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FX Derivatives – RVs and vol ratio spreads still the game

- **Our view for mildly bullish longer terms FX volatility may be vulnerable to strong summer seasonality that tends to see soft July FX vols followed by an August bounce.**
- **This backdrop, though muddied by the fluid COVID-19 developments, makes us willing to continue with a string of vol ratio spreads and RVs which also performed well in the aftermath of the March vol explosion.**
- **Amid the vol setup and favorable carry differential we find value in costlessly financing MXN upside by selling BRL upside.**
- **We expanding beta-to-vol ratios framework to non-USD crosses. Buy CAD/JPY-EUR/CAD and NOK/JPY-EUR/NOK vol spreads.**
- **G10 skew theta harvesting via vol ratio spreads is tactically still very well worth the effort in 3M delta-hedged USD/JPY ratio put spreads.**

Summer lull is starting to take hold though as seen during the 2019 US/China summer trade skirmishes, the summer liquidity can provide fertile ground for vol shocks. The recently introduced VXY term structures (details *here*) show a normal G10 basket vol curve and the EM curve that is only starting to flatten, following a few weeks of reluctance in subscribing to an outright normalization. GL FX vol basket is down 0.8pts since the mid-June high. As noted in our mid-year outlook the offsetting factors (COVID-19 economic uncertainty and the USD election uncertainty vs. concentered decline in G7 policy rates) leave us net only mildly bullish on FX volatility in H2 (see *here*). Balancing that somewhat cautious longer term view it's an upside surprise in the latest jobs report and the FX vol seasonality as indicated by the mean of the last two decades (Exhibit 2). Strong summer seasonality tends to see soft July FX vols followed by an August bounce.

This backdrop, though muddied by the fluid COVID-19 developments, makes us willing to continue with a string of vol ratio spreads and RVs which served as well in the aftermath of the March vol explosion.

MXN – BRL relative value

After a stretch of a heavy underperformance as COVID-19 spread to the Western economies in Feb/March, Latam had a bumper Q2 but started to stumble more recently. Our analysts think that the rally may have ran its course and going forward the opportunities are limited to inter-regional RVs as China's recovery fades and as signs of 2nd wave COVID-19 risks are starting to rise (see here). Expectations are for MXN to outperform BRL on relative basis only as BRL position is threatened with cabinet reshuffle, political noise and steepening COVID-19 curve. On the flip side, MXN's overall beta remains a concern along with a risk that on the back of downbeat inflation prints and negative IP Banxico may cut by more than what market is pricing in right now. While that overall very mixed picture leaves little to desire Exhibit 3 shows the MXN-BRL vol spread to be at multiyear low (not accounting for the 2018 BRL

Exhibit 1. EM VXY curve flat, G10 basket fully normalized.

1M-1Y VXY-G10 and VXY-EM vol spreads.

Source: J.P.Morgan, Bloomberg

Exhibit 2. VXY-GL shows a pronounced July-Aug vol seasonality.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
% up	**38%**	**29%**	**52%**	**10%**	**57%**	**38%**	**29%**	**75%**	**40%**	**35%**	**70%**	**60%**
avg	**(0.3)**	**(0.3)**	**0.3**	**(0.7)**	**0.4**	**(0.2)**	**(0.3)**	**0.5**	**0.2**	**0.2**	**0.1**	**0.1**
stDev	0.8	0.9	1.0	0.8	1.1	0.9	0.8	0.6	1.4	2.4	1.0	0.6
2020	(0.2)	1.6	3.5	(2.4)	(0.6)	0.3	(0.2)					
2019	(1.1)	(0.8)	0.4	(0.9)	0.2	0.0	(0.2)	1.6	(1.0)	(0.8)	(0.5)	0.2
2018	0.6	(0.0)	(0.2)	(0.3)	0.6	0.0	(0.2)	1.0	(0.6)	0.2	0.1	0.5
2017	(0.8)	(0.5)	(1.1)	(0.7)	(0.4)	(0.1)	0.3	0.0	0.3	(0.6)	(0.1)	(0.1)
2016	0.8	1.0	(0.6)	(0.2)	(0.5)	0.6	(1.4)	0.9	(0.3)	(0.4)	1.1	0.5
2015	1.2	(1.9)	1.6	(0.9)	(0.1)	(0.0)	(0.6)	1.3	0.1	(1.0)	0.4	(0.4)
2014	0.1	(1.1)	(0.1)	(1.1)	(0.5)	(0.6)	0.7	(0.2)	1.8	(0.0)	0.7	1.5
2013	0.6	0.5	(0.2)	(0.4)	1.7	0.9	(1.0)	0.4	(1.3)	(1.1)	0.3	0.4
2012	(1.9)	(0.4)	(0.3)	(0.9)	2.5	(1.9)	(0.2)	(0.5)	(1.1)	(0.4)	(0.0)	0.6
2011	(1.2)	(0.9)	0.0	0.3	0.2	(0.7)	1.0	0.6	2.7	(2.1)	1.0	(1.1)
2010	(1.1)	(0.4)	(0.8)	(0.1)	3.2	(0.5)	(2.5)	1.1	(0.5)	1.0	0.2	(0.6)
2009	(1.1)	(2.3)	(0.6)	(3.0)	0.9	(1.4)	(1.2)	0.0	(0.3)	0.6	0.6	(0.5)
2008	0.4	0.5	1.6	(1.5)	(0.7)	0.4	(0.8)	0.9	4.4	10.0	(3.3)	0.4
2007	(0.1)	0.0	0.1	(0.4)	(0.4)	0.1	1.0	1.6	(0.9)	0.5	1.4	(0.1)
2006	(0.1)	(0.4)	0.1	0.1	1.3	(0.9)	(0.4)	(0.3)	(1.1)	(0.6)	0.8	(0.6)
2005	(0.6)	(0.4)	(0.0)	(0.4)	(0.1)	(0.1)	(0.1)	0.2	(0.2)	(0.1)	0.1	0.2
2004	0.5	(0.5)	0.8	(0.1)	0.3	(0.7)	(0.5)	0.0	(0.7)	0.6	0.3	0.3
2003	(0.3)	(0.3)	0.4	(0.5)	0.2	(0.5)	0.1	0.0	1.5	(1.1)	0.1	(0.0)
2002	(1.3)	(0.4)	(0.3)	(0.2)	0.7	2.1	(0.6)	(0.3)	0.2	(1.2)	(0.5)	1.3
2001	0.1	(0.4)	0.8	(0.7)	(0.8)	(0.6)	0.4	0.1	0.5	(0.9)	0.1	0.5
2000	(0.2)	0.5	0.5	(0.5)	0.4	(1.2)	(0.5)	0.6	(0.2)	1.0	(0.2)	0.1

Source: J.P.Morgan

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election pricing) and at more than 3vols below the long term average. The direction of risks makes an outright vol spread trade out of question.

In event of June MXN spot trend starting to reverse the positioning would provide ample headroom (~9% change in spot in May occurred on the back of the less than $0.5bn change in positioning). In the post-2016 US elections period performance of zero cost structures where MXN upside is financed by selling BRL upside has been positive even without timing the entry (Exhibit 4). Amid the vol setup and still favorable carry differential, zero cost strikes selection sets the BRL strike almost twice further with respect to spot. Consider:

Near zero cost 3M USD/MXN 30D put @15.9ch vs short USD/BRL 25D put @20.9/21.65indic, not delta-hedged

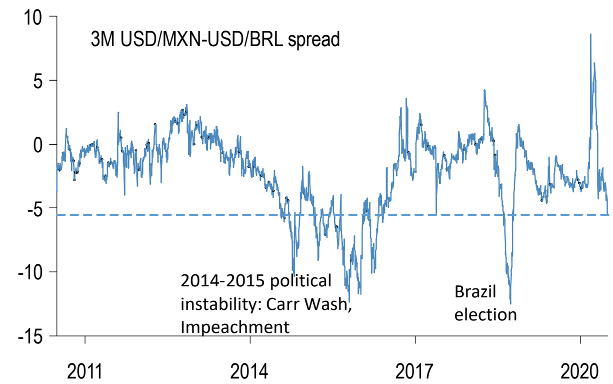
Expanding beta-to-vol ratios framework to non-USD crosses

In a number of recent vol publications, we have carried out extensive research for establishing links between different measures of risk-sensitivities, aiming at finding RV opportunities. One of them was aimed at screening the appeal of owning vols based on the average “beta” exposure to a set of pre-specified exogenous risk drivers – see *here*. Basically, for comparable levels of vols, we favor going long vol in the cases where the exposure to risk is higher. We expand the analysis to crosses.

Among EUR-crosses JPY, ZAR, AUD and CEEMEA vols look affordable. Average betas for EUR-crosses are generally lower than for USD-pairs, which can be understood by recalling that USD-Index is one of the four exogenous factors included in the analysis. Recent yen vols collapse prompted market participants to wonder whether the tightening of global rates differentials were to put a cap on the foreign investments and the consequent repatriation patterns that had potential for trigger large spikes of realized volatility during risk off times. Aside the question of that systemic vulnerability we note in Exhibit 5 that high beta currencies ZAR, BRL, AUD and NZD screen favorably within x-yen complex

Ranking the long term beta-to-vol ratios (Exhibit 6) we find best value in JPY x-vols. Amid the broader FX vol backdrop we feel more comfortable with RV structures. Based on the beta-to-vol framework CAD/JPY-EUR/CAD and NOK/JPY- EUR/NOK are two 3M vol RV worth considering. The two implied spreads are currently offering pricing near the multi-year low and a flattish vol carry entry and historically when a spike in realized vols occurs the spreads are well positioned for locking in a significant positive PnL, as the distribution of realized vol is highly

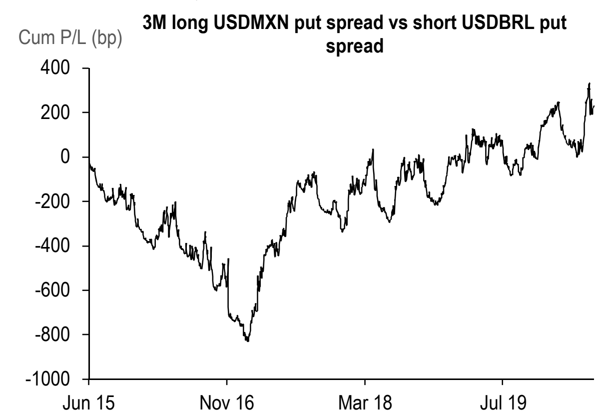
Exhibit 3. USDMXN-USDBRL vol spread is at multiyear low (excluding Brazil 2018 election) and is more than 3 vols below the long term average.



Source: J.P.Morgan

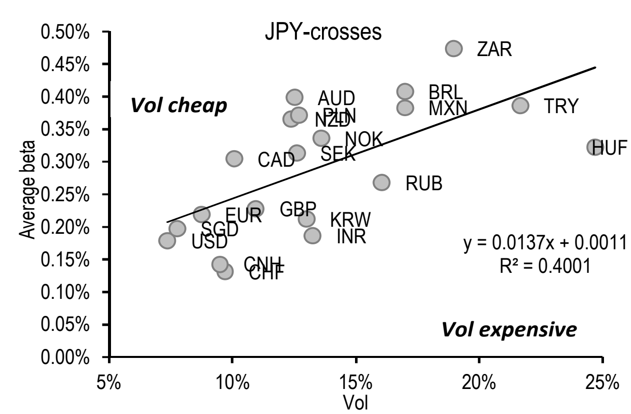
Exhibit 4. Post-US election performance of zero cost structures where MXN upside is financed by selling BRL upside has been positive.

Zero cost 3M long USD/MXN ATM/25D put spread vs short USD/BRL put spread (BRL strikes solved for zero cost), live (i.e. not delta-hedged), rolled into new position every 2-mo.



Source: J.P.Morgan

Exhibit 5. Average |betas| vs. 1y vols for JPY-crosses



Source: J.P.Morgan

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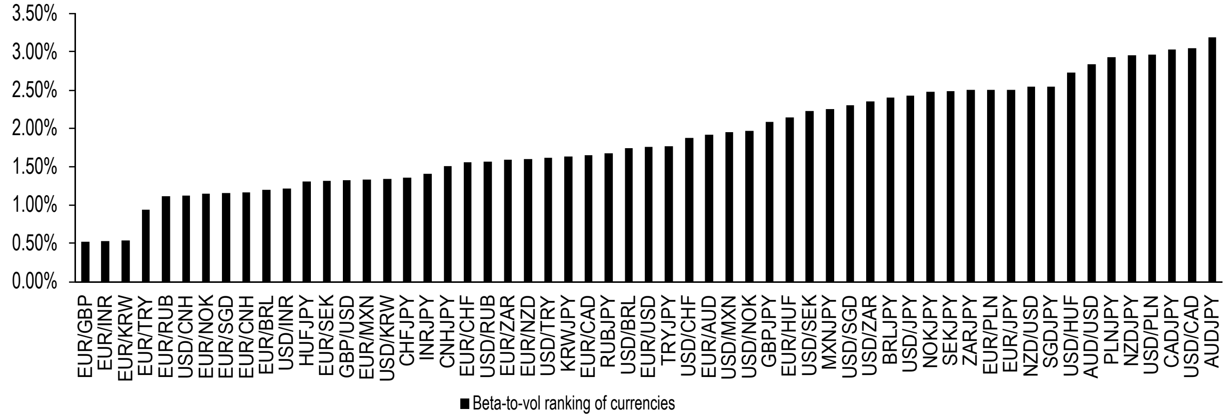
Exhibit 6. Beta-to-vol ratios – screening for USD-, EUR- and JPY-crosses point to current value in owning JPY-vols



Source: J.P.Morgan

asymmetric, as was also the case earlier this year. Consider:

3M CAD/JPY @8.7/9.4indic vs EUR/CAD @6.8ch delta-hedged straddles or 3M NOK/JPY @13.4/14.4indic vs EUR/NOK @10.7ch delta-hedged straddles

G10 skew theta harvesting

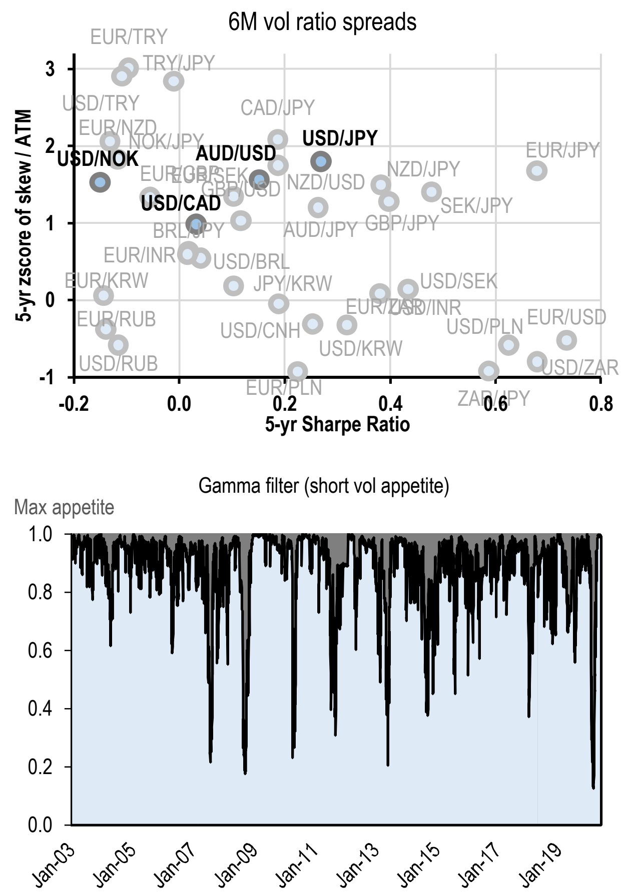
Selling riskies via delta-hedged ratio spreads was one family of trades that served us well in the aftermath of the March vol spike. Delta hedged AUD/USD and USD/CAD 1*2s proved efficient in capturing excess risk premium embedded in skew while weathering the intermittent ups and downs in risk sentiment. The mechanics of such trades and timing the entry with a gamma filter we analyze at depth in an earlier note (see *here*). The framework screens for candidate ratio spreads based on Sharpe and the RR/vol z-score.

USD/JPY skew is a worthy candidate (Exhibit 7). Yen vols have been under immense pressure and the skew tightened substantially but yen skew retracement was unable to keep up with the collapse in the atm vols. Riskies / atm vol ratio is still 1.8sigma elevated, one of the largest among the majors (Exhibit 7). Moreover, SABR based implied spot-vol correl and the trailing realized correl are at odds as the implied correlation has been slow to tighten and materially lagged the realized spot-vol correl correction. While there is no effective protection against skew blow-up it is worth pointing out that USD/JPY vol ratio put spreads were able to promptly consolidate March losses in the subsequent three months (Exhibit 8).

Our analysts look for the yen to remain flat to the dollar through 2H20, with a bias for moderate JPY appreciation through early 2021 (see *here*). If those expectations realize yen skew is bound to underperform. The US election pricing dynamics is distorting the yen vol curve though @40vol yen election overnights are near the current

Exhibit 7. COVID-19 vol episode has upset the recent performance of vol ratio spreads but the gamma filter short vol appetite and the skew/ATM ratio are selectively supportive of vol ratio spreads.

25 delta risk reversals = (risk off call – risk off put). The gamma filter level close to 1.0 (as is currently the case) indicates favorable environment for vol ratio spreads – more details about the gamma filter given *here*.



Source: J.P.Morgan

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cycle high and the 2016 peak pricing in mid 40s. By our account yen 2020 US election overnights are likely capped going forward. We add to our model portfolio:

*Delta-hedged 3M USD/JPY ATM/25D 1*2 ratio put spread @6.25ch vs 7.174/7.425indic, vega notionals*

Cheap exposure to vulnerable FX via gold leveraged structures

Aside the post-US jobs report gyrations, gold spot has been on a winning streak on the back of the synchronized global ZIRP & NIRP and as the Fed has signaled it is on hold for a foreseeable future. Meanwhile the gold positioning is well off the pre-COVID-19 historic high and has only started to bounce (see *here*). Acknowledging that the risk are skewed to upside, our analysts expect gold prices to peak out in 3Q20 at between $1,800/oz and $1,850/oz on a spot basis (averaging $1,780/oz for the quarter as a whole) before coming under pressure later in the year (see *here*).

The gold backdrop allows for expressing cheaply directional view on some of the vulnerable FX such as NZD and GBP (see *here*). Exhibit 9 reports 3M dual digitals of type [XAU/USD up | USD/CCY up]. Utilizing dual digitals significantly cheapens the downside view for currencies such as GBP, NZD and CAD. The structures benefit from the decorrelation direction between XAU and the third currency in the duals. The resulting dual in case of e.g. GBP has ~9X leverage and shows discount of 61%, near the historical high.

3M [XAU/USD > 3% OTMS | GBP/USD < 2% OTMS] @5.25/11.25% USD or 3M [XAU/USD > 3% OTMS |NZD/USD < 2% OTMS] @6.5/12.5% USD

Alternatively, we like financing downside in GBP and NZD with selling gold downside option structures (Exhibit 10). Gold has shown resilience vs the USD and is expected to hold well over next couple of months. Additionally, the steep rolldown the gold vol curve makes gold options an attractive funding source.

Buy 3M NZD/USD ATM put vs sell 3M XAU/USD 35D put at near zero cost.

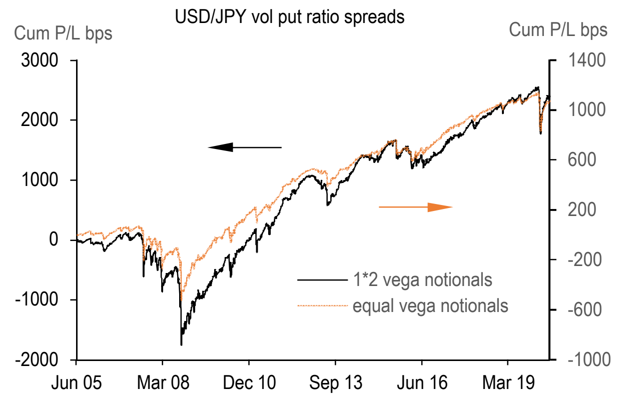
Update on the FX options recommendations

We take 1.5vol pts profit on delta-hedged 1Y USD/CAD ATM/25D ratio call spread.

We initiate yen vol ratio put spread: *Delta-hedged 3M USD/JPY ATM/25D 1*2 ratio put spread @6.25ch vs 7.174/7.425indic, vega notionals*

Exhibit 8. Vega netral and 1*2 vega notional USD/JPY vol put ratio were quick to consolidate the March drawdown.

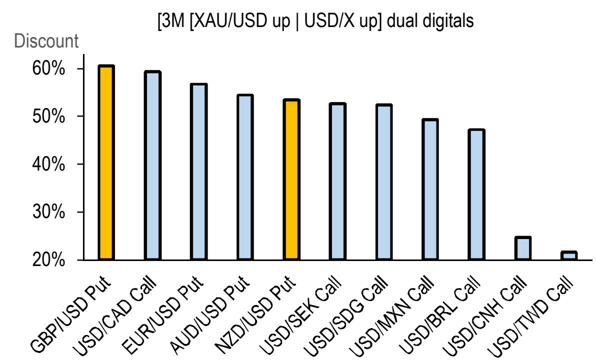
6M tenor, rolled into fresh strikes monthly. Delta-hedged daily at smile delta with expiry matched forwards.



Source: J.P.Morgan

Exhibit 9. Combining XAU with the vulnerable G10 and EM currencies generates hefty discount.

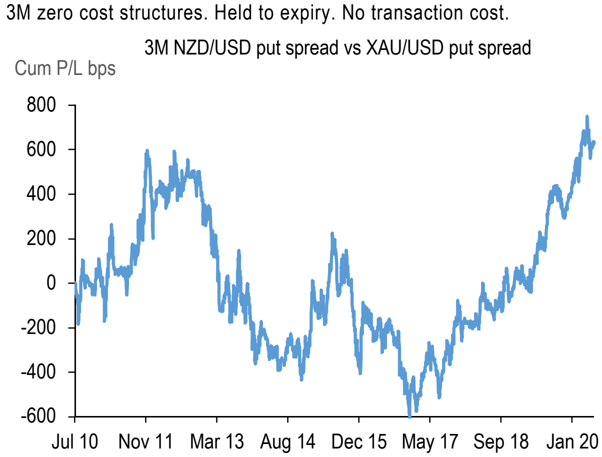
3M at-expiry dual digitals. 3% charge over mid accounted for.



Source: J.P.Morgan

Exhibit 10. Performance of zero cost conditionals in NZD downside vs. gold downside have been on a strong upswing since 2016.

3M zero cost structures. Held to expiry. No transaction cost.



Source: J.P.Morgan

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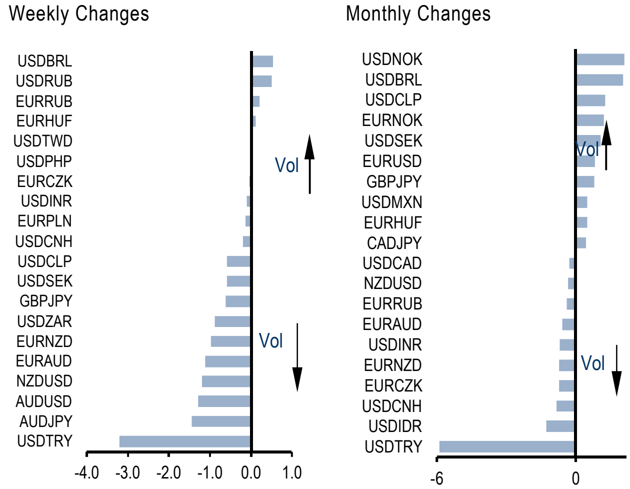
Implied volatilities

	Current Implied Vols			Avg. Implied Vols			Z-Score Implied Vols		
	1M	3M	1Y	1M	3M	1Y	1M	3M	1Y
AUDJPY	11.7	12.0	12.4	10.5	10.5	10.9	0.3	0.5	0.8
AUDUSD	10.6	10.7	10.8	8.7	8.7	9.1	0.6	0.8	1.1
CADJPY	9.0	9.2	9.7	8.8	8.9	9.4	0.1	0.1	0.2
CHFJPY	6.1	6.3	6.7	6.1	6.4	6.9	0.0	0.0	-0.2
EURAUD	8.2	8.7	9.3	7.6	7.6	7.9	0.2	0.5	0.8
EURCAD	6.7	6.9	7.4	6.4	6.5	6.8	0.2	0.3	0.5
EURCHF	5.0	5.2	5.7	4.8	5.0	5.4	0.2	0.3	0.4
EURGBP	7.1	7.6	8.2	8.2	8.5	8.3	-0.5	-0.5	-0.1
EURJPY	7.5	7.9	8.6	7.5	7.7	8.3	0.0	0.1	0.3
EURNOK	11.1	10.7	10.0	7.5	7.4	7.4	0.8	1.0	1.4
EURNZD	7.7	8.6	9.2	7.7	7.8	8.2	0.0	0.4	0.7
EURSEK	6.5	6.7	6.9	6.1	6.2	6.4	0.3	0.4	0.6
EURUSD	7.0	7.1	7.4	6.1	6.3	6.8	0.6	0.6	0.6
GBPJPY	9.7	10.0	10.8	10.6	10.9	10.9	-0.3	-0.4	-0.1
GBPUSD	8.8	9.3	10.1	9.5	9.8	9.6	-0.3	-0.2	0.4
NZDUSD	9.8	10.4	10.7	8.8	8.9	9.3	0.3	0.7	0.9
USDCAD	6.8	6.8	7.0	6.2	6.2	6.5	0.3	0.4	0.4
USDCHF	6.0	6.4	6.8	6.0	6.2	6.8	0.1	0.2	0.1
USDCNH	4.4	4.7	5.4	5.3	5.4	5.7	-1.0	-0.9	-0.5
USDJPY	5.8	6.3	7.4	6.7	6.9	7.5	-0.4	-0.4	-0.1
USDNOK	13.8	13.3	12.6	9.5	9.5	9.6	1.0	1.1	1.6
USDSEK	10.0	9.9	9.9	8.5	8.7	9.0	0.8	0.8	0.7
USDBRL	24.7	21.7	18.3	15.8	15.2	14.5	1.7	1.6	1.7
USDCLP	14.0	13.7	13.5	11.5	11.3	11.1	1.0	1.2	1.7
USDMXN	18.0	16.6	15.2	12.8	12.5	12.8	0.9	1.0	0.9
EURCZK	6.8	6.4	5.8	4.3	4.3	4.4	1.1	1.3	1.7
EURHUF	7.0	6.8	6.7	5.4	5.4	5.6	1.1	1.3	1.5
EURPLN	6.2	6.0	5.9	4.8	4.8	5.1	0.9	1.0	0.9
EURRUB	13.1	13.4	13.5	11.8	11.9	12.6	0.3	0.4	0.4
USDRUB	13.6	13.5	13.5	11.9	12.0	12.7	0.4	0.4	0.4
USDTRY	8.7	12.1	17.5	18.4	18.9	20.7	-1.2	-1.2	-0.8
USDZAR	15.7	16.0	16.2	16.2	16.2	16.4	-0.1	-0.1	-0.2
USDIDR	11.6	10.8	9.8	8.9	9.0	9.4	0.5	0.4	0.2
USDINR	5.5	5.8	6.4	6.9	7.0	7.3	-0.8	-0.9	-0.9
USDKRW	8.1	8.2	8.5	7.7	7.8	8.2	0.2	0.2	0.2
USDPHP	4.2	4.3	4.5	4.3	4.4	4.8	-0.1	-0.2	-0.7
USDSGD	4.2	4.4	4.7	4.1	4.2	4.5	0.1	0.3	0.3
USDTWD	4.5	4.7	5.2	4.5	4.8	5.3	0.0	-0.1	-0.2

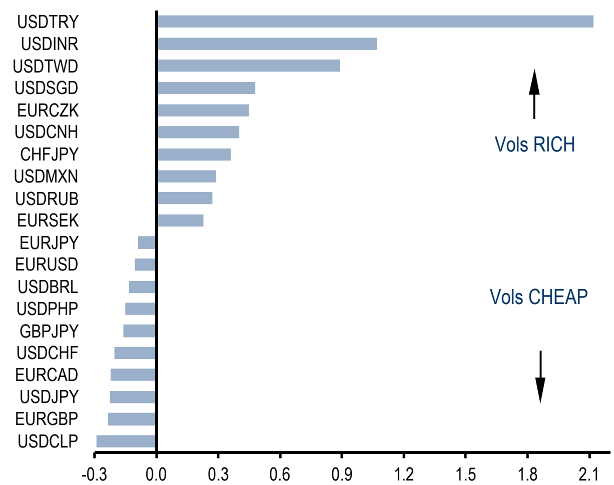
Biggest 3M Implied Volatility Movers



Source: J.P. Morgan

Front-End Vol Rankings

In order of Normalized Volatility Risk Premium*



*Normalized Volatility Risk Premium = 1M Implied Vol / 1M Realized Vol – 1

Source: J.P. Morgan

Current trade recommendations and P&L

Description	Entry date	Entry	Current mid	P/L	P/L units	Remarks
Delta-hedged 3M USD/JPY ATM/25D 1*2 ratio put spread, vega notionals	02-Jul-20	8.1	8.4	-0.3	vol pts	Collect rich skew theta via vol ratio put spread
Buy 2M 25D USD call/JPY put vs. sell 2M 25D CHF call/JPY put, equal notionals, delta-hedging	19-Jun-20	-0.7	-0.2	0.5	vol pts	Long USD-correlation opportunities ahead of US election
Buy 9M 25d GBP/CHF put vs sell 25d USD/CHF put, delta-hedged	07-May-20	3.4	2.8	-0.5	vol pts	GBP vulnerability risk and the broader de-correlation
Buy AUD/JPY vs. AUD/USD 2Y ATM straddle spread	30-Apr-20	1.2	2.5	1.3	vol pts	Record RV cheapness of long-end AUD/JPY vol vs. AUD/USD
Enter a short 6m / long 1y straddles on USD/ZAR, long 6m / short 1y straddles on AUD/USD (Gamma-neutral notionals). Keep both legs delta-hedged	28-Apr-20	3.1	3.2	0.1	vol pts	Curve stepness RV between ZAR and AUD
Buy USD/CNH 6M6M forward volatility agreement (FVA)	23-Apr-20	5.7	5.4	-0.2	vol pts	Hedge the return of US/China political noise
Sell 2M 1.46 strike USD/CAD call one-touch vs buy 4M 1.46 strike call one-touch, 0.85:1.00 notionals	24-Apr-20	16.3	3.2	-13.1	%	Bought back the worthless short leg on June 19th
Delta hedged 1Y USD/CAD ATM/25D 1*2 call spread in vega notionals	17-Apr-20	1.5	0.0	1.5	vol pts	Take profit

Trades marked to market at 2:00pm BST Friday. High-conviction trades are starred. All other recommendations are moderate-conviction.

For delta-hedged straddles and vol products, P/L is in vol points; for directional trades, bp of notional; negative entry price indicates a net credit at inception

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