August 2016

Quanto Futures on EURO STOXX® 50

Eurex has launched Quanto Futures on the EURO STOXX 50® in USD (FESQ) in March 2016. The new product is targeted at investors seeking to participate in the performance of the index without being subject to currency fluctuations between euro and U.S. Dollar. It can also be used for hedging structured products flows and to hedge short-dated cross-gamma risks in other products. Quanto Futures are exchange-traded and centrally cleared, providing independent mark-to-market valuation and transparency.

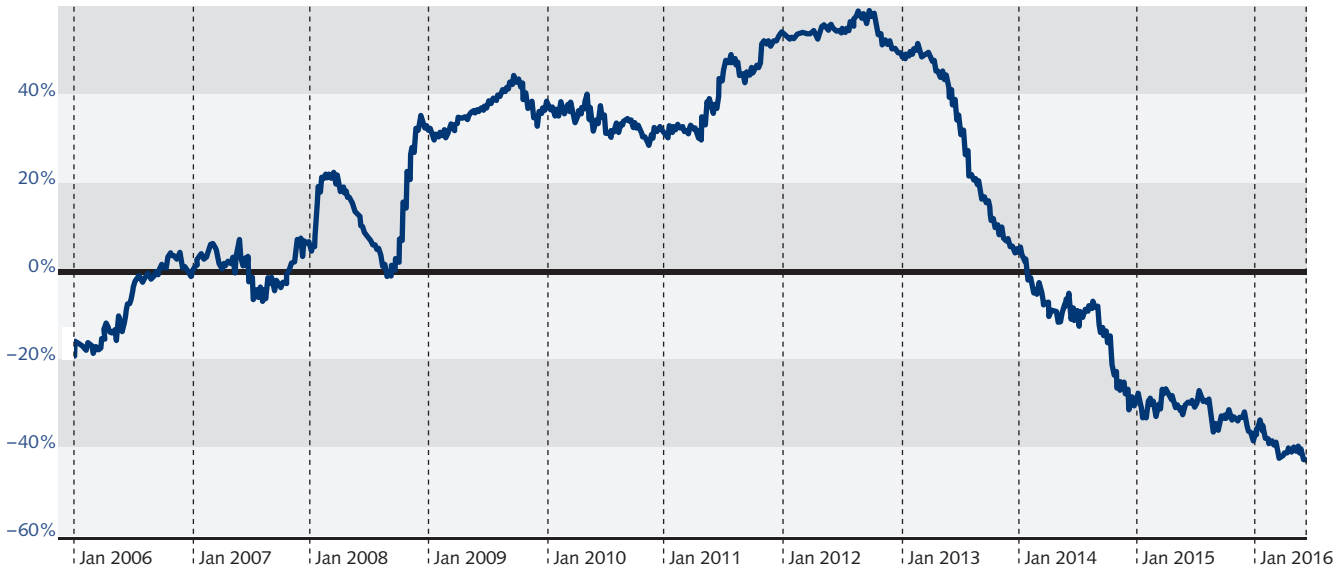
Currency risk matters

The market volatility following the U.K. referendum brought yet again into the foreground the importance of FX risk. Investors who don't hedge FX exposure can suffer heavily. The EURO STOXX 50® Index has gained 5 percent from December 2013 to December 2015, whereas the same index calculated in USD suffered a loss of approximately 17 percent during this period. This means that for USD investors, the positive equity performance was erased by the weakness of the euro. Quantitative easing programmes, as observed in Japan, the U.S. and most recently in Europe have exacerbated currency movements. Thus, there is a growing demand for products, which separate the performance of equities from the FX movements, such as Quanto Futures.

Quanto Futures

A Quanto product provides the performance of an underlying expressed in a foreign currency. Clients can profit from an embedded currency-hedge received via Quanto products, whereas the issuers of e.g. structured Quanto products need to hedge those risks. The fair value of a Quanto Future depends on the underlying – here the EURO STOXX 50® – the implied volatility of the underlying (measured by VSTOXX®), the implied volatility of the EUR-USD pair (taken from currency options) and the correlation of the equity and the FX moves.

This correlation has changed quite drastically over the last few years, as can be seen in the following graph. Since 2009 the EURO STOXX 50® has had a positive performance for most of the time and the euro was rather stable against the Dollar. In 2014, the U.S. Fed commenced the phase out of the QE3 program and with that the Dollar gained markedly against the euro.



The Futures are set up in a way that they are settling into the same level as the standard EURO STOXX 50® Futures (FESX). The only difference is that for every long position in the Quanto Futures one receives 10 USD per index point, instead of 10 EUR in the case of FESX. The spread between the two Futures therefore converges to zero at expiry.

A comparison of the contract specs for FESQ and FESX is shown here:

	EURO STOXX 50® Index Futures (FESX)	EURO STOXX 50® Quanto Futures (FESQ)
Underlying	EURO STOXX 50® Index	
Contract value	EUR 10 per index point	USD 10 per index point
Price quotation	In points with one decimal place	
Minimum price change	1 point (equivalent to EUR 10)	1 point (equivalent to USD 10)
Contract months	**Standard – up to 9 months**: the three nearest quarterly months of the March, June, September and December cycle	
Settlement	Cash settlement, payable on the first exchange day following the final settlement day.	
Daily settlement price	Datermined from the volume-weighted average of the prices of all transactions during the minute before 17:30 CET, provided that more than five trades are transacted within this period.	
Expiration day and final settlement day	Third Friday of each expireation month if this is an exchange day; otherwise the exchange day immediately preceding that day. Close of trading in the maturing futures on the last trading day is at 12:00 CET.	
Final settlement price	The final settlement price is established by Eurex on the final settlement day and is based on the average of the respective STOXX® index values calculated between 11:50 and 12:00 CET.	
Trading hours	07:50–22:00 CET (01:50 a.m.–04:00 p.m. ET)	
Trading fees	EUR 0.30 (order book) EUR 0.45 (off-book)	USD 0.50 (order book) USD 0.75 (off-book)
Minimum Block Trade size	1,000	

The Quanto market

The setup of a separate Quanto Future allows for a different purpose: Investors, who want to get the European equity exposure without the EUR risk can trade the outright Quanto Futures. On the other hand, the banks or other market participants, who only want to trade the Quanto spread, i.e. the difference between FESQ and FESX trade two legs against each other. Indeed, for most of the trades done in the Quanto Futures, a second trade in the standard Futures in the same expiry can be observed. And as the Quanto spread becomes bigger with longer expiries, the bulk of trading activity took place in the back months.

The majority of Quanto spread trades are currently done OTC via forwards, often going out to two or three years. It is a rather concentrated market and trades are done rather infrequently, but in large sizes of EUR 100 million or more. Counterparties include asset managers – primarily those outside the Eurozone, but also hedge funds. This is the reason, why a centrally cleared solution would be preferred by a number of market participants, as it avoids counterparty risk.

Some market participants would like to see the Quanto spread being traded separately in an order book with a smaller tick size, as they are used to trade it OTC in fractions of a basis point. Eurex allows this indirectly: depending on the size of the trade, one can produce almost every price by combining Block Trades with different sizes and prices.

Margin offsets

Quanto Futures are evaluated under Prisma, the portfolio margining system of Eurex. With this framework, diversification effects are calculated for the determination of margin levels. If the Quanto spread is traded by a long position in FESQ and a short position in FESX against it, the margin levels look like this (based on May 2016 data):

Margin for FESX (1 contract):	EUR 3,076
Margin for FESQ (1 contract):	EUR 4,097
Margin for FESX long & FESQ short:	EUR 467

Market Makers

Four Market Makers are currently quoting the FESQ in the order book. Several investment banks, including J.P. Morgan are set up to facilitate Block Trades.

Company	Member ID	Contact	Phone number
DRW Investments (UK) Ltd.	LOTLO	Chad Miller	+44-20-7031-1369
J.P. Morgan	JPMFR	Rachid Alaoui	+44-20-7779-2454
Jump Trading	JUMLO	Peter Deaner	+44-20-7382-4374
Spire Europe	SPELO	Alan McGroarty	+44-20-7809-1995

The front month is constantly quoted in spread of only 1 tick (= 1 index point wide), and the spread in the back month is typically around 10 ticks. The Quanto spread increases exponentially with time.

The Quanto Futures can be seen on Bloomberg under **VLA Index** and on Thomson Reuters under **0#FESQ:**

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