. C7 then risk manages the positions utilizing portfolio margining offsets between the ETRF/BTRF positions and other products included in the equity liquidation group. The basket ID is then referenced in the clearing and billing reports.

ETRFs are designed to replicate the OTC markets and replicate the quoting conventions and performance but in a centrally cleared and exchange traded environment. The basket functionality also offers users the flexibility that OTC products bring.

The products are expected to evolve in conjunction with the OTC market, providing a lower cost alternative to many of the trades that are currently traded bilaterally.

Where is the market today?

In December 2020, BNP Paribas and Goldman Sachs conducted the first BTRF trade and a total notional of almost EUR 4bn has been traded to date.

Volumes are expected to grow as more banks develop the workflows to trade BTRFs. For banks, there is a relatively significant amount of operational work to do to get their systems ready to trade and clear the product.

Depending on a bank's post-trade ecosystem, adding the functionality to clear the Basket ID can be a large operational and technology challenge. In addition, that field has to be capable of being passed through from execution to reporting. To trade BTRFs, financing desks need to build new workflows around their execution methodologies to connect to the T7 GUI.

"The biggest challenge has been to streamline the workflow from agreement to matching to booking in with risk. It is not that the product is cumbersome, it is just a new product that inevitably requires additional workflows," says Ken-Ji Low, a trader at Goldman Sachs, which also worked closely with Eurex on the development of the products.

The investment in the workflows, however, brings significant benefits to banks bringing greater operational efficiencies, transparency and clear pricing and simplicity to trade BTRFs in the list product.

Interest in ETRFs and BTRFs is growing

Low says: "It is a new product for banks and their financing desks and it requires some build, both operationally and from a risk management perspective. However, we are definitely seeing interest picking up," says Low.

BTRFs and ETRFs are in the first instance an inter-dealer product that the large prime brokers and derivatives houses will use. They are particularly well-suited to banks that have well-integrated financing and delta 1 desks. In addition, smaller regional banks with large financing operations that have traditionally used ISDA-based financing will benefit from the products.

"The challenge today is to bring more participants to the market," says Vlaic. "There are three banks now that can now participate and other firms are working towards it. Growth at this early stage will go hand in hand with the number of participants.

"Then the growth will come from bringing more diverse participants to the market. For example, funds that trade the spread between the TRF and its components or those that buy and sell repo in different underlyings will find benefits in trading the ETRFs."

There are also beneficial use cases for market makers and other firms with large inventories of equities on their books.

"We have a large book of single stock options that are hedged with cash equities which we need to manage efficiently," says Paraic Rogan, Volatility Trader and Market Structure Specialist at Susquehanna International Group.

"A product that is tailored to offset those risks with margin offsets in the same book and same place makes sense. There is a lot about BTRFs that fits our requirements – the substitution rights, the elimination of dividend risk and the cross margining are all very attractive."

Several banks are already in late-stage development and it is expected that, over the next six months, more firms will come on board.

"Being a listed product opens up the ability to trade with more counterparties and to expand the client base to firms that don't trade in the OTC markets," says Vlaic. "Also the standardization that the listed contract achieves will bring more liquidity to the market."

Eurex is currently actively promoting the products and their benefits to banks to support development initiatives and help to build the case for onboarding the products.

"Eurex is listening to the needs of dealers to develop the product," says Low of Goldman Sachs.

Several banks are already in late-stage development and it is expected that, over the next six months, more firms will come on board.

What's next in the product roll-out?

Eurex is currently working on expanding more underlyings to the roster of products that can be traded as an ETRF. Currently ETRFs are available for trading on more than 250 constituents of the EURO STOXX indices.

Expanding the set of maturities available, allowing flex trades on non-standard maturities and building out the set of underlying names and currencies is key to meeting the needs of the market and the potential of the products.

Eurex is looking at a range of areas for product development with non-Euro stocks and ETFs in strong demand from the market.

There is also significant scope for ETRFs to increase the sophistication of equity financing. Because of the standardization of the product and maturities on offer, BTRFs users can trade calendars and forward dated risk, with some forward forwards already trading. This is not widely feasible in the OTC world currently as it is cumbersome to book forward dating swaps.

Vlaic sees the potential for significant growth. "Right now, the most important thing is for more participants to come to the market. The next step for Eurex should be to expand the product geographically.

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