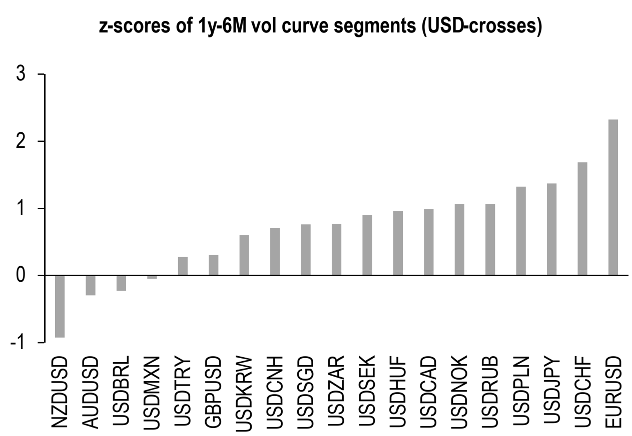
JPM FX - Derivatives Chartpack Notes

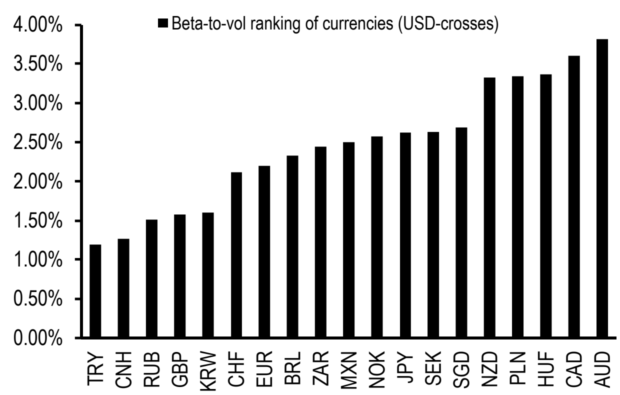
RV trade opportunities on FX vol curves

- NZD forward vol stands as cheap, a signal which is supported by the macro setup. We identify RV trade opportunities in fwd vol space: 6M6M FVAs between NZD/USD and AUD/USD or USD/KRW.
- NZD/USD vs USD/CNH forward volatilities screens attractively as well but requires an implementation via calendar spreads amid the lack of liquidity in the FVA space.
- Within EUR-crosses, the framework indicates a good value in EUR/HUF vs EUR/USD 6M6M FVAs and (spot) vol spread and/or corresponding vega RV.
- Alternatively, in the front end expiries we find 3M HUF – PLN x-vol spread to be a decay efficient expression for owning front end HUF vols. The spread currently shows ~2pts of vol carry and has had strong performance in the last three years.

RV trade opportunities on FX vol curves. Finding opportunities to buy forward volatilities could allow entering long FX vol positions at historically depressed levels while circumventing the negative Carry attributable to the even lower realised volatilities. We monitor 2y z-scores on the 1y-6m segment of vol curves as a way to spot opportunities, especially for playing RV on vol curves. The methodology does not introduce any conceptual difficulty but can easily allow spotting dislocated price actions. At the moment, the NZD/USD vol curve is the one appearing as the flattest, whereas EUR/USD, USD/CHF and USD/JPY ones are the steepest.

Exhibit 1. The vol curve on NZD/USD is the flattest, if measured over the past 2-yrs, whereas the EUR/USD one is the steepest (left-hand side). AUD, CAD, HUF, PLN and NZD are the best vol-buy signals based on the beta-to-vol analysis for USD-crosses (right-hand side).





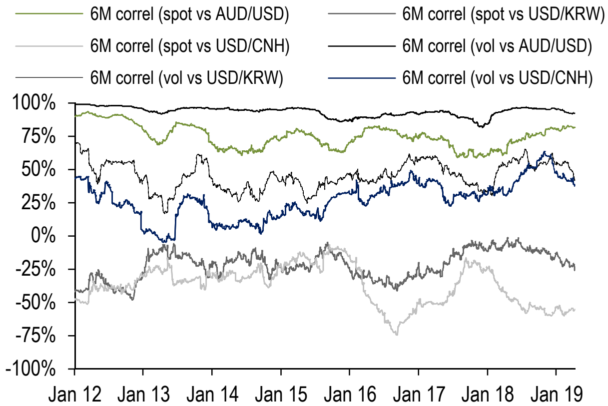
Source: J.P.Morgan

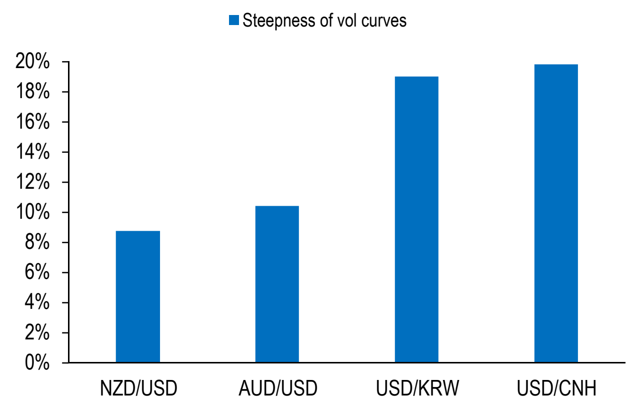
Depressed volatility levels are inducing a somehow artificial steepening of vol curves: by looking at longer horizons (8yr, since USD/CNH data became available), the current historical quantile of the 1y-6M segment of the vol curve for NZD is just around 44%, third lowest, and well behind that of most other currencies (for USD/CHF, we are near the top 84% quantile).

Buying (forward) vol on Kiwi is a view which resonates well with that of the FX strategy team (see for instance *The Antipodean Strategist*, Auld, 11 April), as they find that future rates cuts as implemented by RBNZ might not be fully priced-in by markets, which could weigh on the currency and trigger a higher volatility. Furthermore, long optionality on NZD is well supported by the earlier beta-to-vol analysis (*Beta-to-vol ratios – a bottom up approach for spotting RV vol trades*, Ravagli et al, 27 March) which finds AUD, CAD, HUF, PLN and NZD as the 5 top-buys. Putting aside currencies (USD-crosses) here where idiosyncratic factors at stake are currently strong, CNH, RUB, KRW, CHF and EUR are good sell opportunities.

So, the question is: how the signal above could be turned into a viable trade, ideally without taking an excessive directional view on spot and/or on the overall trend of FX vol levels? One possibility is to implement the NZD/USD vol curve trade on a standalone basis via delta-hedged calendar spread. For spotting good candidate pair trades, monitoring the time series of the spot and volatility correlations between the long and short legs is a useful exercise (Exhibit 2, left-hand chart). From this perspective, AUD/USD stands out as the ideal partner in a pair trade with NZD/USD, with elevated spot and volatility correlations. KRW and CNH are roughly equivalent, with the latter (former) offering a higher spot (volatility) correlation against NZD/USD.

Exhibit 2. 6M correlation between NZD/USD vs. AUD/USD, USD/KRW and USD/CNH spot and volatilities (left-side chart). (6M6M fwd vol- 6M spot vol)/6M spot vol for NZD/USD, AUD/USD, USD/KRW and USD/CNH (right-hand side).





Source: J.P.Morgan

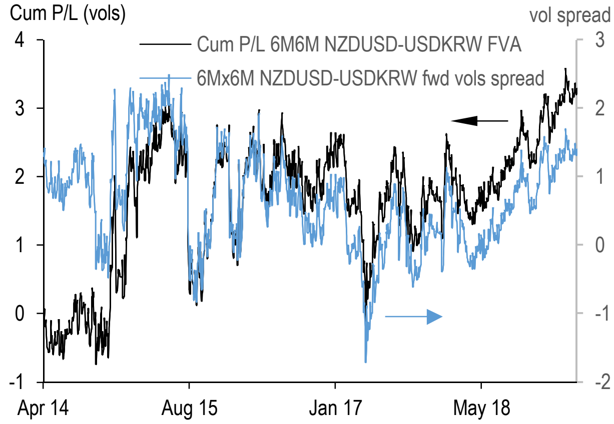
An additional piece information is contained in the actual slope of the vol curves, measured as (6M6M fwd vol- 6M vol)/6M vol. From the perspective of the slide on the vol curve, USD/CNH and USD/KRW largely outperform AUD/USD as a short-vol candidate. Ultimately, the choice of a second currency to be paired with NZD/USD might be up to macro considerations. The FX strategy team is generally bearish NZD, even vs AUD (*FX markets weekly*, Meggyesi, 5 April), which supports using the latter currency's vol as a funding leg. December 2019 targets for KRW expect just a 1% drop from current levels, under which scenario a short-vol trade could perform well, see also (*EM Asia Local Markets Compass*, Sandilya, 2 April). Selling (spot) vol outright on CHN might be overly sensitive to the resolution (or not) of the US/China trade dispute, however, doing so in a forward vol, pair trade format would (at least partially) insulate the trade to the latter aspect, thanks to the elevated correlation of CNH vs NZD. We have however to stress that FVAs don't trade on CNH, which could create the necessity of implementing the trade via long/short calendar spreads.

NZD/USD vol (for 3M, 25delta delta-hedged strangles) was shown to be the worst performer in the G10 space (USD-crosses) in terms of systematic vol selling (see for instance *Timing short-vol trades*, Ravagli et al, 5 March), making all pairings above well supported (in particular against USD/KRW and USD/CNH). The performance of the NZD/USD vs USD/KRW pair trade via FVAs has proved to be well correlated with the time series of the spread of FWD vols (Exhibit 3).

We recommend:

- *Buy 6M6M NZD/USD FVA @8.6/9.0 vols vs sell 6M6M USD/KRW FVA @6.6/7.2, equal vega notionals*
- *Sell 6M NZD/USD ATM straddle @7.65 vols choice / buy 1y NZD/USD ATM straddle @8.0/8.275 vols indic; buy 6M USD/CNH ATM straddle@4.275 vols choice / sell 1y USD/CNH ATM straddle @4.625/4.8 indic, both legs Gamma neutral*

Exhibit 3. Tight link between the P/L series and fwd vols spread for long 6M6M NZDUSD vs short 6M6M USDKRW.
Rolled into fresh trade every 3 months. No transaction cost.



Source: J.P.Morgan

EUR crosses: HUF x-vol is a buy - vulnerable to a bounce amid heightened uncertainty: A few weeks ago our analysts turned bearish HUF (*CE3 underpricing external risks, Christovova*, 25 February) prompting us to turn USD/HUF vol long (*Beta-over-vol ratios - a bottom-up approach for spotting RV vol trades*, Ravagli et al, March 27). Here we expand on that idea within the EUR complex.

Exhibit 4. EUR crosses: EUR/HUF vols are a decisive buy on both metrics.

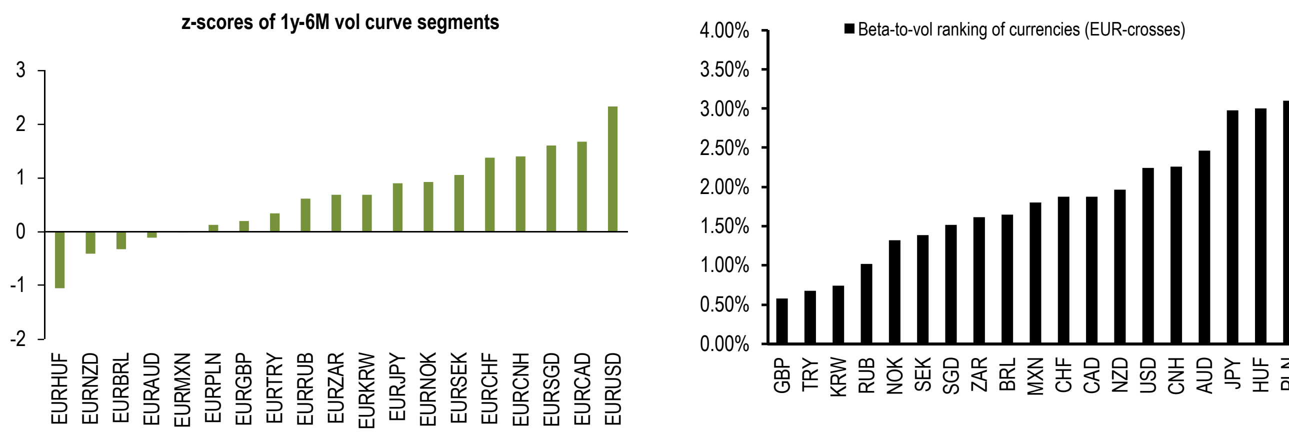


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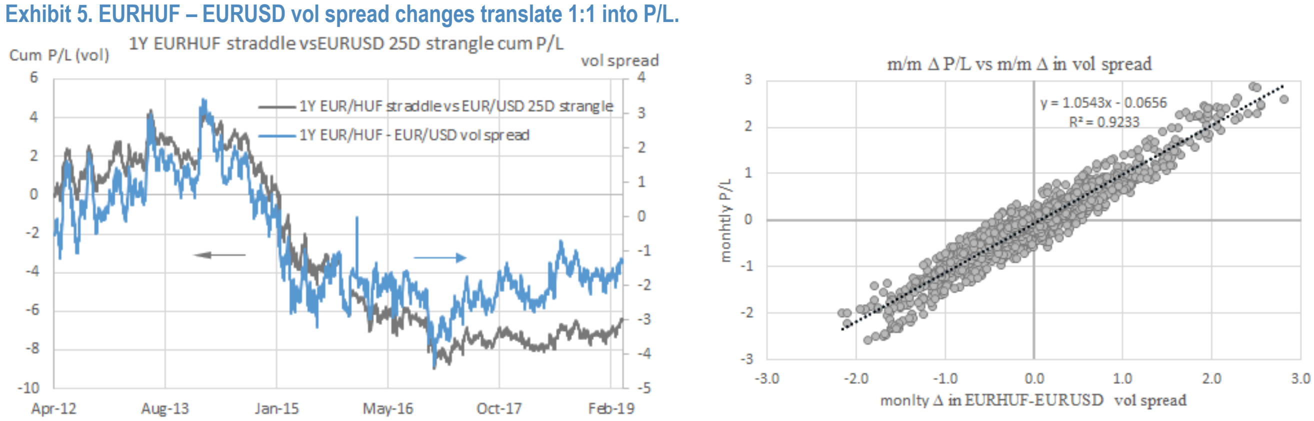
Exhibit 5. EURHUF – EURUSD vol spread changes translate 1:1 into P/L.



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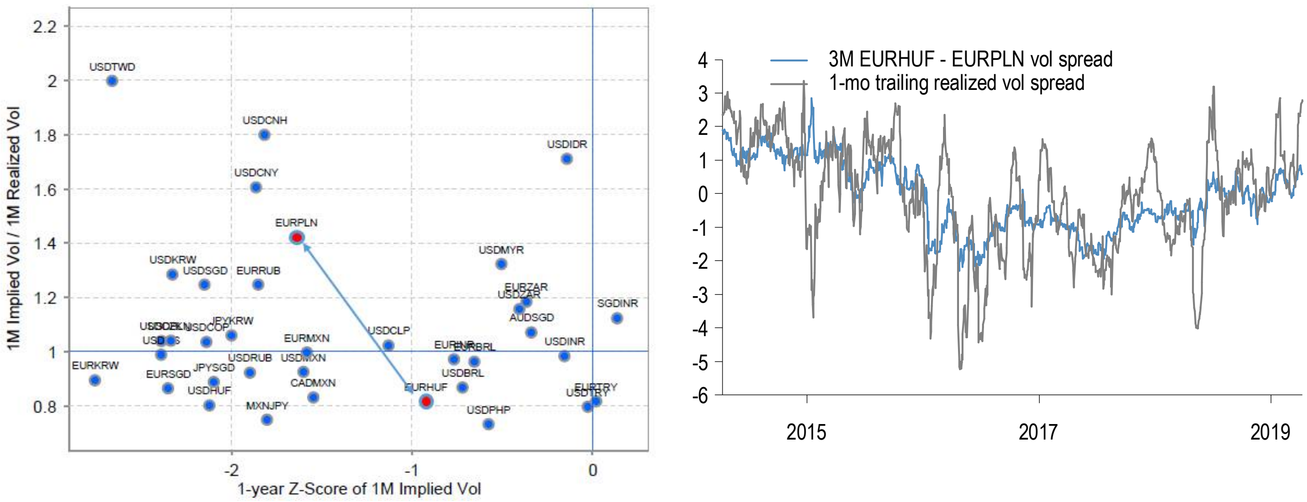
Analysing EUR crosses, Exhibit 4 shows EURHUF vols to be attractive to own on both metrics (curve flatness and beta/vol). Among the regional candidates to pair against EURHUF, EURPLN and EURUSD stand out.

Consider:

- *Buy 9M EUR/HUF straddle @4.6/5.0 financed by selling EUR/USD 25 strangle @5.9/6.2, equal vega notional, delta-hedged*

Decay efficient expression for owning front end HUF vols: The appeal for owning HUF x-vols vs European peers extends to shorter tenors. Specifically, the setup is favourable for owning performing HUF x-vol vs selling premium rich PLN x-vol, with more than 2 vol RV between the two (Exhibit 6). The corresponding implieds have shown historically a tight relationship, ensuring the effectiveness of the PLN hedge (Exhibit 6 – RHS).

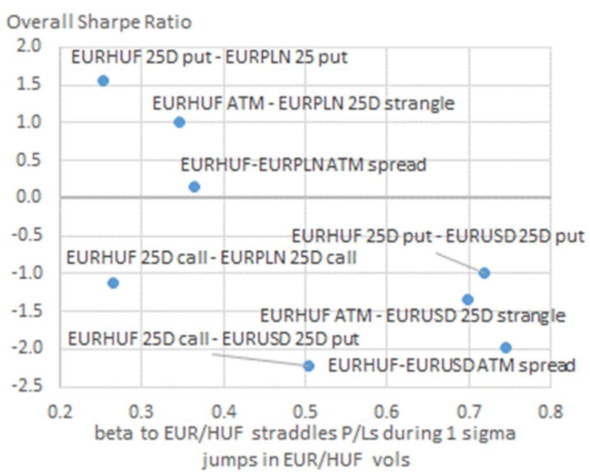
Exhibit 6. The setup is favorable for long HUF vs short PLN x-vols with more than 2vol RV between the two.



Source: J.P.Morgan

Exhibit 7. EURHUF straddles vs EURPLN 25D strangles show best compromise between expressing bullish EURHUIF vols and historical performance.

3M options, delta-hedged daily with smile forwards. Rolled into fresh strikes every 2 month. No transaction costs. Period: 7-yr history.



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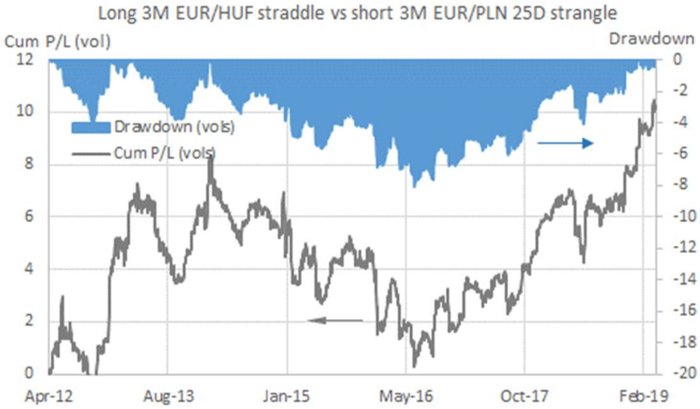
The RV is a decay efficient expression for owning front end HUF vols. Analysis of various structures with long EUR/HUF against EUR/USD and EUR/PLN vols in Exhibit 7 finds EUR/HUF straddles vs EUR/PLN 25D strangles to be the best compromise between expressing bullish EUR/HUF vols and historical performance. With the EUR/PLN convexity elevated by more than 1 sigma we like expressing the vol spread via long EUR/HUF straddles vs short EUR/PLN strangle, a combination that in last three years has delivered strong returns (Exhibit 8).

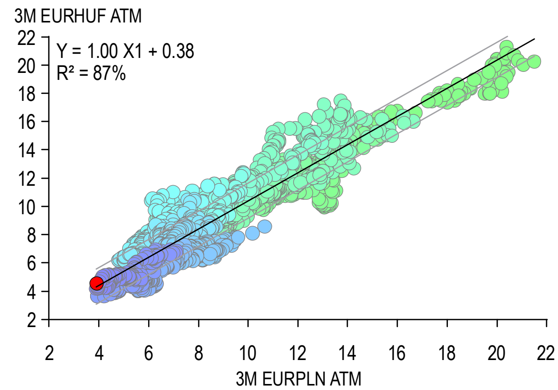
We recommend:

- *Buy 3M EUR/HUF straddle @3.7/4.1 vs sell EUR/PLN 25 strangle @4.25/4.65, equal vega notional, delta-hedged*

Exhibit 8. Tight relationship between HUF and PLN x-vols guaranties for an effective hedge. Long HUF vs short PLN x-vol has systematically performed.

3m expiry, options delta hedged daily with smile forwards. Rolled into fresh strikes every 2 months. No transaction cost.





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