

ROOM TO MANOEUVRE

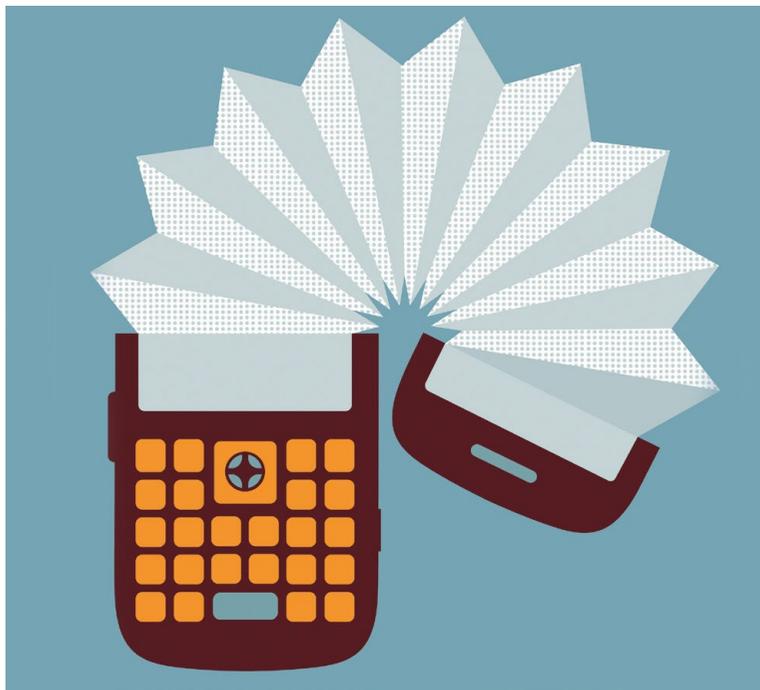
WHEN MARKET INDICATORS ARE UNCLEAR, DECISIONS ON HEDGING DURATION CAN OFFER TREASURERS SOME FLEXIBILITY. RON LEVEN PhD EXPLAINS

In the wake of the UK referendum on EU membership, GBP volatility hit levels last seen in the financial crisis, sending ripples across the FX landscape. Although such moves are rare, the fact that they can happen means that corporate treasuries typically have limited discretion in hedging and must routinely hedge FX exposure; the hedge is implemented as soon as an FX exposure is identified. While there may be little discretion on when or whether to hedge, there still remains potential discretion on how to hedge. And because choosing the right hedge can have a significant impact on a firm's bottom line, it's a good idea to analyse market pricing to uncover the most cost-effective hedge structure.

The right duration for hedges

Duration is one vector where there is often some discretion. Having shorter duration than the benchmark creates an opportunity to benefit from a favourable move in interest rates. Contrarily, the impact of an adverse rate move can be avoided by holding relatively long duration. An anticipation of a particular rate move would determine the duration bias. But what if there is no clear view?

Relative value can be a helpful tool for directing



a hedging duration bias in the absence of a view. Specifically, avoid durations where rates are unattractive from both a relative and historic perspective. And in addition to actual rates, relative value on a volatility (or risk) adjusted basis should also be assessed. As an example, let's take USD/COP and USD/MXN. If rates for both COP and MXN outright and volatility-adjusted one-year rates are high versus other USD pair currency yields (for example, USD/EUR and USD/PHP) and they are also high versus their own three-year history, and if

hedging requires buying these currencies, take advantage of this by going long duration, but keep duration short if selling. Similarly, if we look at the EUR as another example and the EUR carry is low across all metrics, then buyers of EUR should stay short duration and sellers should bias long. Exposure for rates that are not clearly extreme would best be left close to the benchmark.

Finding a hedging structure

Beyond duration, hedgers commonly have discretion on

the structure of the hedge. In addition to forward outrights, at-the-money and low-delta options are common alternatives, as well as risk reversals (RRs). A strong directional bias can provide a clear guide to an appropriate structure – for example, if you are bullish, buy a call. In the absence of a view, here, too, relative value can help guide the choice of how to best take advantage of market pricing. Implied volatility drives the pricing of options and should be considered both outright and versus realised volatility and across currencies and time. As shown on page 43, implied volatility is not cheap for any of the currencies shown other than PHP, so options are generally not an attractive way to hedge.

Expensive implied volatility makes the decision on low-delta strikes moot, but in principle, risk-reversal skew would help drive this bias. For example, there is extreme USD/JPY downside skew making low-delta USD puts versus the JPY expensive and low-delta calls cheap, so USD call buyers should consider low-delta options. IDR is a currency with strong skew for USD upside so, while rare, USD sellers would get good value from low-delta puts.

Extreme skew can also highlight when RRs represent relatively good value *vis-à-vis* outright forwards. The

FX RELATIVE VALUE VOLATILITY METRICS (RED IS TOP/BLUE IS BOTTOM QUARTILE)

Currency	3M Implied Vol	3M Implied Vol	3M Implied Vol	3M Implied Vol	3M Risk Reversal skew	3M Risk	3M Risk
	Value	Percentile	/ Realized Vol	/ Realized Vol		Reversal skew /	Reversal skew /
			Value	Percentile	Value	Percentile	Value
USDPHP	5.55	33.55	1.00	13.57	1.15	20.72	60.66
USDSGD	6.83	71.03	0.96	22.86	1.10	16.12	25.67
USDINR	7.20	35.45	1.71	94.13	1.50	20.83	43.93
USDIDR	10.38	18.93	1.57	27.66	2.15	20.72	80.16
USDJPY	12.65	95.66	0.99	31.16	-2.58	-20.36	2.81

SOURCE: THOMSON REUTERS EIKON CURRENCY VALUE TRACKER (SHOWING LOWEST VALUES AS RANKED BY OUTRIGHT THREE-MONTH IMPLIED VOLATILITY)

downside skew for USD/JPY suggests there is good potential return in using an RR instead of a forward. The RR would be applicable for an investor with short USD versus long JPY exposure. It is constructed by selling an out-of-the-money USD put and using the premium to buy a USD call. The downward skew means that the call will be closer to the money than the put. While there is exposure to a USD rally to the value of the call strike, there will be more potential gain from a USD decline to the put strike. The chart shows the trade-off of the net profit and loss of the RR compared with what would be earned being long USD via a forward contract. Gains are

made as the USD declines, which are capped at 9.5% when spot goes through the put strike. The RR does have exposure to USD strength, but the loss is capped when spot reaches the call strike at roughly two percentage points less than the potential gain.

Even hedgers with little discretion on timing have some ability to decide at what point of the day to execute the trades needed to establish the hedge. Executing a large trade during periods of poor liquidity can have a significant adverse effect on the transaction price. Thomson Reuters is able to provide an FX volume heat map, which portrays relative trading volume and

liquidity during the day in half-hour segments. Using FX trading data from the Thomson Reuters matching platform, the map compares how the average volume in a particular segment compares with average daily half-hour volume. It is apparent that liquidity varies substantially and that pockets of liquidity for different currencies do

volatility for the month of July was trading at roughly two percentage points lower than three-month implied volatility and at the same levels as in December. Forward July volatility exposure was cheaper than outright volatility with less downside risk than if the referendum vote had been a non-market event. As was widely covered in the press, the vote was in fact a major market-moving event and July volatility surged to a maximum of five percentage points higher than it was in April.

Conclusion

Even when there is no discretion on whether to hedge, it has been shown here that there is still substantial discretion on how to hedge. Decisions on the duration, structure and intraday timing of the hedge can all have a material impact on the cost

Relative value can be a helpful tool for directing a hedging duration bias in the absence of a view

not occur in unison. So when transacting large orders, it makes sense to ensure trades are executed in periods of relatively strong liquidity.

Know risk, know reward

The importance of assessing the market pricing surface when developing hedge strategies for the risk of Brexit was highlighted in the Thomson Reuters April FX Market Voice¹. By April, three-month implied GBP/USD – which extended past the June referendum – was trading at around 12.5%, so it was already pricing in significant risk. Buying three-month volatility had substantial exposure to loss if the referendum proved to be a non event and volatility sank back towards the 8% level of last December. By contrast, forward implied

and effectiveness of the hedge. In the absence of a market view, relative value can provide a guide to cost-effective hedging. This means that it is worth investigating the pricing surface of the yield and volatility surface to find relative value opportunities that can be incorporated into the chosen hedging structure. ♡

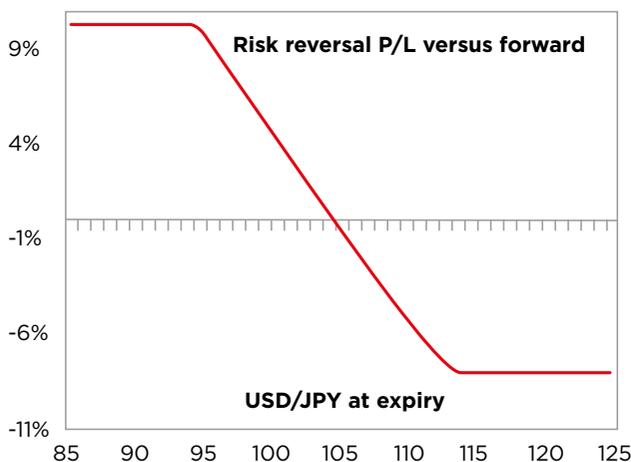
¹ <https://smartsales.thomsonreuters.com/exLink.asp?998967060Q92A111393435549>

The content of this article should not be considered as investment advice

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PROFIT/LOSS FOR A USD/JPY RISK REVERSAL



SOURCE: THOMSON REUTERS EIKON