

Subject: RE: DB FX trade idea: EURZAR-USDZAR correlation swap

From: Xavier Avila <[REDACTED]>

Date: Thu, 07 Dec 2017 16:10:16 -0500

To: "Paul Barrett ([REDACTED])" <[REDACTED]>

Cc: Stewart Oldfield <[REDACTED]>,

Joshua Shoshan <[REDACTED]>,

Martin Zeman <[REDACTED]>

Paul, I was with trading today. We have seen also good interest in TRY correlation from fast money, the numbers look as good or better than MXN, similar downside and higher upside vs average and min realized correlation.

Thanks

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From: Xavier Avila

Sent: Wednesday, December 06, 2017 5:47 PM

To: 'Paul Barrett ([REDACTED])' <[REDACTED]>

Cc: Stewart Oldfield <[REDACTED]>; Joshua Shoshan

<[REDACTED]>; Martin Zeman <[REDACTED]>

Subject: RE: DB FX trade idea: EURZAR-USDZAR correlation swap

Paul, the more we look at it, the better MXN compares vs ZAR.

Data in the file, since 2007 on a rolling daily 1yr realized correlation basis.

The strike is lower (78% vs 82.50%), but the diff of strike vs Max is lower (-9% vs -10%), vs Average is much better (14% vs 3%), and the historical max gain is double (67% vs 34%)

Also, MXN has only been 17% of the time above the strike vs 45% in ZAR.

Take a look and let us know if any questions. Thanks

From: Xavier Avila  
Sent: Wednesday, December 06, 2017 1:15 PM  
To: 'Paul Barrett ( [REDACTED] )' <[REDACTED]>  
Cc: Stewart Oldfield <[REDACTED]>; Joshua Shoshan <[REDACTED]>; Martin Zeman <[REDACTED]>  
Subject: RE: DB FX trade idea: EURZAR-USDZAR correlation swap

Paul, we tried to call you on the corr swap.

We spoke to trading and our bid-offer prices are below, a bit better than we were discussing in both currencies on the bid side.

I also attach the t/s in ZAR ready to go just in case you want to review.

Let's discuss when you have a sec. Thanks.

1y USDZAR-EURZAR Corrrswap in USD Payout – two-way is 82.5 / 88.5

1y USDMXN-EURMXN Corrrswap in USD Payout – two-way is 78 / 83.5

From: Xavier Avila  
Sent: Tuesday, December 05, 2017 4:17 PM  
To: 'Paul Barrett ( [REDACTED] )' <[REDACTED]>  
Cc: Stewart Oldfield <[REDACTED]>; Joshua Shoshan <[REDACTED]>; Martin Zeman <[REDACTED]>  
Subject: RE: DB FX trade idea: EURZAR-USDZAR correlation swap

Paul, file attached to look at calculations of implied and realized. Thanks

From: Xavier Avila  
Sent: Tuesday, December 05, 2017 11:17 AM  
To: 'Paul Barrett ( [REDACTED] )' <[REDACTED]>  
Cc: Stewart Oldfield <[REDACTED]>; Joshua Shoshan <[REDACTED]>; Martin Zeman <[REDACTED]>  
Subject: RE: DB FX trade idea: EURZAR-USDZAR correlation swap

From: Xavier Avila  
Sent: Friday, December 01, 2017 5:55 PM  
To: 'Paul Barrett ( [REDACTED] )' <[REDACTED]>  
Cc: Stewart Oldfield <[REDACTED]>; Joshua Shoshan <[REDACTED]>; Martin Zeman <[REDACTED]>  
Subject: RE: DB FX trade idea: EURZAR-USDZAR correlation swap

Paul, see below the note and analysis that Vimal put together. Attached also an indicative termsheet, where you can also see the mathematical Definition of Realized Correlation. Thanks and good weekend. Xavi

Following the call yesterday we have attached an example termsheet for a correlation swap.

We have also looked at 2 historical periods where USDZAR-EURZAR correlation realized at significantly lower levels, during 2010-2011 and 2015. Overlaying the realized correlation during those periods with USDZAR, EURZAR and EURUSD FX spot rates (each rebased to 1), we can see that lower realized

correlation is driven by significant trends and moves in EURUSD particularly relative to ZAR. This coincided with EURUSD realized volatility rising relative to ZAR realized volatility. In other words EURUSD spot became bigger driver compared to ZAR spot.

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{cid:image002.png@01D36AB5.2B5E6DF0}

From: Xavier Avila  
Sent: Friday, December 01, 2017 3:54 PM  
To: 'Paul Barrett ( [REDACTED] )' <[REDACTED]>  
Cc: Stewart Oldfield <[REDACTED]>; Joshua Shoshan <[REDACTED]>; Martin Zeman <[REDACTED]>  
Subject: RE: DB FX trade idea: EURZAR-USDZAR correlation swap

Paul, Vimal is working on the analysis and we'll send soon with the termsheet and mathematical calculations of implied and realized correlation.

See also below the same idea but in EURMXN-USDMXN, the strike is a bit lower but Vimal wanted to point out that the historical realized has gone also much lower than in the ZAR situation, so the potential for positive payout seems higher here than in ZAR.

Vimal also told me that we have seen clients do more the MXN and TRY crosses than the ZAR one, but typically MXN and TRY are currencies with more interest.

Talk soon. Thanks

## Trade Idea

- Sell 1y EURMXN-USDMXN correlation swap at 77%
- Sell 2y EURMXN-USDMXN correlation swap at 77%

## Rationale

- EURMXN-USDMXN implied correlations are close to the highest levels since 2007 (see graph 1)
- This has been driven by MXN implied volatilities trading at their highest levels relative to EURUSD volatility since the financial crisis, largely a result of concerns regarding the Mexico elections in 2018 (see graph 2)
- Since 2007 the highest 1y realized correlation is 87% and the lowest is 11%. For 2y the highest is 83% and the lowest is 44%. Whilst current levels of 1y and 2y realized correlations are close to their highest levels, 3m realized correlation has fallen from recent highs to now sit close to current strikes (see graphs 3 & 4)
- The correlation swap provides a limited loss way of fading elevated MXN volatilities and buying cheap EURUSD volatility, which could perform in the event of rising Italian election and Catalonia independence concerns

## Graphs

Graph 1: EURMXN-USDMXN implied correlation at highs

Graph 2: MXN vols elevated compared to EURUSD vols

Graph 3: 1y realized correlation vs. strike

Graph 4: 2y realized correlation vs. strike

Sources: Deutsche Bank, Bloomberg Finance  
L.P.

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From: Martin Zeman  
Sent: Tuesday, November 28, 2017 12:42 PM  
To: Paul Barrett ( [REDACTED] ) <[REDACTED]>  
Cc: Stewart Oldfield <[REDACTED]>; Xavier Avila  
<[REDACTED]>; Joshua Shoshan <[REDACTED]>; Liam  
Osullivan <[REDACTED]>  
Subject: DB FX trade idea: EURZAR-USDZAR correlation swap

Paul,

this could be an interesting trade on ZAR without really getting directional exposure to it. The payout is defined as a \$amount per point of correlation. So that means selling the correlation at 80% for \$10k per point of correlation is a max loss of \$200k.

Let me know if you'd like to discuss.

Martin

#### Trade Idea

- Sell 6m EURZAR-USDZAR correlation swap at 80% (USD payout)
- Sell 1y EURZAR-USDZAR correlation swap at 80.5% (USD payout)

#### Rationale

- EURZAR-USDZAR implied correlations are close to the highest levels since 2007 (see graph 1)
- This has been driven by ZAR implied volatilities trading at their highest levels relative to EURUSD volatility since the financial crisis (see graph 2)
- Since 2007 the highest 6m realized correlation is 94% and the lowest is 41%. For 1y the highest is 93% and the lowest is 48%. Looking at shorter dated metrics, 3m realized correlation has fallen from recent highs to now sit close to current strikes (see graphs 3 & 4)
- The correlation swap provides a limited loss way of fading elevated ZAR volatilities and buying cheap EURUSD volatility, which could perform in the event of any Eurozone concerns such as the Italian election

#### Graphs

Graph 1: EURZAR-USDZAR implied correlation at highs

Graph 2: ZAR vols elevated compared to EURUSD vols

Graph 3: 6m realized correlation vs. strike

Graph 4: 1y realized correlation vs. strike

Sources: Deutsche Bank, Bloomberg Finance  
L.P.

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Disclaimer: <http://globalmarkets.db.com/new/content/3045.html>

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