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Derivative Focus

CROSS-ASSET

Summertime and the carry is easy

New mid-curve trades that should work while you don't

Global Markets Research

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Quantitative Strategies

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Because of the stellar performance of our turbo-carry (mid-curve calendar spread or link) programme (a total return of 9.77% since the start of the programme in September 2013), we will continue with our regular trade recommendations. Our focus is on both 1-month and 3-month expiries in EUR, because of the low-for-longer expectations, and only on 1-month USD recommendations, which should benefit from the summer lull, but expire before the more likely to be eventful September FOMC meeting. We focus on three trades, EUR 1m1y2y and 3m1y2y, and USD 1m3y2y.

Trade Ideas: (scaled for a target carry of ~$250k per trade)

EUR 1m1y2y 0.43%: *Buy €680mn 13m2y receivers, sell €680mn 1m1y2y receivers, both struck at 1y2y spot rates ("spot", ref 43bp) for a package offer price of 15.5ct. The expected carry is 2.7ct.*

EUR 3m1y2y 0.43%: *Buy €390mn 15m2y receivers, sell €390mn 3m1y2y receivers, both struck at 1y2y spot rates ("spot", ref 43bp) for a package offer price of 13.5ct. The expected carry is 4.7ct.*

USD 1m3y2y 2.89%: *Buy $145mn 37m2y receivers, sell $145mn 1m3y2y receivers, both struck at 3y2y spot rates ("spot", ref 2.89%) for a package offer price of 108.5ct. The expected carry is 17.4ct.*

Turbo-carry new trades

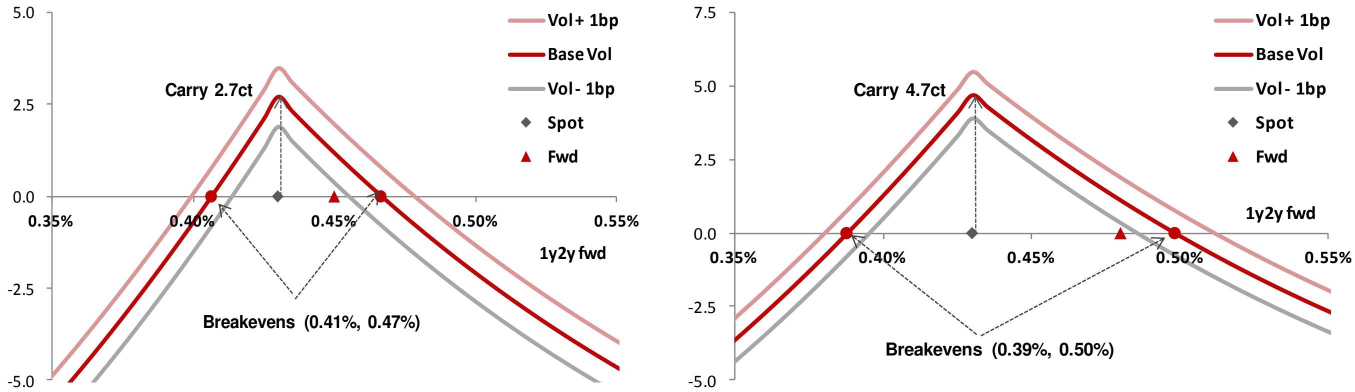
We focus on high carry trades with relatively wide breakevens. Our criterion for choosing these trades has evolved and focuses on the use of the spot measure (a *physical* measure that has a normal density centred on spot at the time of expiry, using spot-vol * sqrt (expiry), where the spot-vol has been adjusted for implied/realised ratios). Although we do not explicitly calculate the expected payoff under the spot measure, we approximate a number of ways and focus on the probability of staying within the breakeven boundary. In general, we would also use the recent stability of the trading range (i.e., the historical probability of staying within the breakevens), although this measure is more meaningful in the US, where rates have been relatively range bound since about July 2013, while in EUR, since the ECB meeting, rates are settling into a new range.

Our goal is to maximise carry being cognisant of risks of a breakout. With recent data releases in the US, further market movers over the next month, as the summer wears on there are less likely. We do not consider 3-month trades entirely because we do not wish to have a short gamma position around the September FOMC meeting. Meanwhile, in EUR, with ECB President Draghi announcing changes to the ECB meeting schedule and the publication of minutes, this is likely to be a modest vol dampener and keep rates in a further contained range.

That being said, we have 1m1y2y and 3m1y2y for our EUR recommendations. The two trades are both struck at 1y2y forward (ref. 0.43%). In Figure 1, we plot the profiles of net payoff for the two trades. As EUR volatility has been largely compressed since the June ECB meeting, the breakeven range becomes relatively tight after stochastic vol adjustment: 0.41% - 0.47% for 1m1y2y, and 0.39% - 0.50% for 3m1y2y. However, we think possible moves in the EUR are likely to be muted near term, because of the ECB's "rates low for a long time" commitment. In particular, Mr Draghi said at the ECB meeting last week, that he doesn't plan on synchronising the ECB meetings with the Fed's or any other central bank. This suggests a disconnection of EUR rates from their US counterparts, and the EUR curve is likely to be less affected by developments in US rates in coming months.

Fig. 1: P&L profile (cts) at expiry for EUR 1m1y2y 0.43% (left) and 3m1y2y 0.43% (right)

Long vega exposure and wide breakeven range

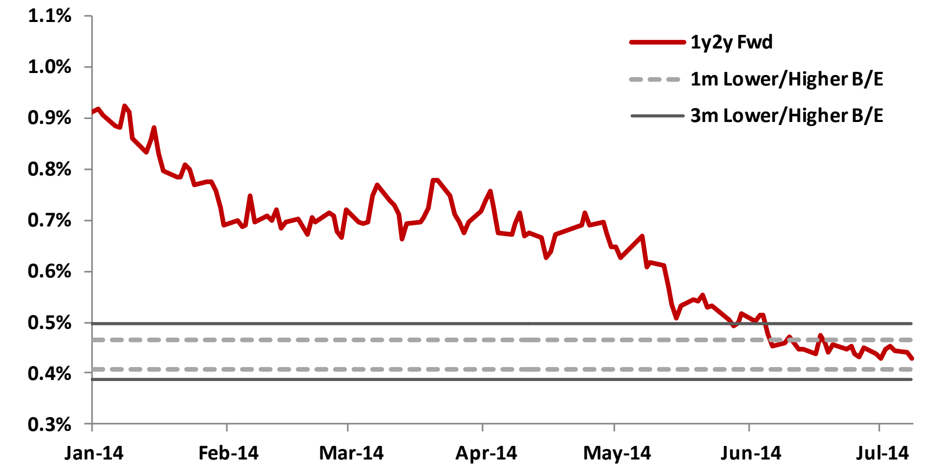


Source: Nomura Research

Figure 2 shows the recent history of EUR 1y2y forwards overlaid with breakevens. Our breakeven band has largely covered most of the extremes since the June ECB meeting, and should provide a decent buffer against either a sell-off or rally.

Fig. 2: Historical EUR 1y2y fwd vs lower/higher breakevens

After the ECB's June action, an event-light summer would help EUR 1y2y fwd settle into a relatively narrow range

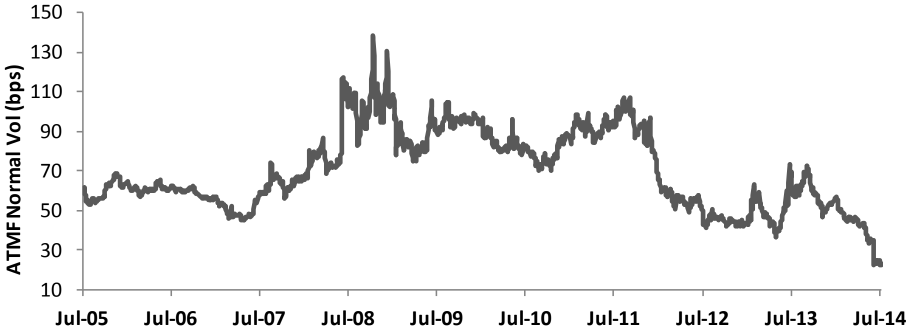


Source: Nomura Research

EUR 1y2y volatility has been falling since last July, and collapsed in June to its all-time low (see Figure 3). Speaking of an entry point, we think the two EUR trades are less likely to be affected by any further drop in vol, but benefit the most from any potential rally in vol.

Fig. 3: EUR 1y2y volatility has been falling to an all-time low

Long vol exposure will benefit when EUR 1y2y vol bounces back from its all-time low



Source: Nomura Research

We note the risks to the trade in Figure 4, where we highlight the risk to vega, where a 10bp increase in vol underlying the 1y2y forward will raise the package price by 5.5ct for the 1-month trade and 4.4ct for the 3-month trade. In terms of time value, they gain approximately 0.08ct and 0.04ct per day for 1-month and 3-month trades, respectively.

Fig. 4: Risks to EUR turbo carry trades

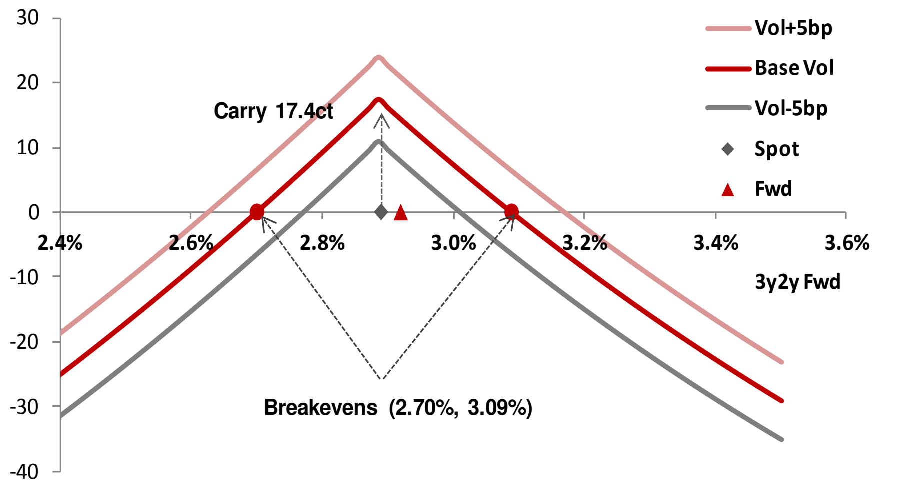
Package Name	Fwd (%)	Spot (%)	Strike (%)	Delta (ct/bp)	Gamma (ct/bp2)	Vega (ct/bp)	Theta (ct/day)
EUR 1m1y2y	0.450	0.430	0.430	-0.28	-0.08	0.55	0.08
EUR 3m1y2y	0.480	0.430	0.430	-0.32	-0.03	0.44	0.04

Source: Nomura Research

On USD, our favoured trade is 1m3y2y struck at 2.89%. In a similar way, we plot the payoff profiles in Figure 5 for current vol and up/down vol scenarios, noting that the long vega position means that the payoff profile shifts up in a rising vol environment and correspondingly shifts down in a falling vol environment. We calculate the vol-adjusted breakevens as being 2.70% - 3.09%, at a full 39bp wide, giving some protection against the rally, while maintaining a decent margin for sell-offs.

Fig. 5: P&L profile (cts) at expiry for USD 1m3y2y 2.89%

Long vega exposure and wide breakeven range (lower B/E 2.70 %, higher B/E 3.09%)

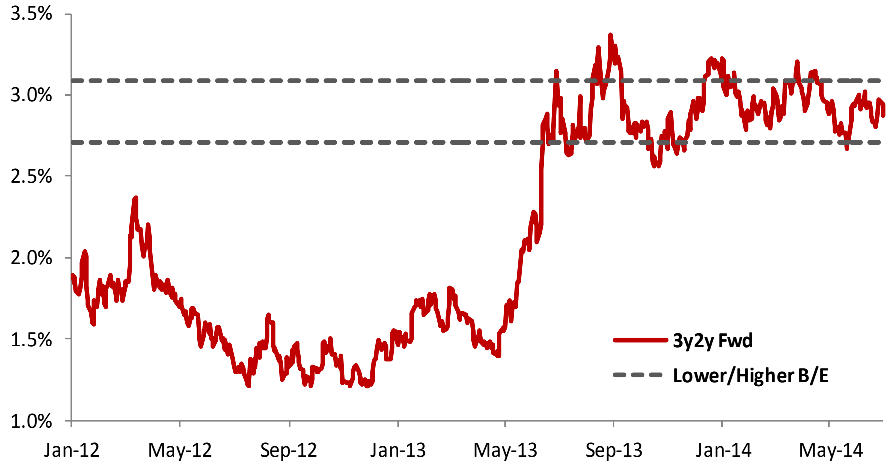


Source: Nomura Research

Figure 6 overlays the breakevens with the recent history of USD 3y2y forwards. We note that our breakeven band has covered most of the extremes since Fed tapering expectations began in May 2013, and should provide decent protection against either a sell-off or rally. Although trade MTMs may vary based on a number of factors, the terminal payoffs are simple and we believe it should have decent positive P&L if forwards expire within these bands in one month's time.

Fig. 6: Historical USD 3y2y fwd vs. lower/higher breakevens

Wide breakeven range gives the trade a large margin against market moves



Source: Nomura Research

For the USD 1m3y2y trade, we show the risks in Figure 7. Again, we highlight in particular the risk to vega, where a 10bp increase in the vol underlying the 3y2y forward will raise the package price by 10.3ct. The trade gains approximately 0.36ct per day in terms of time value alone.

Fig. 7: Risks to USD 1m3y2y 2.89%

Package Name	Fwd (%)	Spot (%)	Strike (%)	Delta (ct/bp)	Gamma (ct/bp2)	Vega (ct/bp)	Theta (ct/day)
USD 1m3y2y	2.92	2.89	2.89	-0.17	-0.02	1.03	0.36

Source: Nomura Research

On general trade risks, these turbo-carry trades have limited downside, and will tend to lose money if:

- Forwards move outside the range (specified in terms of breakevens in the previous discussion).
- Volatility decreases significantly.

These risks are not completely independent. Typically, large bearish moves have been associated with rising volatility (providing a further buffer against losses when rates rise). By contrast, large bullish moves have often coincided with falling volatility (decreasing the buffer against losses). This consequently has given the trades a more bearish bias. Nonetheless, we believe that the highlighted trades more than adequately offset these risks, where we believe the breakevens are relatively wide and vega is sufficiently high to help balance risk and return, especially in the light of the market action in the past two months. In any event, the maximum downside is losing the initial premium.

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Appendix A-1

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