J.P.Morgan

15 May 2020

JPM FX - Derivatives Chartpack Notes

MXN calendar spreads | European vol curves RV

- Amid still supportive vol setup USD/MXN one-touch put calendar spreads that sell elevated front-end vols to finance longer expiry puts rank as good value at ~8X max payout / cost and ~100% of annualized static carry. Short 2M / long 4M calendar spreads show a robust long-term performance, fit the macro timeline and contain an additional appeal of the defined downside way of fading still rich front-end vols.

- We take advantage of an attractive entry point on vol levels and relative shape of vol curves for proposing a RV of fwd volatilities long USD/PLN 6m6m and short USD/SEK 6m6m.

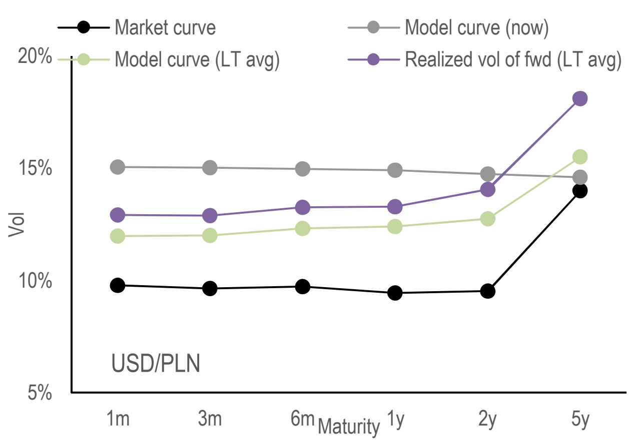
RV opportunity on European vol curves

The FX vol market is finding a new equilibrium following the sharp rise and subsequent retracement of FX volatility levels since the end of February. As of writing, at 8.1 the JPMVXY G7 Index is just around 3 points above the record low reached earlier this year. That's a benign valuation of FX risk, which contrasts with the heavy toll the health crisis is having on global economy, with several developed economies expected to see their GDP shrinking by up to 10% over 2020. The backdrop of lower vol levels and improved market liquidity is supportive of RV vol curve trades where dislocations arise from different speed of stabilization of vol parameters.

We reprise a recently introduced screening of vol curves that is based on dynamics between rates and FX, as well as on the *correlation between spot and forward points*. Smoothly upward sloping, the SEK vol curve stands out as being the steepest in in the liquid 6m6m segment for USD-G10 pairs relative to the model (Exhibit 1, LHS). SEK spot underwent a sharp drop in the first two weeks of March, but turned out to be far more resilient than NOK, given the sensitivity to Oil prices of the later one. Our analysts' outlook remains overall defensive on Scandies, but they view SEK to be less exposed to sharp downside growth revisions than other high-beta (see *FX Markets weekly – Assessing relative QE vulnerabilities in G10*, Meggyesi, 1 May).

Exhibit 1. Vol curves model for G10 vol curves based on the spot/rates differentials correlation. Model-based USD/PLN vol curve.

	RD (6M)	Spot Vol	RD vol (6M)	RD spot correl (6M)	RD spot correl (6M) - LT	1y-6m z score	2y-1y z-score
ccy							
EUR	-0.8%	10.6%	0.7%	8.3%	25.7%	0.1	2.7
GBP	-0.1%	15.4%	0.7%	23.9%	23.5%	0.5	2.6
JPY	-0.7%	13.7%	1.2%	17.8%	10.7%	0.0	-0.1
CHF	-1.1%	10.0%	0.8%	-1.5%	11.0%	-0.1	1.7
CAD	-0.1%	11.8%	0.5%	10.5%	22.4%	-0.5	2.5
AUD	0.0%	17.8%	0.7%	17.4%	24.2%	-0.5	0.5
NZD	0.2%	16.3%	1.1%	-2.2%	14.5%	-0.6	0.8
NOK	-0.3%	29.8%	0.8%	6.1%	23.2%	-0.2	-0.2
SEK	-0.3%	15.2%	3.8%	-12.3%	18.0%	1.1	-0.8



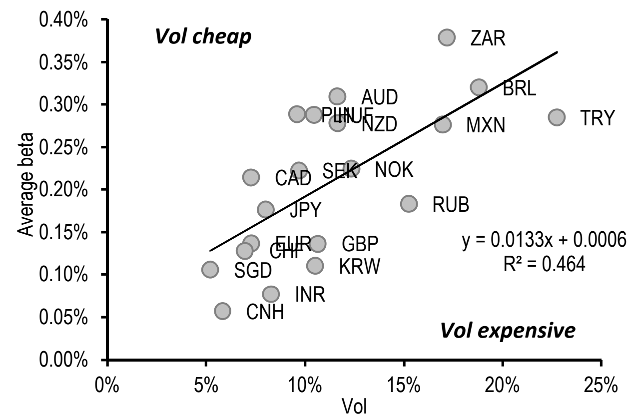
Source: J.P. Morgan

Selling fwd vol on SEK would leave the Gamma-neutral trade nonetheless exposed to the risk from vols repricing higher. An RV vs a high-beta currency mitigates the risk. We already own a CAD vs AUD fwd vols RV. Broadening the search to EM we find PLN to be attractive. PLN flat vol curve offers room for buying forward vol (Exhibit 1, RHS). The EM strategy team is underweight PLN and HUF vs. overweight CZK and

RON (*EM Outlook and Strategy*, Oganes, Goulden, 7 May). Furthermore, keeping both legs of a long/short vol spreads within the European complex reduces the exposure to European political risk that a short fwd vol trade on SEK partially embeds.

The entry point in terms of vol levels is attractive, with a proxy of 6m6m fwd at 9.8 for SEK and at for 9.3 PLN. Generally speaking, long EM / short DM vol trades offer upside potential given the intrinsically higher beta nature of the former, especially when pricing is benign. This is confirmed by a beta to vol analysis (Exhibit 2, LHS), which essentially finds PLN as offering more directional sensitivity to a set of global market risk factors for a comparable level of vol. We currently run in the portfolio a long fwd vol on ZAR vs. short fwd vol on AUD based on similar reasoning. A long fwd vol leg on CAD, while attractive based on the shape of the vol curve, would leave investors exposed to European risk, whereas a long position on USD/CHF would offer less directional sensitivity. The opportunity is supported by a RV analysis on FX implied spreads, although the strength of the dislocation is not very strong (z-score of 0.6).

Exhibit 2. Beta to vol analysis favors owning PNL vol over SEK vol. The trade is also supported based on a dislocation analysis on vol spreads (z-score should read for spreads long the row vol / short the column vol).



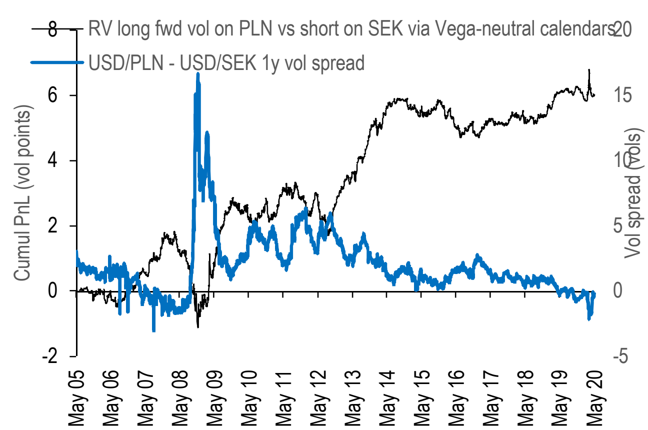
z-scores	USD-SEK	USD-BRL	USD-MXN	USD-TRY	USD-ZAR	USD-PLN	USD-HUF	USD-SGD	USD-KRW	USD-CNH
USD-SEK	0.68	-3.01	-2.42	-0.87	-0.01	0.57	-0.25	0.05	-3.16	0.68
USD-BRL	3.01	2.29	0.28	0.28	2.89	3.55	3.04	2.57	1.74	2.58
USD-MXN	2.42	-0.28	1.79	0.14	1.98	2.44	2.28	1.96	1.44	1.97
USD-TRY	0.87	-0.28	-0.14	1.00	1.01	1.03	0.86	0.86	0.41	1.01
USD-ZAR	0.01	-2.89	-1.98	-1.01	0.56	0.56	-0.10	0.04	-1.28	0.59
USD-PLN	-0.57	-3.55	-2.44	-1.03	-0.56	0.29	-1.11	-0.49	-2.07	0.23
USD-HUF	0.25	-3.04	-2.28	-0.86	0.10	1.11	0.80	0.24	-2.33	0.89
USD-SGD	-0.05	-2.57	-1.96	-0.86	-0.04	0.49	-0.24	1.15	-2.03	1.16
USD-KRW	3.16	-1.74	-1.44	-0.41	1.28	2.07	2.33	2.03	1.71	1.95
USD-CNH	-0.68	-2.58	-1.97	-1.01	-0.59	-0.23	-0.89	-1.16	-1.95	0.26

Source: J.P. Morgan

PLN is one of the cases within EM where the short front / long end calendar construct performs best (Exhibit 3, LHS). The results of the chart, however, correspond to a Vega-neutral / short-Gamma -3m/+12m implementation (delta-hedged), whereas FVAs or pure forward vol trades would correspond to the Gamma-neutral / long-Vega setting. The long-term PnL generated by the RV structure via Vega neutral calendars looks appealing, with the spread suffering some drawdowns over GFC, in May 2012 and over the past two months. However, the historically tight level for the spread should mark an attractive entry point for starting the trade now. We stress that results as displayed in both charts do not take into account trading costs.

Exhibit 3. 15-yr backtests of USD/EM straddle calendar trades (Vega-neutral -3M / +12M, held until expiry. No trading costs). Long-term PnL of Vega-neutral 6m6m SEK vs. PLN looks appealing in the long run.

	Short 3m			*Short 3m / Long 12m*		
Pair	Ret	Vol	Sharpe	Ret	Vol	Sharpe
USD-TRY	7.7%	7.2%	1.07	1.6%	4.1%	0.39
USD-HUF	2.7%	5.0%	0.54	1.0%	2.6%	0.38
USD-PLN	4.1%	4.8%	0.84	2.2%	2.4%	0.90
USD-ZAR	4.6%	6.4%	0.72	2.2%	3.3%	0.68
USD-RUB	4.9%	5.1%	0.96	0.2%	4.3%	0.04
USD-CNH	3.3%	3.8%	0.87	1.4%	2.0%	0.71
USD-KRW	5.9%	6.2%	0.95	3.0%	3.2%	0.95
USD-BRL	6.7%	7.3%	0.91	3.0%	3.7%	0.81
USD-MXN	6.0%	8.0%	0.74	2.7%	4.0%	0.67



Source: J.P. Morgan

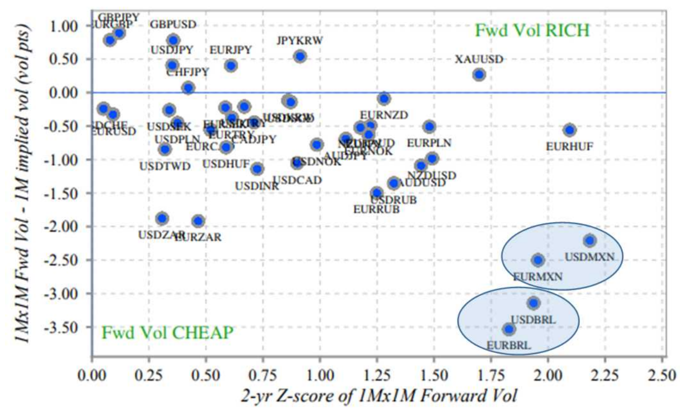
Consider:

- Long 6m / short 12m delta-hedged straddles @9.85ch vs 9.8/10.4indic on USD/SEK vs short 6m / long 12m delta-hedged straddles on USD/PLN @9.7ch vs 9.45/9.95indic, both legs sized to be Gamma-neutral at inception

MXN one-touch put calendar spreads, a defined downside vehicle for fading the MXN vol setup

Latam FX has been one major casualty within EM during the Q1 adverse developments. MXN 3M volatility exploded by ~20vol pts and BRL vol by 12vol in March, overshooting the reaction of the VXY-EM basket. MXN vol curve inversion at 20vols and BRL at 17vols between 1M and 12M expiry both reached the highest since GFC. At 3.5vols and 6.1vol for MXN and BRL, respectively, the current levels of the 1M-12M inversions are still quite notable even as the gamma end of the curve is starting to flatten.

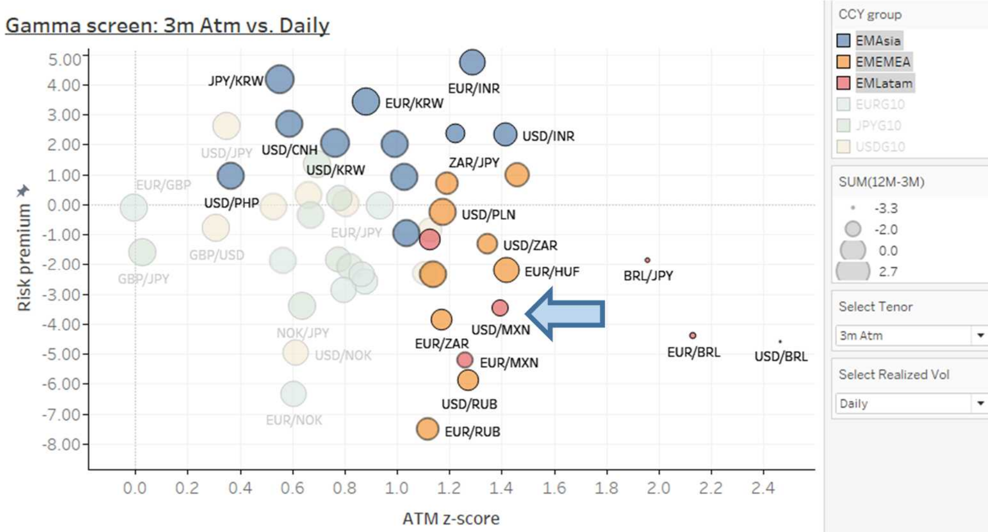
Exhibit 4. Latam front-end volatility spiked, far overshooting the reaction within the rest of the VXY-EM. The repercussions are still felt, with MXN and BRL vol curves stil one of the most inverted.



Source: J.P. Morgan

Meanwhile, our macro analysts note (*EMOS: EM in a two-speed market as COVID-19 impact means tail-risks remain for some*, Oganes and Goulden, May 7) that BCB has been dovish, but that it may not be enough to offset medium-term macro pressures, and they keep their bearish outlook for BRL. They are more supportive of MXN, which they see reaching its weakest point in 2Q before turning more positive in the second half of the year as lockdowns begin to be lifted and some normalization in economic activity starts to take place (June forecast at 24.50, Sep 23.75 and YE at 23.00). Importantly, they note that risk of unwinds have decreased substantially and a build-up in MXN shorts is unlikely given current valuations.

Exhibit 5. Daily spot gyrations continue to pose a major hurdle for fading the inverted front-end vols even as spot is starting to trade within a wide range (at least for MXN).

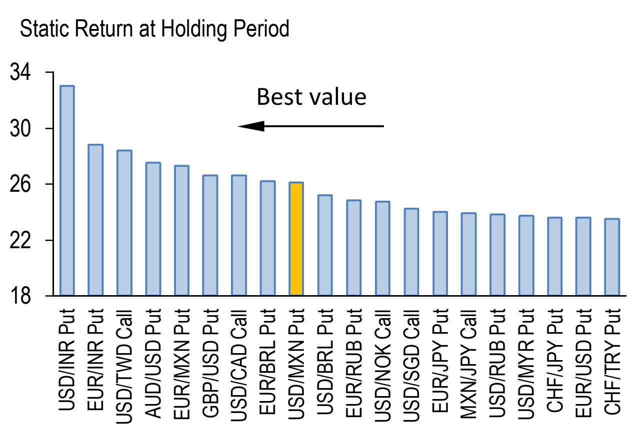


Source: J.P. Morgan

Daily spot gyrations continue to pose a major hurdle for fading the inverted front-end Latam vols. MXN daily trailing realized vol is more than 3vols above the 3M implied even as USD/MXN spot is starting to trade within a wide range. Also our two systematic gamma trading frameworks diverged on Latam. The machine learning framework (*Machine Learning Based Trade Recommendations*, Cheng et al., May 12) is expecting MXN and BRL gamma to perform on the back of the supportive daily vol while the FX short-gamma timing filter (*FX options trading screeners*, Ravagli et al., May 13) is seeing the global environment supportive for a convincing short Latam gamma. The overall backdrop leaves us somewhat reserved from participating in in Latam vol space outright. In our view a better option is to utilize directional structures such as calendar spreads. Calendar structures fit well with the macro view of near-term vulnerability and longer-term MXN supportive backdrop, but they avoid the outright gamma risk. One-touch calendar spreads are just the type of structures that fits the macro timeline, sell the elevated front-end vols to finance longer expiry and also contain an additional appeal of the defined downside. Exhibit 6 ranks USD/MXN OT put calendar spreads favorably on the static carry measure, which assures positive decay if markets remain unchanged. -2M/+4M USD/MXN OT put calendar spread is priced attractively at >8X max payout to cost ratio and ~100% (annualized) static carry at TV of 40% set on the long leg.

Exhibit 6. Thanks to still solid curve inversion USD/MXN comes up favorably on static carry ranking for one-touch calendar spreads.

Short 2M / long 4M tenor. Strikes set to the strike corresponding to TV = 50% on the long leg. Static return determined at 2-mo holding, i.e. at the expiry of the short leg.

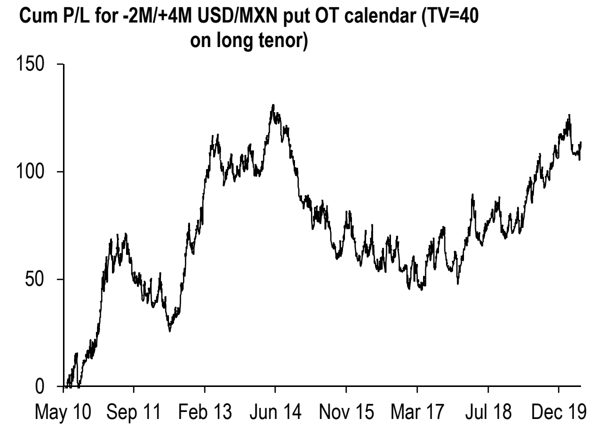


Source: J.P. Morgan

The robust 10-yr historical performance of -2M/+4M at 2-mo holding in Exhibit 6 is supportive. Sizing the notionals in such way that in event of an early exercise one gets paid back the premium (i.e., the 100% rebate structures) is a viable option and max payout / cost ratio just shy of 6X and static carry still in positive land. However, amid the macro backdrop and in light of MXN spot remaining above 23 level since March, we deem the risk from a forceful and surprise MXN appreciation worth the extra pay from equal notional sizing on both legs. We recommend:

Short 6wk @ USD 19.9% vs long 12wk @ USD 32/35% indic. USD/MXN one-touch 22.30 strike put calendar spread spot ref. 24.04

Exhibit 7. Favorable historical performance at 2-mo holding both for -2M/+4M USD/MXN OT put calendar spreads.
-2M/+4M USD/MXN OT put calendars held for 2 months. Equal notionals on both legs. No transaction cost.



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