J.P.Morgan

FX Markets Weekly

Higher rates are more manageable than higher rate volatility

Outlook:

The global bond sell-off is the third worst of the post-Lehman era in yield terms, but the most disruptive judged by the rise in equity/rate/FX volatility and contagion to EM. Disorderly markets are much more problematic for alpha generation than environments of rising Treasury rates or tighter Fed policy. Historically fund managers have been able to generate decent returns when rates normalise but not when rate vol surges. Treasury volatility should peak soon barring a major upside surprise on payrolls, but JGB stability is harder to forecast since that market is in the early stages of price discovery under a new BoJ regime.

Macro Trade Recommendations:

Position selectively for further deleveraging of short-term speculative positions and longer-term bond positions following the biggest rise in interest rate volatility in 2-1/2 years and spillover to more unstable equity/FX conditions, but avoid big positions due to payrolls and unattractive entry points. Sell AUD and IDR vs USD. Buy CHF vs EUR and USD. Took profits intra-period on long USD vs CAD, CHF and JPY.

Emerging Markets FX:

The normalization of US rates threatens continued portfolio flows into EM. On bond positioning and current account imbalances, ZAR ranks as the most vulnerable, RUB as the least. Positioning aside, widening c/a deficits in commodity countries amid growth deceleration is a concern.

FX Derivatives:

VXY has broken higher, but is still not overly expensive vs. our forecasts; deleveraging can continue a while longer. Cash long USD exposures are vulnerable to whipsaws; switch into USD call spreads with RKIs in KRW, BRL and TRY where risk-reversals have blown out recently. EM FX is more vulnerable to bond volatility than G10, and hence are better vols to own on a relative basis; buy 3M3M USD/TRY FVAs.

Technical Strategy:

EUR/USD remains weak with the broad H & S topping pattern still intact. A break of 1.2772 is needed to confirm the negative implications. Cable is also fragile - the setback risk for GBP against CHF and JPY has also increased. The window for a broader JPY recovery is wide open as the key-reversal week down in EUR/JPY last week illustrated. Given the increasing signs of trend exhaustion on the risk front we foresee a revival of CHF which already delivered minor buy-signals. Stay long USD/CAD, CAD/JPY, TRY/JPY, USD/NOK and short EUR/INR and EUR/KRW.

Research notes:

IDR: A concentration of negative risks (Daniel Hui)

Shedding light on Latin America's shadow FX rates (Vladimir Werning, Ben Ramsey and Diego Pereira)

See page 42 for analyst certification and important disclosures.

Global FX Strategy

John Normand AC
(44-20) 7134-1816
john.normand@jpmorgan.com
J.P. Morgan Securities plc

Paul Meggyesi
(44-20) 7134-2714
paul.meggyesi@jpmorgan.com
J.P. Morgan Securities plc

Arindam Sandilya
(1-212) 834-2304
arindam.x.sandilya@jpmorgan.com
JPMorgan Chase Bank NA

Thomas Anthonj
(44-20) 7742-7850
thomas.e.anthonj@jpmorgan.com
J.P. Morgan Securities plc

Bert Gochet
(852) 2800 8325
bert.j.gochet@jpmorgan.com
JPMorgan Chase Bank, N.A., Hong Kong

Felipe Q Pianetti
(1-212) 834-4043
felipe.q.pianetti@jpmorgan.com
J.P. Morgan Securities LLC

Contents

John Normand
(44-20) 7134-1816
john.normand@jpmorgan.com

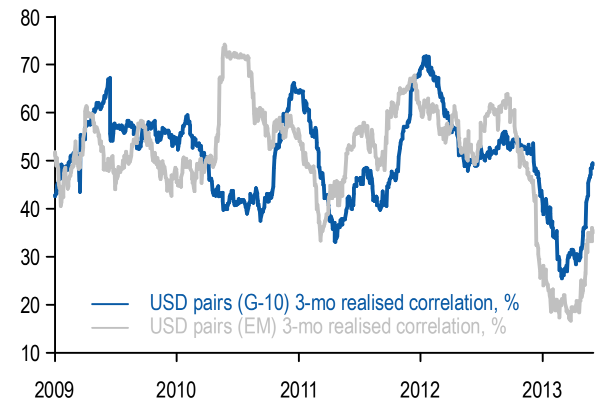
Outlook: Higher rates are more manageable than higher rate volatility

- **May's global bond market sell-off now ranks as the third worst of the post-Lehman era measured in yield terms, but the most disruptive judged by the rise in equity/rate/FX volatility and contagion to emerging markets.**
- **Disorderly rates markets like these have been much more problematic for alpha generation than environments characterized by rising Treasury rates or even tighter Fed policy. Historically fund managers have been able to generate decent returns when rates normalise but not when rate vol surges.**
- **Treasury volatility should peak soon barring a major upside surprise on payrolls. JGB stability is somewhat harder to forecast since that market remains in the early stages of price discovery under a new BoJ regime. More-frequent purchase operations should help (eventually).**
- **Strategy: Position selectively for deleveraging through longs in USD (vs AUD and IDR) and CHF (vs EUR and USD), but keep positions light ahead of payrolls.**
- **Next week: PMIs, payrolls, Fed speak, global trade, four key central banks**

Although May's global bond market rout is only the third worst of the post-Lehman era measured in yield terms,[1] it is probably the most disruptive judged by the rise in equity/rate/FX volatility and contagion to emerging markets. Over the past month the dollar is up 3% trade-weighted compared to its usual decline of about 2% during Treasury sell-offs; the currency is higher across all pairs but CNY and HUF; and consequently correlations have mean-reverted from almost decade lows (chart 1). We have discussed previously the unusual cyclical and technical nature of these FX moves. The US continues to decouple from several hangover economies still trying to rebalance themselves (China, Australia, parts of EMEA), which in turn leaves vulnerable huge position concentrations in several high-yield markets (Australia, New Zealand, parts of EM) as US rates start to normalise. Structural factors like US energy independence or equity/FDI flows have little to do with this year's dollar trend, and probably nothing to do with this month's moves (see *The beginning of the end of easy money implications for the dollar, FX volatility and correlation*, May 24, 2013).

Chart 1: FX correlations have mean-reverted to levels more typical of systemic events like a major US Treasury sell-off

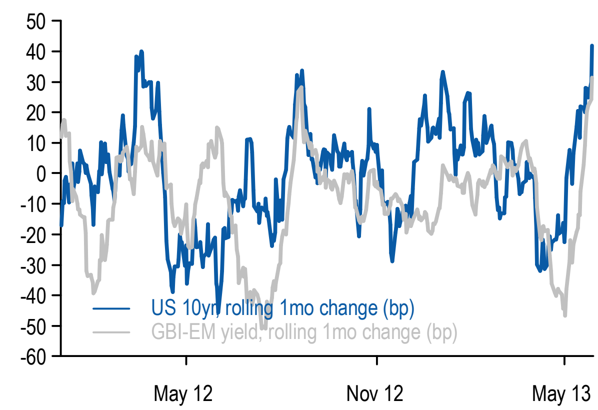
3-mo realized correlations on baskets of G-10 and emerging markets currencies



Source: J.P. Morgan

Chart 2: Brutal moves – a two-sigma sell-off in Treasuries and in EM local currency debt

Rolling 1-month yield changes in 10-yr Treasuries and EM local currencies debt (measured by yield on J.P. Morgan GBI-EM index)



Source: J.P. Morgan

The core view has not changed – this year's broad USD rally is overdone and should narrow over the summer as some growth gaps narrow, particularly versus Europe. But given how disorderly markets have become in May, we examine how much more sensitive alpha generation is to vol spikes versus simply rising bond yields or Fed tightening. The results are only somewhat surprising: rising rate volatility and spikes in rate vol the most problematic environments, rising interest rates the least and rising equity vol and Fed rate hikes in between. Hedge further disorder in global markets by selling AUD and IDR vs USD and by adding CHF longs vs EUR and USD, but avoid too many

[1] US 10-yr yields have risen 45bp since May 1, compared to sell offs of 140bp in spring 2009 (March to June 2009) following the Fed's first QE announcement, and 130bp from October 2010 to February 2011.

defensive trades: rates and rate vol have already repriced considerably for this Fed environment.

Worst in four years based on vols

This month's UST sell-off has been the most vicious of the past four years, once contagion to emerging markets and moves in volatility are considered. US 10-yr yield rises of some 50bp occur fairly regularly, but contagion to EM local markets on this scale is a rarer event (chart 2). This month's vol moves are unusual too, highlighting how much more disorderly the rate sell-off has become. For the first time in four years a US rate move is pushing equity and EM FX volatility higher (table 1), and while US rate vol has always risen during Treasury sell-offs, the magnitude of this month's rally (+28bp in 3Mx10YR swaption vol) is the second strongest of the past six episodes.

Rising Japanese rate vol for unrelated reasons – the BoJ's contradictory promises to buy overwhelming amounts of JGBs to push yields lower and to achieve 2% inflation in two years – isn't helping either. JGBs are almost as volatile as Treasuries now for the first time in decade (chart 3), a development which undermines high-yield currencies since Japanese investors are unlikely to step-up their foreign asset purchases when their domestic markets are becoming higher-yielding as well as unruly. The MoF's weekly portfolio report indeed confirms that Japan has no interest in the rest of the world given the performance of its domestic markets. (They've sold almost ¥2trn in foreign bonds in the past two weeks.)

Historically such volatility has been much more problematic for alpha generation than rising Treasury yields or Fed rate hikes have been. Table 2 highlights these dynamics by comparing the returns of currency managers and hedge funds (global macro, emerging markets, fixed income and commodity) during various market environments. Section A shows average monthly returns over different sample periods depending on data availability. Only two composites publish returns since the early 1990s and can be used to examine patterns across more than one Fed cycle – the Barclay Currency Trader Index for FX funds and the HFR Macro for global macro funds. Several other indices are available since 2005 for FX funds (Barclay BTOP, Parker Blacktree and HFR Currency) and other hedge funds (fixed income sovereign, emerging markets and commodities), so at least can be used to examine patterns when rates or volatility have risen over the past eight years.

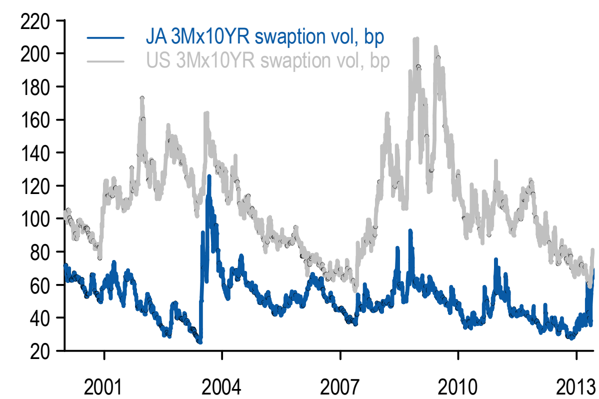
Section B of the table shows average monthly performance in months when the Fed has hiked the funds rate in 1994, 1999 and 2004-06. Section C shows returns in months when US 10-yr rates, both nominal and real, have risen by any amount. Section D shows returns during more extreme rate

Table 1: May 2013 UST sell-off has been more disorderly than previous ones judged by moves in equity, rates and FX volatility
Change in volatility for various asset classes: VIX for equities, VXY G10 and VXY EM for currencies and 3Mx10YR swaption vol for US and Japanese rates

UST sell-off		Equity vol (VIX)	US rate vol (3Mx10YR swaptions)	Japan rate vol (3Mx10YR swaptions)	G-10 FX vol (VXY G10)	EM FX vol (VXY EM)
18-Mar-09	10-Jun-09	-11%	50bp	-2bp	-2.5%	-2.8%
07-Oct-10	08-Feb-11	-6%	20bp	12bp	-2.4%	-1.8%
03-Oct-11	27-Oct-11	-20%	7bp	4bp	-2.4%	-4.1%
24-Jul-12	16-Aug-12	-6%	8bp	7bp	-1.0%	-0.9%
06-Dec-12	11-Mar-13	-5%	5bp	10bp	1.7%	0.0%
01-May-13	30-May-13	2%	28bp	31bp	1.5%	2.6%

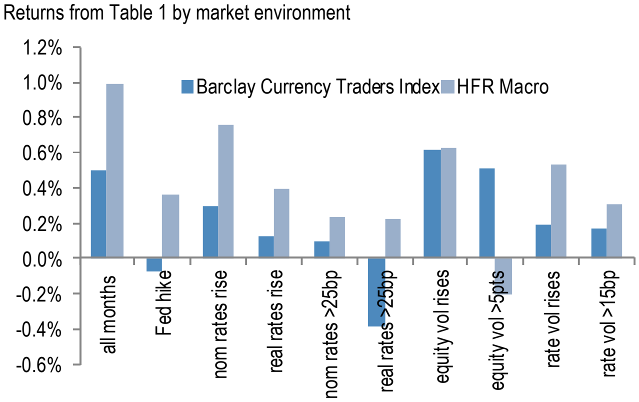
Source: J.P. Morgan

Chart 3: Rare convergence – JGBs are now almost as volatile as Treasuries
3Mx10YR swaption vol in the US and Japan



Source: J.P. Morgan

Chart 4: Rising rates are manageable; large moves in rates and high rate and equity volatility are not
Returns from Table 1 by market environment



Source: J.P. Morgan

John Normand
(44-20) 7134-1816
john.normand@jpmorgan.com

moves, defined as increases of more than 25bp per month (one sigma). Sections E and F provide the same calculations for months when equity and rate vol rise by any amount ands by a more extreme 5 points on the VIX or 15bp on 3Mx10YR swaption vol.

The results are discouraging for the next several weeks over which Fed and BoJ policy are creating so much uncertainty; they are more encouraging for the rest of 2013 if indeed the inevitable further rise in US rates will become more orderly. A few points from the table and chart 4:

- **Manager returns during Fed tightening: 1994 was the only uniformly disastrous experience.** Only two manager composites (Barclay Currency Traders, HFR Macro) provide sufficiently long data history to examine performance over more than one Fed tightening cycle. Currency funds, which had generated monthly returns averaging 0.5% since 1990, generated lower returns when the Fed hiked: -0.6% per month during the 1994 shock tightening, +0.15% per month during the 1999 tightening and +0.22% per month during the 2004-06 tightening. Global macro funds also lost money in 1994 but maintained high monthly returns during the 1999 and 2004-06 cycles, however (about 0.8%).
- **Manager returns when rates rise: the greater the sell-off , the worse the returns.** In months when Treasury yields rise, currency funds have generated below-average returns but still generated alpha (0.3% versus long-term average of 0.5%). Global macro fund performance exhibits a similar pattern, with average monthly returns of 0.76% when yields rise versus 0.99% for the full sample. A **significant increase in rates,** defined as Treasury sell-offs of more than 25bp per month, have been much more challenging for generating alpha. Returns for currency and global macro funds have been positive but only about one-forth as high as the average (table 1 and chart 4).
- **Manager returns when volatility rises: mixed but generally the worst of any environment.** Manager returns when volatility rises are quite variable across fund category. They also depend on whether equities or rates is generating the vol move. **Currency funds**, proxied by the Barclay Currency Trader Index since 1990, appear to have suffered no meaningful reduction in performance when equity vol rises or when the VIX spikes more that five points. But other currency manager indices available since 2005 show much worse performance when equity vol increases. All FX fund composites show lower and sometimes negative returns when rate vol rises. **Global macro funds** show lower-than-average returns when equity or rate vol rises, and even lower returns when equity and rate vol rise significantly. No doubt this pattern owes to carry trade unwinds triggers by interest rate shocks.

Strategy: selectively defensive

These figures make grim reading given levels of realised volatility in rate markets and the event risks ahead of US payrolls. The nearly 30bp increase in US rate vol this month is well beyond the threshold associated with below-average fund returns, even though the rise in the VIX has been more muted (only 1% this month compared to thresholds of 5% usually associated with poor performance). As with UST yields, we expect US rates and rate vol to peak soon since mortgage-related hedging will probably be less than feared, and since investor positioning is probably short duration by now. Next Friday's payrolls figure is a huge wildcard, however (see today's edition of *Global Fixed Income Markets*) . In Japan, we expect too that JGB yields and vols are near a peak too as the BoJ continues to modify its asset purchase program, now conducting ten operations per

Table 2: Currency and hedge fund manager returns during various interest rate and volatility environments

Average monthly returns for each fund manager composite during various market environments. Sample coverage varies depending on data availability.

	A			B			C		D		E		F	
	All months			Months when Fed hikes			Months when nominal US 10-yr rises	Months when real[1] US 10-yr rises	Months when nominal US 10-yr rises >25bp	Months when real[1] US 10-yr rises >25bp	Months when equity vol rises	Months when equity vol rises > 5pts	Months when rate vol rises	Months when rate vol rises > 15bp
	Since 1990	Since 2000	Since 2005	1994	1999	2004-2006								
FX funds														
Barclay Currency Traders Index	0.50%	0.26%	0.15%	-0.60%	0.15%	0.22%	0.29%	0.13%	0.09%	-0.38%	0.62%	0.51%	0.19%	0.17%
Barclay BTOP	NA	NA	0.09%	NA	NA	0.01%	-0.10%	-0.10%	0.06%	-0.14%	-0.06%	-0.09%	-0.11%	-0.03%
Parker Blacktree	NA	NA	0.12%	NA	NA	0.39%	0.03%	0.11%	0.08%	0.14%	-0.14%	0.06%	-0.06%	0.16%
HFR Currency	NA	NA	0.03%	NA	NA	-0.08%	0.16%	0.03%	0.33%	0.43%	-0.32%	-0.46%	-0.23%	-0.24%
Avg of FX manager composites	NA	NA	0.10%	NA	NA	0.14%	0.10%	0.05%	0.14%	0.01%	0.03%	0.01%	-0.05%	0.02%
Hedge funds														
HFR Macro	0.99%	0.50%	0.41%	-0.62%	0.88%	0.81%	0.76%	0.39%	0.24%	0.22%	0.63%	-0.20%	0.53%	0.31%
HFR Fixed Income	NA	NA	0.31%	NA	NA	0.74%	0.50%	0.06%	1.63%	-1.84%	-0.36%	-3.37%	0.06%	-1.51%
HFR Emerging Markets	NA	0.76%	0.66%	NA	NA	1.89%	1.33%	0.27%	3.07%	-1.17%	-0.82%	-4.90%	0.07%	-1.96%
HFR Commodity	NA	NA	0.49%	NA	NA	2.39%	0.72%	0.50%	0.47%	0.73%	0.52%	-0.20%	0.83%	0.45%

[1] real rates derived from 10-yr US TIPS

Source: J.P. Morgan

month than eight and focused on the 1-5yr sector which has been subject to the most selling pressure by domestics. Indeed, the BoJ must adjust its program until its pushes yields lower, since without lower yields, Japanese capital outflows are unlikely to occur, which in turn limits the yen's downside, the Nikkei's upside and the country's broader reflation strategy.

Our strategy therefore remains selective. Higher vol is clearly more challenging that just a rising rate environment or even a Fed tightening environment, yet rates and vols are probably nearing a near-term peak. Hence we add only a handful of defensive trades rather than position for broad deleveraging.On the one hand we sell AUD and IDR vs USD, capturing current account vulnerabilities in both, bond leverage in the case of AUD and additional idiosyncratic factors in IDR (cessation of coal exports to China?). On the other, we buy CHF vs EUR and USD, as CHF has been used as a key financing currency in recent months, pushing CHF to heavily oversold levels versus short-term valuation metrics. See *Macro Trade Recommendations* on page 8.

Next week: PMIs, payrolls, Fed speak, global trade, four key central banks

Next week is huge on the data front given PMIs globally, payrolls and Fed speakers in the US and trade data in several countries.

In most countries **PMI** manufacturing surveys are reported Monday and non-manufacturing surveys on Wednesday. The exceptions are China (NBS PMI manufacturing Saturday, Markit manufacturing and non-manufacturing Monday); Mexico (both PMIs print Monday); and Japan (only reports PMI services on Wednesday).

In the **US** other key reports are ADP employment and factory orders Wednesday plus payrolls on Friday. Four Fed governors speak next week: Williams (non-voting, dove) Monday, George (voting, hawk) and Fisher (non-voting, hawk) Tuesday and Plosser (non-voting, hawk) Thursday. In **Latin America**, the focus will be on Brazil's trade balance Monday and industrial production Tuesday; Chilean economic activity Thursday; and Brazilian IPCA inflation plus Chilean trade Friday.

In the **Euro area**, German data are the only important ones: manufacturing orders Thursday and trade plus industrial production Friday. In the **UK**, watch BRC retail sales Tuesday and the trade balance Friday. CEEMEA reports mainly trade and IP figures: Turkish CPI Monday, Czech current account Wednesday, and Czech IP, Hungarian IP and Hungarian trade Friday.

Japan is quiet datawise outside of the PMI services release, though bonds auctions on Tuesday (10-yr) and Thursday (30-yr) are important tests for whether the BoJ's decision this week to increase the frequency of JGB purchases will succeed in reducing yields and volatility. Obviously failure implies a stronger yen and weaker Nikkei.

There are no major Chinese releases other than PMIs. **Non-Japan Asia** is mostly about trade balances – Indonesia Monday and Malaysia and Taiwan Friday. Next week is big for **Australia**, with retail sales Monday, current account Tuesday and trade balance Thursday.

Four central banks meet next week: RBA Tuesday, ECB and Bank of England Thursday and Banxico Friday. None should adjust policy, though a cut is 20% priced in Australia. No move is discounted in other markets.

Table 4: Main Trade Recommendations

Trade type	Position
Macro Portfolio	
Cash (new)	— Enter **short AUD/USD** (0.9560) and **long USD/IDR** (9877). **Sell EUR/CHF** (1.2430) and **USD/CHF** (0.9590)
Cash (existing)	— **Took profits long USD/JPY** (+2.8%), **long USD/CAD** (1.0%) and **long USD/CHF** (0.8%). — **Stopped out of long MXN/JPY** (-3.8%) and **short JPY/KRW** (-2.6%).
Options (new)	— None
Options (existing)	— Hold a **2-mo worst-of JPY put** vs **(AUD, BRL, ZAR) ATMF basket call**. — Hold **2-mo AUD/USD** 1.07x1.09x1.11 **1x2x1 call fly** and **2-mo NZD/USD** 0.8750-0.90 **1x2 call spread**. — Hold **2-mo EUR/SEK** 8.30 **put RKO** 8.05 vs sell 8.60 **call**, and short **2-mo EUR/NOK strangle** 7.37-7.64. — Hold **2-mo USD/BRL 1x2 put spread** 1.95-1.90.
Derivatives Portfolio (relative value)	
RV (new)	— **Buy 3M3M USD/TRY FVA**
RV (existing)	— Hold short **2-mo USD/INR vol swap** entered May 3, strike=7.6vol. — Hold long **EUR/KRW** vs short **USD/KRW 3-mo vol swap spread**, vega neutral, entered May 3 at 1.35vol. — Hold long **USD/NOK** vs sell **EUR/NOK 2-mo straddle spread**, beta weighted, entered May 3 at -1.45vol. — Hold a long **2-mo EUR/PLN** 4.21 call vs short **EUR/RUB** 41.95 **call**. — Hold short **3-mo 25D USD/CLP call**, delta-hedged. — Hold **long 1Yx1Y** vs **short 6Mx3M FVA** spread in **CHF/JPY**. Hold back-end **EUR/USD** calendar spreads (long 1-yr vs. short 5-yr straddles). — Hold **6-mo** long **CHF/JPY** vs short **USD/JPY** straddle spread, delta-hedged. — Hold **9-mo DNTs** in **NZD/SEK**, and **GBP/CAD**. — Hold **long silver** vs **short gold 1-yr vol swap spread** and **short GBP vs JPY 1-yr correlation.**
Technical Portfolio	
Cash (new)	— None
Cash (existing)	— **Close short EUR/MXN** from March 13 (-3.61%). **Stopped out of short EUR/AUD** from April 26 (-2.4%). Stay long **USD/CAD**, **USD/NOK**, **CAD/JPY,** and **TRY/JPY** and short **EUR/KRW, EUR/AUD and EUR/INR**.

Source: J.P. Morgan.

John Normand
(44-20) 7134-1816
john.normand@jpmorgan.com

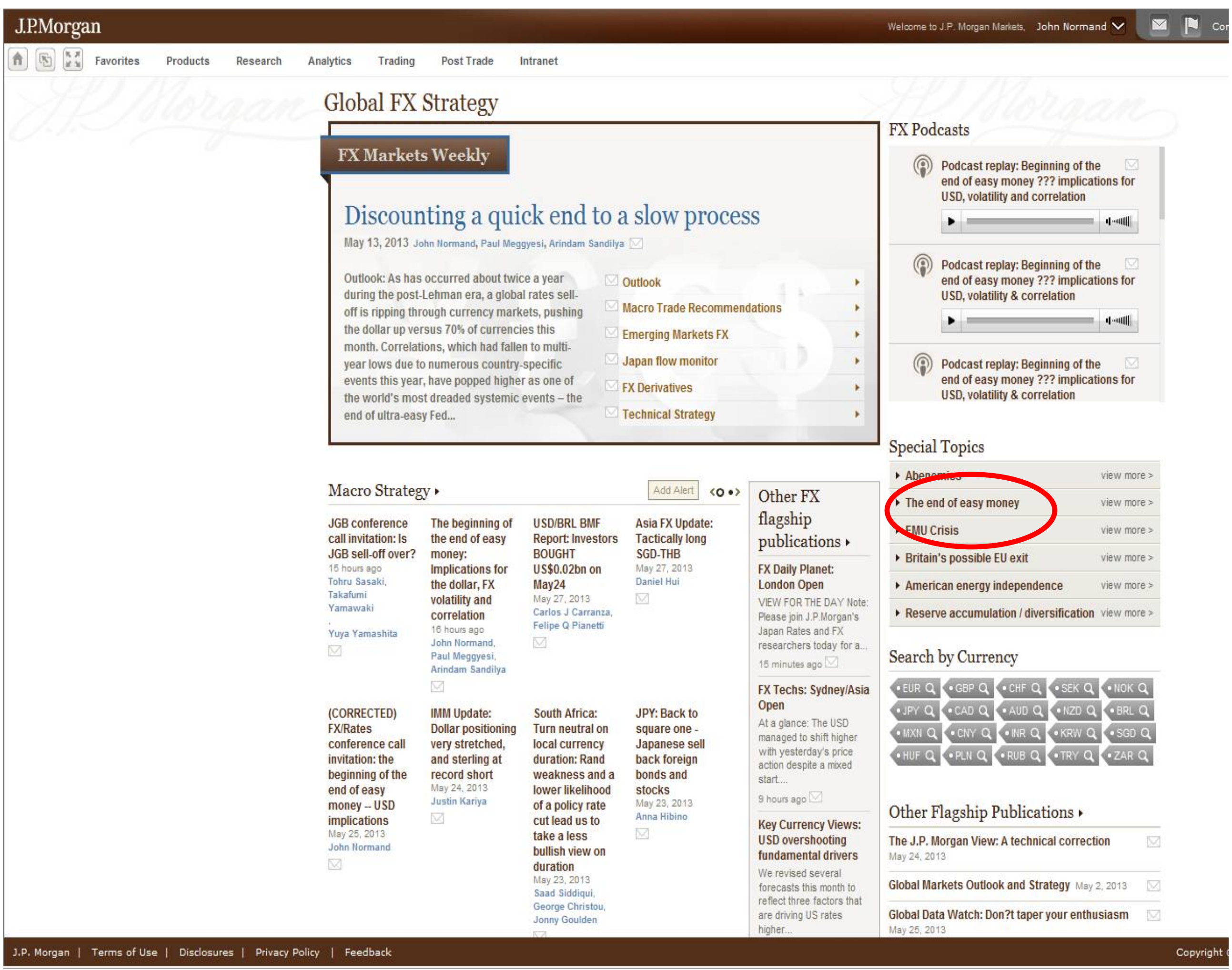
Preparing for the end of easy money on J.P. Morgan Markets (www.jpmm.com)

Given ongoing market focus on rising interest rates and the spillover to currency markets, we've added a **Special Topics** section called **The end of easy money** to the **Global FX Strategy** page of J.P. Morgan Markets.

This section archives key research reports from FX, Rates and Economics around the issue of rate normalization. It will be updated with longer shelf-life publications, similar to the **Abenomics** section just above it for cross-market research on Japan's policy experiment.

To access the **Global FX Strategy** page, go to **www.jpmm.com**, then select the menus **Research > FX > Global FX Strategy.**

On the right-hand side of the webpage, click the **End of Easy Money** banner under **Special Topics** to scroll through the most recent reports. Click the **more** button to see all reports



Paul Meggyesi
(44-20) 7134-2714
paul.meggyesi@jpmorgan.com

Macro Trade Recommendations

- **Position selectively for further deleveraging following the biggest rise in interest rate volatility in 2-1/2 years and the attendant spillover to more unstable conditions in equity and FX. But avoid large positions given US payrolls next week.**
- **Position imbalances take two forms: 1) Short-term, predominately long USD vs G10, especially JPY, CHF and EUR; 2) Longer-term bond investments in high-yield, low-credit risk markets in both DM (antipodeans) and EM (MYR, MXN, ZAR). Currencies are vulnerable where an overhang of bond investments collides with a large current account deficit (ZAR, TRY, and AUD).**
- **Sell AUD and IDR vs USD. Buy CHF vs EUR and USD.**
- **Closed Trades: Took profits on long USD/CAD (+1.0%) and USD/CHF (0.8%) on May 16 and on long USD/JPY (+2.8%) May 29. Stopped out of short JPY/KRW (-2.65%) and long MXN/JPY (-3.8%).**
- **Existing trades. 2-mo worst-of (AUD, BRL, ZAR) basket call/JPY put; 2-mo limited upside structures on commodity FX and carry (AUD/USD call fly, 1x2 NZD/USD call spread, 1x2 USD/BRL put spread); 2-mo EUR/NOK strangle (sold) and bearish EUR/SEK risk-reversal with RKO.**

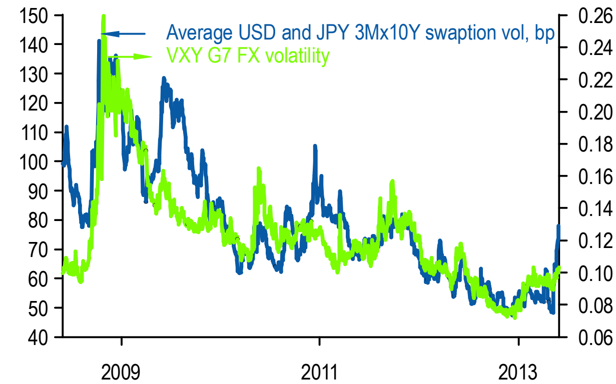
Markets have been shaken up by an injection of interest rate volatility as Fed tapering talk and continued uncertainty about the direction of JGB yields (reflation versus massive BoJ buying) have boosted joint USD-JPY rate volatility by the largest amount since end-2010. What was a low volatility, USD-positive grind higher in US yields has morphed into something more unstable, especially in EM. Deleveraging is now dominating in FX, although this process is more nuanced than usual since it involves the simultaneous squeeze on both short-term speculative positions (predominately long USD versus G10 currencies, most notably CHF, EUR and JPY) and longer-term bond positions in high-yield or low credit-risk markets in DM and EM. The result is a more variable performance from the dollar which is down this week against the key G10 funding currencies yet higher against those currencies where the overhang of bond positions is most pronounced. Where a high concentration of bond positions collides with a serious current account deficit, the currency adjustment has been especially brutal (ZAR).

FX trade recommendations

Trade recommendations in this section are mostly spot, for easier incorporation into the monthly *Global Markets Outlook & Strategy* (*GMOS*), which outlines J.P. Morgan's flagship model portfolio across bonds, credit, equities, fx and commodities. Some directional option trades are included here as alternatives to cash position, and as a complement to relative value trades discussed in *FX Derivatives* section of this publication (p. 16).

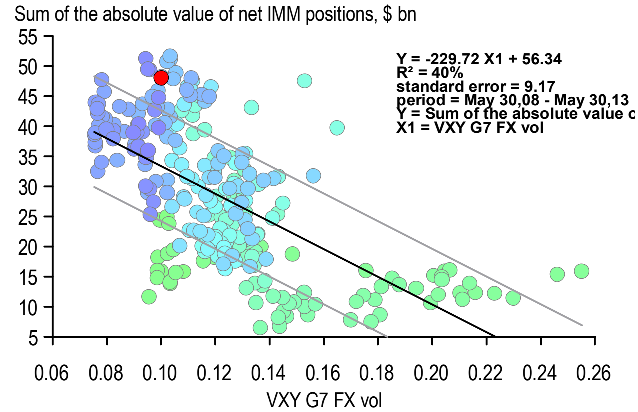
Current recommendations are marked to market at Friday afternoon London time. A complete inventory of closed trades is presented at the end of this section along with performance statistics such as success rates and average returns per trades.

Chart 1: G7 FX volatility is around 2 ppt too low (12% not 10%) given the largest rise in interest rate volatility since December 2010.



Source: J.P. Morgan

Chart 2: Speculative FX positions as of last week were around 40% too large for the level of FX volatility. This week's deleveraging in G10 will have partially eliminated the (long USD) position overhang, but risks remain. Higher volatility is positive for G10 funding FX.



Source: Bloomberg, J.P. Morgan

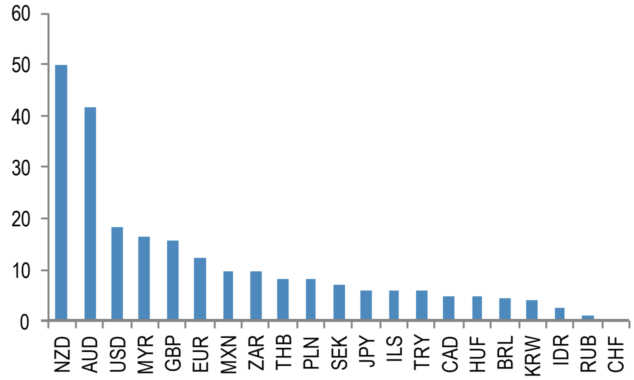
We recommend positioning for an extension of deleveraging this week albeit only selectively and in small size given the proximity of US payrolls next week. FX volatility still has some scope to rally to catch up with the higher level of level of interest rate volatility (chart 1), which will continue to exert pressure on speculative positions in FX (net IMM positions were 40% too high for the level of FX volatility – chart 2). This dynamic is broadly negative for the USD against the G10 funding-currencies given the extent to which the market bought USD on tapering talk – we sell USD/CHF given the extent to which the speculative market concentrated on USD/CHF as a pro-dollar vehicle over the past month. EUR/CHF is also a sell as USD/CHF buying has caused this cross to overshoot short-term fair-value more than any other G10 pair. Stronger economic data from Switzerland (Q1 GDP +2.5% saar) provides reassurance that the SNB will not lift the FX floor at its mid-June meeting.

Other trades we recommend emphasize the risk to those currencies where there is both a high concentration of foreign bond investors and a major current account deficit that will be harder to finance against a backdrop of higher yields and yield volatility in the G3 (charts 3 and 4). ZAR is the stand-out in this regard but has already moved too far to sell. Instead we enter a short position in AUD vs USD. While NZD has a more vulnerable external position than AUD, both the economic and monetary policy cycle in NZ are more supportive for the currency, hence our preference to sell AUD. We also buy USD/IDR on idiosyncratic domestic vulnerabilities (risks to the current account from Chinese coal demand, concentration of bond redemptions and coupon payments in June).

Trades

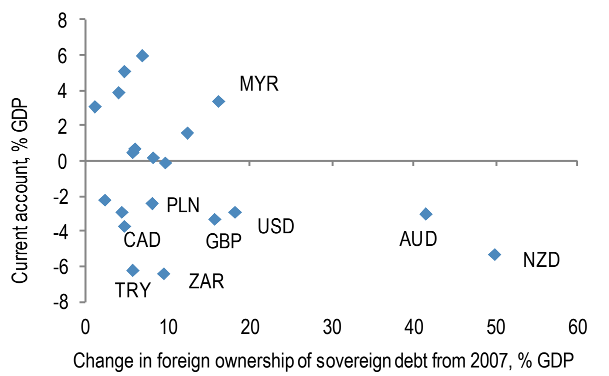
- **Sell AUD vs USD**
  AUD has been a key beneficiary of financial repression in the west, with foreign bond investors placing 42% of GDP in AGCB since end-2007. Much of this money may have come from sticky investors (central banks and SWFs), which limits the risk of outright repatriation as yields in the core markets rise. Nonetheless, the yield back-up, especially if it heralds the end of financial repression, begs the question of how easily Australia will be able to finance its external deficit going forward. Add to this the secular concerns which continue to dog AUD (less growth and less-investment intensive growth in China; an uncertain transition from a mining-centric growth model in Australia) and the near-term outlook for AUD remains negative. This week's back-up in AUD/USD provides better entry levels for the trade. Next week is important for AUD, with not only US payrolls but also China PMI on Sunday and the RBA on Tuesday (a cut is 20% priced – J.P. Morgan expects no change).
  — **Sell AUD/USD at 0.9560 with a stop at 0.9880.**

Chart 3: Fed tapering would signal an end to financial repression and the heavy inflows to high-yield or low credit risk bond markets which this has sponsored.
Change in foreign ownership of domestic sovereign debt, Q4 2007 to present. Percent of local GDP.



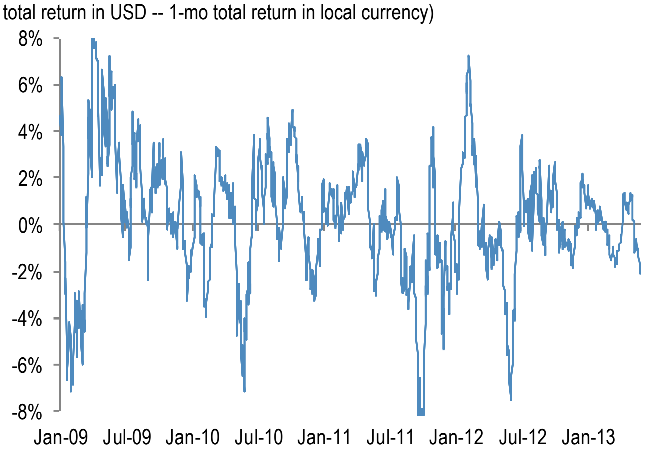
Source: National sources; J.P. Morgan

Chart 4: Currencies are vulnerable where the bond overhang is most pronounced and the current a/c least forgiving



Source: National sources; J.P. Morgan

Chart 5: The sell-off in EM FX (2% over 1-month) is typical for a non-systemic event. The move has further to run if Fed tapering and higher bond yields develop into a systemic threat
1-month currency returns from the GBI-EM Global Diversified bond index (i.e 1-mo total return in USD -- 1-mo total return in local currency)



Source: J.P. Morgan

- **Buy CHF vs EUR and USD**
The FI sell-off puts pressure on the currencies of current account deficit countries that hitherto enjoyed abundant bond inflows to finance themselves. The natural corollary to this should be upward pressure on surplus currencies such as CHF. The market, by contrast, has been assuming the exact opposite, that rising yields and stronger stock markets would stimulate capital outflows from Switzerland, which would make recycling of Switzerland's overwhelming current account surplus substantially easier and in turn undermine the franc. This week's deleveraging casts doubt on the latter scenario, and we expect further unwinding of speculative shorts in the franc. Franc selling has been heavily concentrated on USD/CHF; nonetheless, a further paring back of risk should serve to weaken EUR/CHF, which is the most overvalued G10 cross on out short-term metrics. The strong gain in Q1 GDP (+2.5% saar) should preclude the usual run-up in EUR/CHF ahead of the SNB's quarterly policy meeting on June 20 SNB – with Switzerland outperforming not only the euro area but also Germany to a considerable extent, it is hard to see what the SNB's pretext for raising the EUR/CHF floor could be (or how it could justify this to its international partners)
  - **Sell USD/CHF at 0.9585. Stop at 0.9750.**
  - **Sell EUR/CHF at 1.2430 with a stop at 1.2590.**

- **Sell IDR vs USD**
IDR is vulnerable due to: 1) A weak external position (current account -2.25% of GDP) will be undermined by China's plan to fully ban imports of low-grade coal, 93% of which comes from Indonesia (adding 0.5% to the deficit); 2) Reform of fuel subsidies is unlikely to repair weak domestic confidence in macro-economic policy, even if BI responds with a rate hike; 3) There is a concentration of bond redemptions, coupon and dividend payments in June. (See: *IDR FX Strategy: A concentration of negative risks*, Daniel Hui, May 30, 2013).
  - **Buy USD/IDR at 9877, stop 9760**.

- **Took profits on long USD vs CAD, CHF and JPY.**
We exited this basket of long dollar trades intermittently over the past two weeks as USD started to overshoot (vs Europe) and rising rate volatility turned an orderly dollar rally into a an exercise into less positive deleveraging.
  - **Long USD/CAD. Bought May 10 at 1.0080, took profits May 16 (+1.0%).**
  - **Long USD/CHF. Bought may 10 at 0.9550, took profits May 16 (+0.8%).**
  - **Long USD/JPY. Bought April 26 at 98.20. Closed May 29 for a profit of 2.8%.**

- **Stopped out of short JPY vs KRW and MXN. Hold vs a high-yield basket in a now worthless basket**
We switched funding for these EM trades from USD to JPY on May 10, assuming that a weaker JPY would compensate for any EM wobbles caused by higher US yields. We were wrong on both counts – as a funder the yen has rallied sharply on deleveraging flows, while MXN has suffered from its fundamental popularity amongst overseas investors (as ever in deleveraging, positioning is everything, fundamentals count for nought).
  - **Long MXN/JPY. Bought May 10 at 8.42, stopped out May 23 for a loss of 3.8%.**
  - **Short JPY/KRW. Sold May 10 at 10.91, stopped out May 24 for a loss of 2.6%**.
  - **Hold a 2-mo worst-of (AUD, BRL, ZAR) call/JPY put**. Bought April 12 for 1.59%. Worth 0.0%.

- **Stay short a 2-mo EUR/NOK strangle**
International positions in NOK are light and central bank policy is sensitive to NOK in both directions, all of which adds up to a range in EUR/NOK, in our opinion. Unless next week's PMI and IP data are particularly weak, we doubt whether EUR/NOK will exceed the high-strike.
  - **Sold a 2-mo EUR/NOK 7.37-7.64 strangle** on April 12 for 0.57%. Worth 0.35%.

- **Hold a bearish 2-mo EUR/SEK risk reversal**
EUR/SEK has consolidated in a 8.50-8.75 range for five weeks now. While the premise of this trade was wrong (SEK benefitting from cyclical lift), we doubt whether the converse will be true - a sharp rally in EUR/SEK from here. As such, we hold the trade, even though the call that we sold is now at-the-money.
  - **Hold a bearish 2-mo EUR/SEK risk-reversal with a downside RKO** (8.30 put, RKO 8.05, versus a 8.60 call). Bought April 4 for 0.20%. Worth -0.34%.

- **Hold ratio call spreads in AUD, BRL and NZD v USD**
We thought carry trades would fade gracefully due to the slow-acting forces of overvaluation and policy pushback, hence these limited upside structures. The end, when it came, was rather more spectacular.

— **Hold a 2-mo AUD/USD call fly (1.07-1.09-1.11 in 1x2x1).** Bought April 12 for 0.27%. Worth 0.00%.
— **Hold a 2-mo NZD/USD 0.8750-0.9000 1x2 call spread.** Cost 0.39% on April 12; worth 0.00%
— **Hold a 2-mo USD/BRL 1.95-1.90 1x2 put spread.** Cost 0.33% on April 12. Worth 0.00%.

Table 1.Current FX spot recommendations and P&L

Active trades are marked to market on Friday afternoon London time.

Long	Short	Entry date	Entry level	Current level	Stop loss	P&L since entry	Comments
USD	JPY	26/04/13	98.20	100.95	95.55	2.8%	Take profit
USD	CAD	10/05/13	1.008	1.018	0.980	1.0%	Take profit
USD	CHF	10/05/13	0.955	0.963	0.928	0.8%	Take profit
KRW	JPY	10/05/13	10.91	11.20	11.20	-2.6%	Stopped out
MXN	JPY	10/05/13	8.420	8.100	8.100	-3.8%	Stopped out
USD	AUD	31/05/13	0.956	0.956	0.988	0.0%	New trade
CHF	USD	31/05/13	0.959	0.959	0.975	0.0%	New trade
CHF	EUR	31/05/13	1.243	1.243	1.259	0.0%	New trade
USD	IDR	31/05/13	9877	9877	9670	0.0%	New trade

Table 2. Current FX derivatives (directional/non-RV) recommendations and P&L

Active trades are marked to market on Friday afternoon London time.

Description	Entry date	Expiry date	Days to expiry	Entry level	Current level	P&L since entry*	Comments
Buy 2-mo AUD/USD call fly 1.07-1.09-1.10 in 1x2x1 AUD notionals	12/04/13	13/06/13	13	0.29%	0.00%	-0.29%	Hold
Buy 2-mo NZD/USD 1x2 ratio call spread 0.8750 vs 0.9000	12/04/13	13/06/13	13	0.39%	0.00%	-0.39%	Hold
Buy 2-mo EUR/SEK 8.30 put RKO 8.05, sell 8.60 call	12/04/13	13/06/13	13	0.20%	-0.34%	-0.54%	Hold
Sell 2-mo EUR/NOK 7.37-7.64 strangle	12/04/13	13/06/13	13	0.57%	0.35%	0.22%	Hold
Buy 2-mo Worst-of JPY put vs (AUD, BRL, ZAR) call, ATMF	12/04/13	13/06/13	13	1.59%	0.00%	-1.59%	Hold
Buy 2-mo USD/BRL 1x2 ratio put spread 1.95-1.90	12/04/13	13/06/13	13	0.33%	0.00%	-0.33%	Hold

* P&L in % of asset

Paul Meggyesi
(44-20) 7134-2714
paul.meggyesi@jpmorgan.com

I. Performance statistics 2008 – 2013

	2013	2012	2011	2010	2009	2008	2008-2013 avg
***I. Macro Trade Recommendations* portfolio**							
Cash							
# of trades	23	28	42	89	61	85	328
Success rate	70%	61%	60%	53%	64%	59%	59%
Average return per trade (%, unweighted)	1%	0.2%	0.0%	0.0%	1.0%	2.0%	0.8%
Average holding period (calendar days)	20	26	25	23	20	31	25
Derivatives (non-digital)							
# of trades	16	33	27	27	21	3	127
Success rate	31%	85%	74%	62%	62%	0.0%	65%
Average return per trade (%, unweighted)	0%	0.3%	0.9%	0.3%	0.5%	-0.6%	0.4%
Average holding period (calendar days)	75	58	71	54	59	66	62
Derivatives (digital)							
# of trades	3	5	10	4	21	5	48
Success rate	67%	80%	50%	25%	38%	20%	44%
Average return per trade (%, unweighted)	25%	11.9%	-0.9%	-6.7%	-4.7%	-3.6%	-0.4%
Average holding period (calendar days)	60	38	87	60	55	54	61
***II. FX Derivatives* portfolio (relative value)**							
Vol r.v							
# of trades	17	46	37	45	32	13	190
Success rate	65%	52%	62%	69%	63%	77%	63%
Average return per trade (unweighted)*	0.3	0.1	0.1	0.7	0.1	0.3	0.3
Average holding period (calendar days)	0	84	44	99	73	53	68
Vol plus directional r.v							
# of trades	7	25	16	4	-	-	52
Success rate	29%	60%	75%	50%	-	-	60%
Average return per trade (bp, unweighted)	-5	17.8	12	-8	-	-	11.1
Average holding period (calendar days)	131	59	27	50	-	-	58
Digital							
# of trades	-	-	-	-	-	3	3
Success rate	-	-	-	-	-	33%	33%
Average return per trade (%, unweighted)	-	-	-	-	-	8%	8%
Average holding period (calendar days)	-	-	-	-	-	33	33
***III. Technical Strategy* portfolio**							
# of trades	18	20	33	52	46	87	256
Success rate	56%	40%	58%	46%	57%	43%	48%
Average return per trade (%, unweighted)	0.4%	0.4%	0.1%	0.0%	0.1%	0.2%	0.1%
Average holding period (calendar days)	181	114	54	36	10	9	28

*P&L in vol points

Chart 1: 2008-2013 performance summary: Average returns per trade

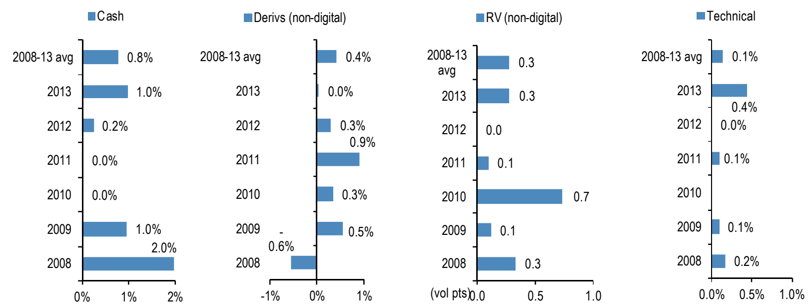
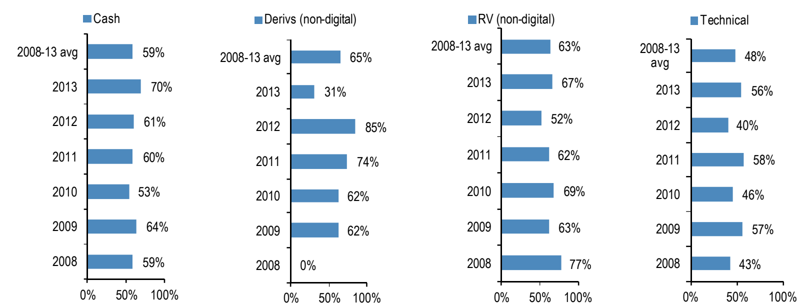


Chart 2: 2008-2013 Performance summary: Success rate by type of trade



Paul Meggyesi
(44-20) 7134-2714
paul.meggyesi@jpmorgan.com

II. Closed trades 2013

Macro Trade Recommendations portfolio

Cash

Long	Short	Entry date	Entry level	Exit date	Exit level	P&L
CHF	JPY	14/12/12	91.95	11/01/13	97.45	6.0%
NOK	JPY	14/12/12	14.85	16/01/13	15.80	6.4%
EUR	JPY	11/01/13	118.5	08/02/13	124.1	4.7%
NOK	JPY	25/01/13	16.47	08/02/13	16.40	1.9%
EUR	GBP	11/01/13	0.824	08/02/13	0.851	3.3%
USD	JPY	11/01/13	89.00	15/02/13	93.64	5.2%
SEK	GBP	25/01/13	10.20	15/02/13	10.20	4.0%
CAD	AUD	01/02/13	1.040	15/02/13	1.065	0.2%
SEK	GBP	01/03/13	9.690	14/03/13	9.650	0.4%
NOK	GBP	08/03/13	8.546	19/03/13	8.820	-3.1%
EUR	JPY	08/03/13	125.2	18/03/13	122.5	-2.2%
USD	JPY	08/03/13	95.50	02/04/13	93.40	-2.2%
CAD	JPY	08/03/13	93.50	23/03/13	91.65	-2.0%
USD	GBP	01/03/13	1.504	12/04/13	1.539	-2.3%
USD	THB	01/03/13	29.84	12/04/13	29.05	-2.6%
USD	JPY	05/04/13	96.07	16/04/13	96.40	0.3%
AUD	JPY	05/04/13	100.1	16/04/13	101.5	1.4%
BRL	JPY	05/04/13	47.70	16/04/13	48.50	1.7%
MXN	USD	03/05/13	12.11	10/05/13	12.05	0.5%
USD	CAD	10/05/13	1.008	16/05/13	1.018	1.0%
USD	CHF	10/05/13	0.955	16/05/13	0.963	0.8%
USD	JPY	26/04/13	98.20	29/05/13	101.0	2.8%
MXN	JPY	10/05/13	8.420	23/05/13	8.100	-3.8%

Derivatives (non-digital)

Non-Digital Options	Entry date	Entry level	Exit date	Exit level	P&L (%)
Buy 3-mo USD/JPY bullish seagull: 83.50-86.50 call spread vs 78.50 put	21/11/12	0.23%	11/01/13	3.00%	2.78%
Buy 2-mo Worst of USD/JPY 89.22 call and AUD/USD 1.0567 call	11/01/13	0.37%	01/02/13	0.19%	-0.18%
Buy 2-mo EUR/GBP 0.8638 call, sell EUR/CHF 1.26 call	25/01/13	0.00%	08/02/13	0.33%	0.33%
Buy 6-mo NOK call/SEK put, stike 1.1850, RKO 1.2350	21/11/12	0.37%	15/02/13	0.09%	-0.29%
Buy 1-mo USD/JPY call 94 RKO 96.25	15/02/13	0.13%	08/03/13	0.00%	-0.13%
Buy 1-mo GBP/SEK 9.70 putRKO 9.50	15/02/13	0.14%	08/03/13	0.00%	-0.14%
Buy 1-mo EUR/JPY 126 call RKO 130	08/02/13	0.15%	11/03/13	0.00%	-0.15%
Buy 2-mo NZD/USD 0.82-0.79 putspread vs sell 0.85 call RKI 0.8660	08/02/13	0.00%	10/04/13	0.00%	0.00%
Buy 2-mo EUR/GBP 0.8700-0.8950 call spread, sell	15/02/13	0.21%	17/04/13	0.00%	-0.21%
Buy 12-mo 1.190-1.110 EUR/CHF putspread, sell 1.255 call, 1x1x1 not	11/05/12	0.13%	03/05/13	0.00%	-0.13%
Buy 6-mo 8.90-8.60 GBP put/NOK call spread	21/11/12	0.71%	03/05/13	0.25%	-0.46%
Buy 2-mo NOK/SEK 1.13-1.16 call spread, sell 1.11 put RKI 1.075	08/03/13	0.18%	03/05/13	0.09%	-0.09%
Buy 6-mo OTMS1% Worst-of USD put vs	21/11/12	0.55%	10/05/13	0.00%	-0.55%
Sell 2-mo USD/JPY 102.0 call, buy 2-mo AUD/JPY 107.6 call	12/04/13	-0.12%	10/05/13	-1.07%	-0.96%
Buy 2-mo USD/KRW 1100-1070 putspread, sell	12/04/13	0.00%	10/05/13	0.56%	0.56%
Buy 3-mo USD/CNH 50D-15D putspread (strikes 6.2109 vs 6.1616)	12/04/13	0.28%	10/05/13	0.52%	0.24%

Derivatives (digital)

Digital Options	Entry date	Entry level	Exit date	Exit level	P&L (%)
Buy 3-mo JPY/KRW one-touch, strike 12.50	21/11/12	23.5%	27/12/12	100.0%	76.5%
Buy 6-mo Dual At-Expiry-Digital EUR/NOK<=7.30, EUR/GBP>=0.81	21/11/12	13.5%	01/02/13	18.7%	5.2%
Buy 3-mo Dual At-Expiry Digital: EUR/NOK<=7.30, EUR/JPY>=105	21/11/12	16.8%	01/02/13	8.6%	-8.1%

FX Derivatives portfolio (relative value)

Vol r.v

Trade	Entry date	Entry level	Exit date	Exit level	P&L (vol)
Sell 3M in 6M USD/TRY FVA	22/11/12	9.7	11/01/13	7.7	2.0
Sell USD/RUB 1M in 2M FVA	07/12/12	8.8	25/01/13	8.0	0.8
Sell USD/PLN 1M in 2M FVA	07/12/12	12.5	01/02/13	10.6	1.9
Buy EUR/JPY vs. USD/JPY 3M vol swap spread, equal JPY vegas	10/01/13	2.4	28/02/13	5.4	3.0
Sell USD/INR 1M vol swap hedged with 1M1M FVA (1:1 vega ratio)	25/01/13	-0.4	25/02/13	-2.5	2.1
Sell USD/MXN 1M vol swap, buy 1M1M FVA	11/02/13	1.2	14/03/13	1.0	-0.1
USD/JPY long 1Y vs short3M vega-neutral straddle calendar	11/01/13	-0.1	15/03/13	0.6	0.6
Sell AUD/USD 6Mx3M FVA vs. buy 1Yx1Y FVA	22/11/12	1.4	26/04/13	1.7	0.4
Sell USD/BRL 1M in 3M FVA	25/01/13	8.9	22/04/13	9.3	-0.4
Buy NZD/USD vs. USD/SGD 3M vol swaps (100:130 USD vegas)	08/02/13	4.2	26/04/13	5.1	0.9
GBP/JPY long 1Y vs short3M vega-neutral straddle calendar	08/02/13	-0.3	26/04/13	-3.1	-2.8
Buy GBP/CAD vs. USD/CAD 2M straddle spread, delta-hedged	12/04/13	0.8	03/05/13	-1.1	-1.9
Sell CHF/JPY 3M in 6M FVAs vs. buy 1Y1Y FVAs	22/11/12	1.1	24/05/13	0.4	-0.7
Sell CHF/JPY 3M in 6M FVAs vs. buy 1Y1Y FVAs	22/11/12	1.1	31/05/13	0.4	-0.7
EUR/USD long 1Y vs. short5Y straddle calendar, gamma-neutral (100:225 notional ratios)	22/11/12	-1.4	31/05/13	-1.1	0.4
Sell 1Y GBP/USD vs. JPY/USD correlation swap	11/01/13	13.0	31/05/13	37.0	-24.0
Buy EUR/JPY vs. USD/JPY 3M vol swap	12/03/13	2.0	31/05/13	-0.1	-2.1
Buy USD/NOK vs. EUR/NOK 2M straddle spread, 100:170 vega ratio	03/05/13	-1.5	31/05/13	-2.3	1.5

Vol plus directional r.v

Trade	Entry date	Entry level	Exit date	Exit level	P&L	Units
Buy USD/ARS 1Y ATMF/ATMS USD put spread	02/03/12	6.8	11/01/13	1.7	-5.1	% USD
Buy 9M 1.52/1.64 GBP/CAD DNT	28/09/12	16.0	11/01/13	31.3	15.3	% GBP
Buy AUD/JPY 1Y 25D AUD call/JPY putvs. Sell USD/JPY 1Y 25D USD call/JPY put, 0.5:1 notional ratio	22/11/12	-0.6	25/01/13	-1.2	-0.6	% JPY
Buy 9M [GBP/USD 1.51/1.68,GBP/CAD 1.51/1.65] dual DNT	22/11/12	18.0	25/02/13	0.0	-18.0	% GBP
Buy NZD/MXN 9M DNT 10.15 - 11.10	24/01/13	16.8	04/04/13	0.0	-16.8	% NZD
Buy GBP/CAD 9M DNT 1.51 - 1.64	25/01/13	17.3	31/05/13	33.8	16.5	% GBP

Technical Strategy portfolio

Trade	Entry Date	Entry level	Exit date	Exit level	P&L
Short EUR vs CAD	01/11/12	1.297	26/12/12	1.314	-1.4%
Short EUR vs MXN	10/06/12	17.42	24/12/12	17.15	0.8%
Long EUR vs HUF	17/12/12	286.0	18/12/12	288.5	0.9%
Lond USD vs ZAR	22/11/11	8.400	18/01/13	8.853	2.7%
Short NZD vs NOK	07/08/12	4.83	30/01/13	4.55	2.9%
Short ZAR vs HUF	18/12/12	25.566	30/01/13	24.250	2.7%
Long EUR vs JPY	19/12/12	112.3	30/01/13	123.0	4.8%
Long USD vs ZAR	26/01/12	7.850	01/02/13	8.895	6.7%
Short NZD vs CAD	22/11/11	0.776	14/02/13	0.851	-4.8%
Short NZD vs CAD	09/01/12	0.808	14/02/13	0.851	-2.6%
Long EUR vs CZK	11/11/11	25.620	21/02/13	25.491	-0.3%
Long EUR vs CZK	08/02/12	24.800	21/02/13	25.491	1.4%
Short ZAR vs HUF	18/12/12	25.566	22/02/13	24.930	1.2%
Long EUR vs AUD	30/01/13	1.296	13/03/13	1.258	-2.9%
Short GBP vs SEK	13/02/13	9.882	13/03/13	9.513	1.9%
Short EUR vs MXN	13/03/13	16.042	30/05/13	16.620	-3.6%
Short EUR vs AUD	26/04/13	1.267	14/05/13	1.306	-1.5%
Short EUR vs AUD	01/05/13	1.283	14/05/13	1.306	-0.9%

Bert Gochet
(852) 2800 8325
bert.j.gochet@jpmorgan.com

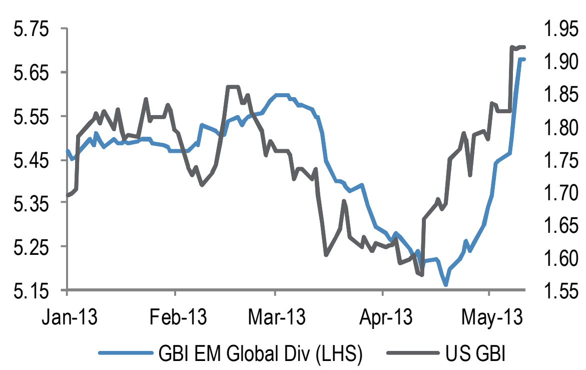
Felipe Q Pianetti
(1-212) 834-4043
felipe.q.pianetti@jpmorgan.com

Emerging Markets FX

De-leveraging in response to US rate normalization and US$ strength

Since the BOJ announcement, EM FX is now mostly down vs. the USD. It is noticeable that the underperformance took place in the last three weeks (or since May 10) when the potential front loading (or the risk of) of the tapering of Fed purchases started being priced by the market. The perception that the FED may act to taper more quickly is a reflection of improved sentiment and underlying growth momentum in the US. With the exception of ZAR, Latin America FX has underperformed the most since then (Figure X), and Asia has stayed relatively resilient. CZK, CNY, and HUF have outperformed. This pattern is in line with the return of correlation to FX markets as commodity/cyclical currencies underperform funding currencies in a deleveraging. The potential normalization of US rates – even if orderly - threatens continued portfolio flows into EM. We note that Malaysia and Korea saw the largest increase in portfolio flows over the past 6 years, some of that from central banks and SWF. Among the speculative currencies in EM, ZAR and MXN saw 6%-pts of GDP increase in foreign holdings of domestic public sector as of end of 2012 vs. the average between 2007 and 2011.

Chart 1: US vs. GBI EM Global Diversified (YTM through May 9)



Source: J.P. Morgan

Local bonds positioning spooks FX markets. GBI EM yields are 55bp+ wider from its historical low (5.18% on May 8 – figure x). We expand the analysis of the overhang of international investor positions contained in *The beginning of the end of easy money implications for the dollar, FX volatility and correlation*, by adding the BoP financing gap in the extreme scenario of a reversal of positioning to the average seen in the period between 2007 and 2011. This metric alone ranks the ZAR as the most vulnerable and the RUB as the least. The financing gap across EM FX would range from -4% to -12% of GDP (table x). Positioning aside we are wary of widening CAD in commodity countries amid growth deceleration. For those countries with headline CPI below targets (CLP, COP, and PEN), currency weakness should be used as the main buffer for the adjustment to lower terms of trade.

Table 1: Foreign holdings of local public fixed income securities

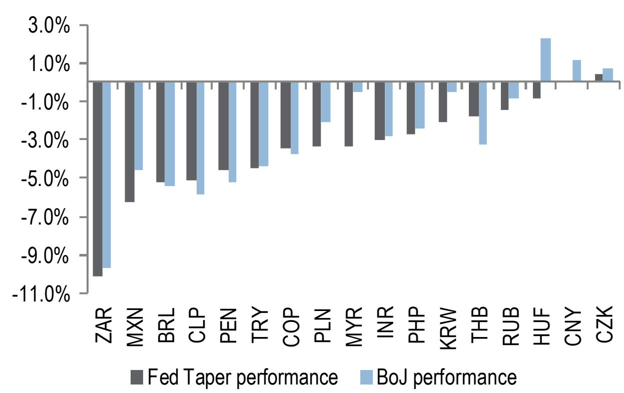
	% GDP Dec 12	Avg 07-11	Adj (a)**	CA % GDP Last (b)	Gap (a+b)*
ZAR	12%	6%	-6.4%	-6%	-12%
TRY	9%	5%	-3.8%	-6%	-10%
PLN	13%	8%	-5.4%	-4%	-9%
MXN	11%	5%	-6.2%	-1%	-7%
ILS	9%	3%	-6.0%	0%	-6%
THB	8%	2%	-5.9%	1%	-5%
CZK	5%	3%	-2.0%	-3%	-5%
PEN	4%	2%	-1.5%	-4%	-5%
MYR	23%	12%	-11.0%	6%	-5%
BRL	5%	3%	-1.7%	-3%	-5%
HUF	17%	11%	-5.7%	2%	-4%
KRW	8%	0%	-8.0%	4%	-4%
RUB	1%	0%	-1.0%	4%	3%

Source: J.P. Morgan. **Holdings reverse to 2007-2011 average. *BoP fianacing gap, with current account unchanged.

Market Movers

Stay short Latin FX but tighten the stops (through CLP, COP vs. long MXN and neutral BRL and PEN). Hold short RUB, and short IDR.

Chart 2: EM FX performance since Apr 4 and May 10.



Source: J.P. Morgan

EM Asia (neutral CNY, short IDR)

- **CNY (neutral)**

Still an alpha story but binary risk is rising. Benefiting from persistently lower daily fixing and strong speculative FX inflows, CNY remains strong and outperforms other EM Asia currencies. But we do not recommend to chase downward moves in USD/CNY (or USD/CNH) at this stage, and hold a neutral trade recommendation. With

Bert Gochet
(852) 2800 8325
bert.j.gochet@jpmorgan.com

Felipe Q Pianetti
(1-212) 834-4043
felipe.q.pianetti@jpmorgan.com

strengthened regulation of exporter over-invoicing and related trade financing activities kicking in soon, speculative FX inflows will weaken going forward. We may even see a downward correction in exports as a result of this regulation. Also, last week's sub-50 flash PMI may reduce the confidence of policymakers and constrain PBOC's capability to lower the fixing a lot further. After all, CNY has already appreciated by 6.9% YTD in NEER terms. An end to the trail of lower daily fixes would soon push up USD-CNY forwards.

- **IDR (Sell)**

Particularly vulnerable to tapering, but facing data and policy event risk next week. Our concerns that IDR would be the most vulnerable to Fed tapering talk is playing out, as the NDF curve rose above 10,000. The policy reaction to this psychological level is now in focus, with the initial move seemingly to manage onshore levels and ration USDs at the cost of FX market liquidity. The domestic focus on current account deficit funding will continue, and trade data will come out next week. Similarly, we are still awaiting for what the planned fuel price hike might look like, if it is even delivered at all.

Latin America (revising targets)

- **BRL (neutral)**

The policy mix in Brazil seems to be leaning again towards interest rates in lieu of FX intervention. BCB's governor highlighted the neutral impact of fx weakness amid lower commodities. Accordingly, tighter monetary policy even amid weaker fx could push REER weaker and help restore countries competitiveness. International participation is relevant in Brazil local markets, but has been stable for 3 years now. In addition the trough for rates took place in Dec 12.

- **CLP (short): Target 515, stop 490**

CLP is now trading slightly cheap to copper and rates differentials. We stay short as rates normalization in the US is hard to incorporate in the short term model. The 515 assumes copper moving towards 300 and rates 2Y IRS spread vs. the US down to 320bp (from 420).

- **COP (short): target: 1950, Stop: 1870**

Some board members within BanRep have explicitly set the 1950 as a target for the COP. As in the case of CLP, inflation is not a constraint for the Colombia central bank. Given the performance of late and low participation off international investors we tight the stop to 1870.

- **MXN (long): Stop: 13.05**

The Mexican peso is the most vulnerable currency in the region to unwinding of local bonds by international investors, but also the country least exposed to commodities and better positioned for a recover in the US economy. J.P. Morgan expects a meaningful rebound on GDP growth in the 2Q, which could revive the MXN trade.

Arindam Sandilya
(1-212) 834-2304
arindam.x.sandilya@jpmorgan.com

Matthias Bouquet
(44-20) 7134-1819
matthias.bouquet@jpmorgan.com

FX Derivatives

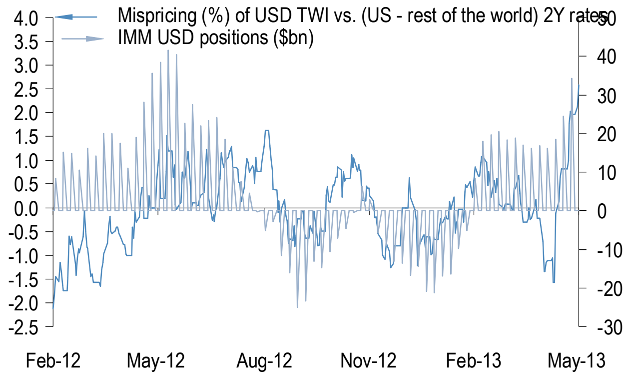
- **VXY has broken higher over the past two weeks, but is still not overly expensive vs. our forecasts. Expect USD strength/EM jitters to continue a while longer.**
- **Cash long USD exposures are vulnerable to whipsaws. Switch into USD call spreads with RKIs in KRW, BRL and TRY where risk-reversals have blown out.**
- **EM FX is more vulnerable to continued volatility in bond markets than G10, and hence are better vols to own on a relative basis. Buy 3M3M USD/TRY FVAs.**

After a relatively quiet first two weeks, May has once again lived up to its fearsome reputation as a torrid month for currency managers. Rising rate volatility in G3 has spilled over into FX markets, characterized by impulsive dollar strength and disproportionately large sell-offs in EM compared to high-beta G10. Despite signs of overshoot in Treasuries, Bunds (see *Global Fixed Income Markets Weekly*, May 31) and the dollar, calling the top in USD/EM and an end to the current volatility involves more glory than gain. Expect jitters to continue a while longer since VXY Global (currently ~10.15) is not terribly expensive vis-à-vis our revised forecasts of 10.0 for the year (with a risk bias to the upside, see *Beginning of the end of easy money,* May 24). We propose replacing cash dollar longs with USD call spreads that can retain bullish USD exposure but better insulate investors against valuation/intervention-induced whipsaws. We also make the case that EM FX vol is worth preferentially owning over G10 in light of the bearish price action in EM fixed income; we advocate 3M3M FVA longs in USD/TRY.

Long dollar exposure via USD/EM call spreads

Cash long USD exposures are vulnerable to whipsaws; investors desiring net long dollar delta are better off switching into USD/EM call spreads. The price action in the dollar over the past two weeks bears the hallmark of an overshoot: short-term cyclical valuations, gauged via US rates vis-à-vis those in the rest of the world, indicate an already healthy degree of risk premium built into cash exchange rates, and speculative length in the greenback (basis IMMs) is nearing multi-year highs (chart 1). Neither of these necessarily signal a top in the dollar, since liquidity (or lack thereof) in the Treasury market lately is exacerbating rate gyrations, and sentiment around EM fixed income is still very fragile. It is hard to argue though that the technical set-up is overly attractive for entering/adding to dollar longs, and currency investors still wishing to retain a bullish USD portfolio tilt are better off substituting cash with defined premium levered structures such as call spreads to mitigate P/L whipsaws.

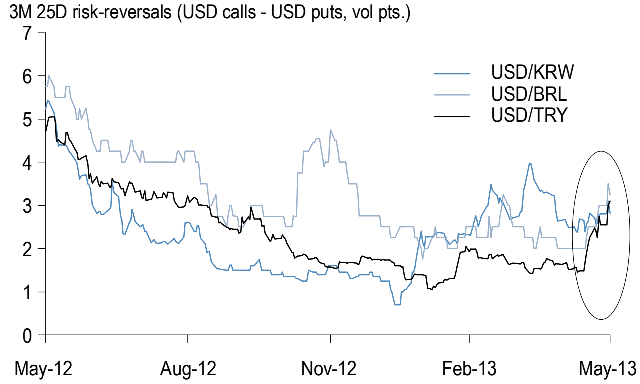
Chart 1. The dollar is substantially overshooting interest rate developments, and speculative length is looking stretched



Source: J.P.Morgan

Chart 2. Risk-reversals in EM FX have blown out in favor of USD calls over the past two weeks….

3M 25D risk-reversals (USD calls - USD puts, vol pts.)



Source: J.P.Morgan

USD call spreads are better purchased against EM currencies such as KRW, TRY and BRL where real money bond holdings are still large (hence room for continued deleveraging), and risk-reversals have blown out enough over the past few days to incentivize OTM USD call shorts against buying closer-to-ATM strikes (chart 2). When skews are this steep, we almost always advocate RKI call/ put spreads instead of vanilla ones, since the former allow significantly greater participation in the underlying spot trend without a commensurate increase in outlay. As evidence, consider Table 1 that ranks the universe of USD 35D/20D call spreads against G10+EM FX with RKIs struck at the 10D level (arbitrary choice of strikes and barriers). High skew/ATM ratio currencies such as TRY, KRW and BRL float to the top of the list, offering > 9X gearing (assuming RKI does not trigger) which is more than double that of vanilla spreads, at an additional expense of no more than 30% of the price of the latter. BRL in particular looks like an appealing sale given the worsening domestic growth/inflation mix (sample the weak Q1 GDP print), widening external deficits (worse-than-anticipated C/A print in May) and apparent policymaker indifference to

Arindam Sandilya
(1-212) 834-2304
arindam.x.sandilya@jpmorgan.com

Matthias Bouquet
(44-20) 7134-1819
matthias.bouquet@jpmorgan.com

a weakening *real* (c.f. Mantega comments this week). Turkish bonds have been some of the heaviest recipients of yield seeking G4 money over the past five years, and Turkey's C/A deficit leaves the lira vulnerable to a continuation of the recent unwinds. Table 1 is also neatly split between the G10 and EM universes, with the former stacking up at the bottom; mechanically, this is a function of nominally higher riskies in EM FX, but the divide is also symptomatic of an emerging rift in the currency world that generally favors owning EM vol over those in G10 (see next section).

EM FX vols preferential buys over G10 vol

EM FX is more vulnerable to continued volatility in core bond markets than G10, and hence are better vols to own on a relative basis. For currency markets supposedly in de-risking mode, the contrast in G10 vs. EM FX price action this week could not be starker. It is hard to recall another episode when traditional G10 carry/ commodity vehicles such as AUD, NZD and CAD nudged *higher* versus the dollar even as EM was awash in a sea of red versus USD amid rising FX vol. A simple yet effective illustration of this divergence is a breadth indicator of currency moves shown in chart 3; by plotting the difference between the fraction of G10 and EM currencies that have rallied against the dollar over the past 2 weeks, the diffusion index eliminates the distorting impact of outsized moves in the odd currency (such as ZAR) and is currently painting a picture of near-record EM weakness vis-à-vis G10. This is primarily a function of positioning: while there is still substantial length in EM for jittery markets to chew through, longs in G10 carry have long been rinsed (and in fact flipped to near-record shorts if IMMs are representative of the broader spec community) ever since concerns around Chinese growth/the commodity super-cycle surfaced in late Q1, and cyclical under-valuations in the likes of AUD (relative to commodity price levels, rate differentials etc) are currently running at levels last seen around the Lehman mayhem. Asynchronous deleveraging and positioning differentials in G10 and EM have left currency investors with rather unusual initial conditions heading into an eventual Fed taper in H2: even as EM retains its usual inverse link to USD/macro-volatility, dollar strength against G10 during stress is now no longer a given (the existence of massive USD/JPY longs – a substantial of source of USD length this year – aggravates the situation). This makes us more comfortable owning EM vols preferentially over G10 vols through the current late-stage Fed easing regime, and funded by the latter where levels permit.

We favor assuming bullish EM vol exposure at present via long back vs. short front calendar spreads in USD/TRY, either as FVA longs or in vanilla form. Despite the spike this week, USD/TRY is still a relatively low nominal vol handle underlying (at least by EM standards) with a mildly inverted vol curve (1M 9.25, 1Y 9.15 at the time of going to print). We prefer not chasing the front-end that now looks rich against longer tenors, not to mention that realized vol delivered by spot even in a jittery market is not inspiring enough to warrant outright gamma buying. In addition to offering better value, back-end vols can also benefit from higher volatility of *forwards* that have meaningful interest rate exposure and can ramp higher faster than spot vol if EM bond markets remain in turmoil. Chart 4 illustrates the appeal of long front/short back calendar spreads: 3M3M forward vols offer correlated

Table1. …incentivizing cost-efficient long dollar exposure via USD call spreads with RKIs in currencies like KRW, TRY and BRL

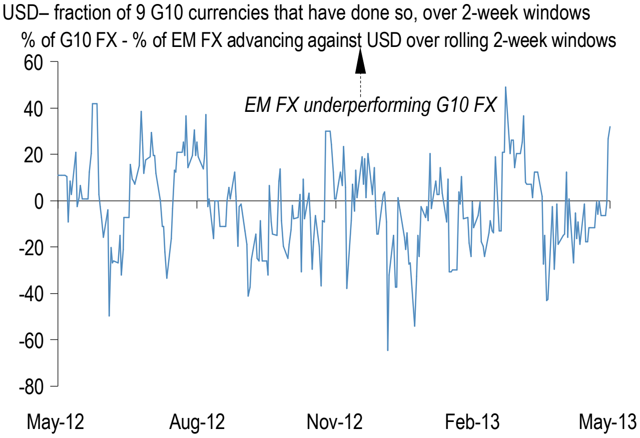
3M USD call/CCY put spreads with RKIs on the far leg with long arbitrarily chosen to be 35-delta, short option strike is set at 20-delta and the RKI barrier level is set at 10-delta. Assumes mid prices for vanilla legs and 3% of stealth for the RKI leg.

Pair	Option Type	Spot	Long Strike (35D)	Short Strike (20D)	RKI Barrier (10D)	Vanilla Spread Price (bp Asset)	RKI Spread Price (bp Asset)	Max gearing without trigger-ing RKI (A)	Max gearing if RKI triggered (B)	Additional participa-tion ratio (A)/(B)
USD/KRW	Call	1,127	1,155	1,191	1,238	57	70	9.7	4.2	2.31
USD/TRY	Call	1.88	1.93	1.99	2.06	52	63	10.2	4.4	2.30
USD/BRL	Call	2.11	2.20	2.29	2.40	75	90	9.1	4.1	2.22
USD/SGD	Call	1.26	1.28	1.30	1.33	37	44	9.2	4.2	2.22
USD/ILS	Call	3.68	3.75	3.84	3.95	47	56	9.2	4.1	2.22
USD/MXN	Call	12.78	13.23	13.79	14.47	83	98	8.7	3.9	2.21
USD/ZAR	Call	9.99	10.46	11.00	11.64	106	124	8.2	3.7	2.20
USD/RUB	Call	31.77	32.93	33.94	35.14	61	73	8.6	3.9	2.18
USD/PLN	Call	3.28	3.39	3.52	3.68	82	97	8.3	3.8	2.18
USD/INR	Call	56.16	58.15	59.70	61.53	57	68	8.1	3.7	2.18
USD/CAD	Call	1.03	1.05	1.07	1.10	48	56	8.4	3.9	2.15
AUD/USD	Put	0.97	0.94	0.91	0.88	68	80	9.2	4.3	2.14
NZD/USD	Put	0.81	0.79	0.76	0.73	77	90	8.8	4.1	2.12
USD/CHF	Call	0.95	0.97	1.00	1.04	68	79	7.6	3.6	2.11
USD/NOK	Call	5.83	5.96	6.12	6.31	63	72	7.6	3.6	2.11
USD/SEK	Call	6.56	6.72	6.91	7.13	68	78	7.4	3.5	2.10
GBP/USD	Put	1.52	1.50	1.46	1.43	51	59	8.3	4.0	2.08
USD/JPY	Call	100.93	103.40	106.85	110.58	82	94	6.9	3.3	2.08
EUR/USD	Put	1.31	1.28	1.26	1.22	55	63	7.8	3.8	2.04

Source: J.P.Morgan

Chart 3. Recent EM FX underperformance vis-à-vis G10 is approaching historic extremes

Diffusion index of the fraction of 17 EM currencies that have advanced against USD– fraction of 9 G10 currencies that have done so, over 2-week windows



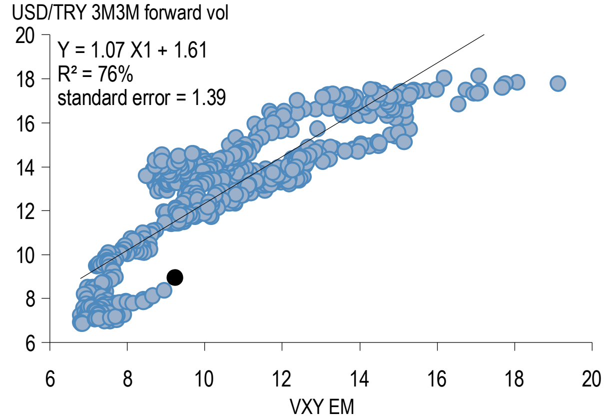
Source: J.P.Morgan

Arindam Sandilya
(1-212) 834-2304
arindam.x.sandilya@jpmorgan.com

Matthias Bouquet
(44-20) 7134-1819
matthias.bouquet@jpmorgan.com

exposure to the broad trajectory of EM vol, but come with ~1.5 vols of relative value edge. The flat veganess of the FVA product with respect to spot moves can come in handy during large market moves when strike drift becomes a headache with vanilla options (spot moving away from strike and causing vega/gamma to tail away), but comes at the cost of the inability to monetize interest rate gamma through dynamic delta-hedging of the back leg; hence vanilla calendars are more suitable for investors with the wherewithal to risk manage vanilla books in gappy markets. For our part, we open 3M3M USD/TRY FVA longs in the model portfolio.

Chart 4. Long front/short back USD/TRY calendar spreads in FVA form offer correlated exposure to broad EM vol developments, with ~1.5 vols of relative value edge



Source: J.P.Morgan

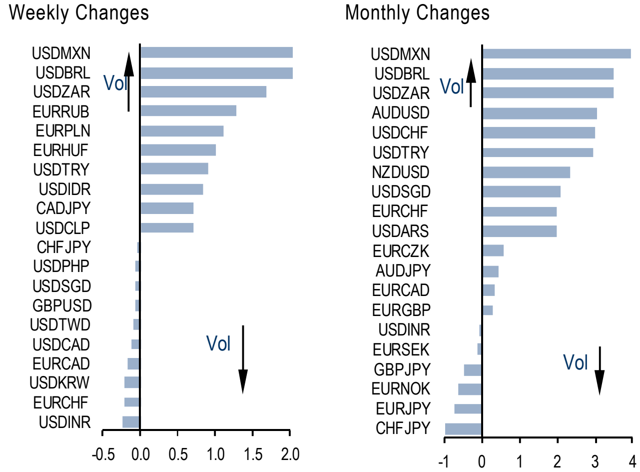
Arindam Sandilya
(1-212) 834-2304
arindam.x.sandilya@jpmorgan.com

Matthias Bouquet
(44-20) 7134-1819
matthias.bouquet@jpmorgan.com

Implied volatilities

	Current Implied Vols			Avg. Implied Vols			Z-Score Implied Vols		
	1M	3M	1Y	1M	3M	1Y	1M	3M	1Y
AUDJPY	13.5	13.4	13.4	13.5	14.0	15.5	0.0	-0.2	-0.8
AUDUSD	11.2	10.9	10.4	11.0	11.5	12.8	0.1	-0.2	-0.8
CADJPY	13.1	13.1	12.9	12.2	12.7	13.9	0.4	0.2	-0.6
CHFJPY	10.9	11.3	11.9	12.9	13.1	13.8	-0.8	-0.9	-1.1
EURAUD	9.6	9.6	9.5	9.4	9.9	11.0	0.1	-0.2	-0.8
EURCAD	7.6	7.9	8.3	8.8	9.3	10.1	-0.7	-0.8	-1.1
EURCHF	6.8	6.4	5.7	5.9	6.5	8.0	0.2	0.0	-0.7
EURGBP	7.0	7.3	7.4	7.7	8.1	9.1	-0.5	-0.5	-1.0
EURJPY	12.9	13.1	13.4	13.3	13.6	14.7	-0.2	-0.2	-0.7
EURNOK	5.9	5.9	5.8	6.9	7.1	7.6	-0.6	-0.8	-1.2
EURNZD	10.5	10.4	10.4	10.1	10.6	11.6	0.2	-0.1	-0.6
EURSEK	6.3	6.4	6.4	7.2	7.5	8.1	-0.7	-0.8	-1.1
EURUSD	8.6	8.7	9.2	10.6	10.9	11.8	-0.7	-0.8	-1.1
GBPJPY	11.5	11.7	11.8	11.3	11.8	13.0	0.1	0.0	-0.7
GBPUSD	7.9	8.1	8.2	8.0	8.5	9.6	0.0	-0.2	-0.7
NZDUSD	12.6	12.1	11.8	11.8	12.3	13.5	0.2	-0.1	-0.7
USDCAD	7.7	7.7	8.1	8.1	8.5	9.4	-0.2	-0.3	-0.7
USDCHF	11.6	10.8	10.2	11.0	11.3	12.0	0.2	-0.1	-0.7
USDJPY	13.7	13.0	12.1	9.4	9.8	11.1	2.1	1.9	0.8
USDNOK	9.9	9.9	10.4	11.8	12.3	13.4	-0.6	-0.8	-1.1
USDSEK	10.5	10.7	11.2	12.4	12.8	13.8	-0.6	-0.7	-0.9
USDARS	15.0	18.0	33.0	10.3	13.3	20.9	0.7	0.8	2.8
USDBRL	12.3	12.3	12.3	12.6	13.1	14.5	-0.1	-0.2	-0.6
USDCLP	9.3	9.5	9.9	11.2	11.7	12.8	-0.5	-0.6	-1.0
USDMXN	13.5	13.4	13.4	12.9	13.2	14.1	0.2	0.1	-0.2
EURCZK	5.8	6.0	6.2	7.1	7.4	7.8	-0.8	-0.9	-1.2
EURHUF	10.2	10.4	10.6	11.2	11.4	11.8	-0.3	-0.4	-0.6
EURPLN	7.8	7.8	8.2	9.3	9.8	10.6	-0.6	-0.8	-1.2
EURRUB	10.0	10.1	9.9	9.4	10.0	11.6	0.3	0.0	-0.8
USDRUB	9.7	9.9	9.8	11.0	11.4	12.6	-0.4	-0.5	-1.1
USDTRY	9.9	8.6	9.0	10.0	10.7	12.4	-0.4	-0.6	-1.1
USDZAR	16.8	16.5	16.4	16.1	16.7	17.8	0.2	0.0	-0.5
USDIDR	7.8	8.8	10.9	8.1	9.4	12.3	-0.1	-0.2	-0.5
USDINR	8.6	9.1	10.1	10.0	10.4	11.2	-0.8	-0.8	-0.9
USDKRW	8.9	9.4	10.3	9.3	10.3	12.1	-0.1	-0.3	-0.6
USDPHP	6.2	6.1	5.8	5.7	6.0	6.9	0.3	0.0	-0.8
USDSGD	5.9	6.0	6.4	6.4	6.8	7.5	-0.2	-0.3	-0.6
USDTWD	4.8	5.1	5.3	3.8	4.1	4.8	1.1	0.9	0.3

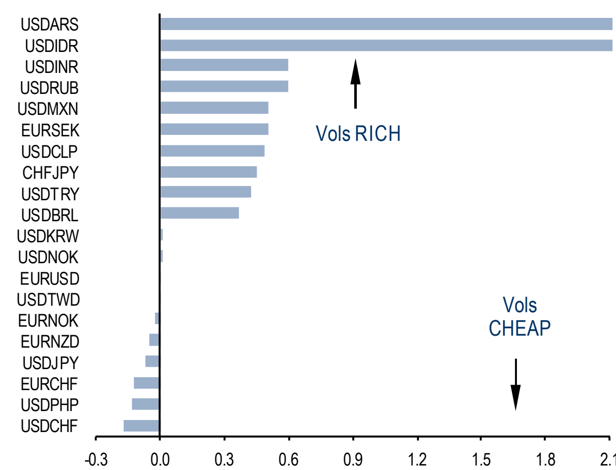
Biggest 3M Implied Volatility Movers



Source: J.P. Morgan

Front-End Vol Rankings

In order of Normalized Volatility Risk Premium*



Source: J.P. Morgan

Current trade recommendations and P&L

Analyst	Description	Entry date	Entry	Current mid	P/L	P/L units	Remarks
Sandilya/Bouquet	Sell CHF/JPY 3M in 6M FVAs vs. buy 1Y1Y FVAs	22-Nov-12	1.1	0.4	-0.7	vol pts	Expired
Sandilya/Bouquet	EUR/USD long 1Y vs. short 5Y straddle calendar, gamma-neutral	22-Nov-12	-1.4	-1.1	0.4	vol pts	Take profit
Sandilya/Bouquet	Buy 1Y silver vol swaps vs. sell 1Y gold vol swaps	28-Nov-12	10.9	11.3	0.4	vol pts	Asymmetric RV with bullish vol exposure
Sandilya/Bouquet	Sell 1Y GBP/USD vs. JPY/USD correlation swap	11-Jan-13	13.0	37.0	-24.0	corr pts	Take loss
Sandilya/Bouquet	Buy NZD/SEK 9M DNT 5.20 - 5.80	25-Jan-13	14.3	9.8	-4.5	% NZD	Wide barriers relative to 1-yr spot high/low
Sandilya/Bouquet	Buy GBP/CAD 9M DNT 1.51 - 1.64	25-Jan-13	17.3	33.8	16.5	% GBP	Take profit
Sandilya/Bouquet	Buy EUR/JPY vs. USD/JPY 3M vol swap, equal JPY vega	12-Mar-13	2.0	-0.1	-2.1	vol pts.	Take loss
Sandilya/Bouquet	Sell 3M 25D USD calls/CLP puts, delta-hedged	05-Apr-13	7.6	9.5	-1.9	vol pts.	Take loss
Sandilya/Bouquet	Buy CHF/JPY vs. USD/JPY 6M straddle spread, delta-hedged	05-Apr-13	0.9	-1.8	-2.7	vol pts.	Take loss
Sandilya/Bouquet	Buy 2M EUR/PLN 4.21 call vs. Sell 2M EUR/RUB 41.95 call	24-Apr-13	-0.11	1.33	1.44	% EUR	Take profit
Sandilya/Bouquet	Sell USD/INR 2M vol swaps	03-May-13	7.6	8.6	-1.0	vol pts	INR gamma rich
Sandilya/Bouquet	Buy EUR/KRW vs. USD/KRW 3M vol swap spread	03-May-13	1.4	-0.6	-1.9	vol pts	Vol spread proxy for selling rich EUR vs. KRW correlation
Sandilya/Bouquet	Buy USD/NOK vs. EUR/NOK 2M straddle spread, 100:170 vega ratio	03-May-13	-1.5	-2.3	1.5	vol pts.	Take profit
Sandilya/Bouquet	Buy 3M3M USD/TRY FVA	31-May-13	9.8	9.3	-0.5	vol pts	Flat vol curve, susceptible to EM fixed income volatility

Niall O'Connor
(1-212) 834-5108
niall.oconnor@jpmorgan.com

Technical Strategy

- **EUR – Still a fairly mixed bag with limited upside and greater risks on the downside though**
- **GBP – Looking weak against USD, CHF and JPY and fairly constructive against commodity FX**
- **JPY – Having lost its down-momentum, the start window for a broader recovery is currently open**
- **CHF – The disregarded currency could be due for a strong revival in line with falling over risk markets**
- **Stay long USD/CAD,USD/NOK, CAD/JPY, TRY/JPY & short EUR/KRW & EUR/INR**

The H & S topping pattern dominates EUR/USD which could be delayed on a break above 1.3138

The big picture is still favoring a H & S topping pattern which formed since September last year. But refraining from delivering the final confirmation via a neckline break at 1.2780/72 (daily.-weekly) the market kept the backdoor open to potentially perform another corrective leg up to 1.3315/23 (weekly.-daily trend channel) if not to 1.3483 (int. 76.4 %) in a C-wave up. For such a recovery to be supported though, it would take a decisive break above 1.3138 (minor 76.4 %) on hourly close (i.e. above 1.3165).

Chart 1: EUR/USD – Daily Chart: Below 1.3138, the market remains in the danger zone and ready to challenge neckline support at 1.2780

Below 1.3080 (daily trend) and 1.3138 though, the EUR bears appear to be in full control and ready to challenge neckline support at 1.2780/72 anytime. A break would call for a 10 cent decline into the 1.1775 handle (H & S projection) but as the last T-junction on the way down at 1.2436 (76.4 % on big scale) could still prevent this negative scenario we'd suggest to at least trade around the latter (i.e. taking profit above and re-selling below). In case the market on the other hand opts for an extension up via a decisive break above 1.3138 we'd suggest selling into strength towards 1.3315 and to add up on an extension to 1.3483 while stops would have to be placed above the latter. In terms of **EUR/Commodity FX** prospects of extending the latest gains have improved but **EUR/CAD** would have to clear 1.3525/32 (last high/minor 76.4 %) to re-open the upside for an extension to the main T-junction on big scale at 1.3979 (int. 38.2 %). **EUR/AUD** and **EUR/NZD** on the other hand have already confirmed their latest up-trends so that 1.3915 (weekly trend, EUR/AUD) and 1.6477 (C = A in EUR/NZD) seem to be in focus next while **EUR/NOK** still has to clear 7.6458 (minor 76.4 %) to be able to challenge its main T-junction on big scale at 7.9754 (int. 38.2 %).

GBP remains weak against USD and ready for deeper setbacks against CHF and JPY

The latest defense of key-Fib.-support at 1.5015 (int. 76.4 %) in **Cable** is certainly inheriting the risk of having only performed a countertrend decline but in order for this limited bullish view to be confirmed it would not only take a decisive break above 1.5231 (minor 38.2 %) but also above 1.5466 (minor 76.4 %). Only such breaks would allow for a potentially missing C-wave up to 1.5718/88 (200 DMA/61.8 % on higher scale) or to 1.5857(monthly triangle). Below 1.5466 though and in particular below

Chart 2: GBP/USD – Daily Chart: The best to expect would be a rebound to 1.5466 in what looks like a well-established bear trend

1.5231, the bears remain in full control but 1.5015 would have to be broken to indicate the resumption of the broader downtrend towards 1.4339/1.4228 (76.4 % on big scale/pivot) as the last good support before the 2009 low at 1.3504 would be back in focus. **EUR/GBP** on the other hand would either have to break below 0.8446 (minor 76.4 %) or above 0.8639 (pivot) to 0.8717 (minor 76.4 %) to support a deeper setback to 0.8285 and to 0.8005 (int. 50/76.4 %) or the potential resumption of the broader up-

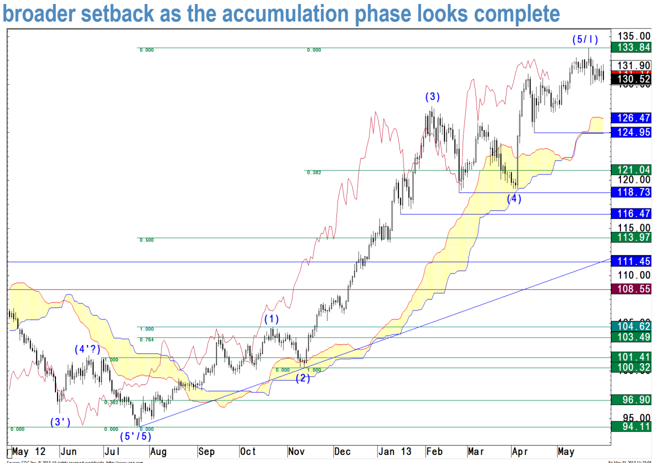
Niall O'Connor
(1-212) 834-5108
niall.oconnor@jpmorgan.com

trend from July last year. **GBP** looks vulnerable against **CHF** after the penetration of key-pivotal support at 1.4476 which calls for a minimum setback to 1.4169 (int .76.4 %) and possibly to 1.3530/1.3485 (monthly breakout line/50 %). The strong down-reversal observed in **GBP/JPY** in the last 2 weeks has most likely provided the initial spark for a broader setback as described in the following paragraph.

The odds of having seen the launch of a broad JPY recovery have never been better

Looking at the chart of **EUR/JPY** shown below we now see a high likelihood that a 5-wave pattern up from 94.11 (July 2012) has finally been completed which opens the door for a broad **JPY** recovery. Last week's key-reversal down and the preceding Doji/hair cross in the weekly candle chart already signaled the loss of up-momentum so that we are now looking for a minimum setback to 124.95 (last low) with a strong option to extend to 121.04 (int. 38.2 %). The latter is the decisive T-junction to distinguish between a 4th wave setback only and a broader wave II setback. Only a break above 132.93 (minor 76.4 %) would support a straight

Chart 3: EUR/JPY– Daily Chart: The odds shifted in favor of a broader setback as the accumulation phase looks complete



extension within wave 5 towards 138.27/35-139.14 (Fib.-projections/pivot) and possibly to 140.99 (61.8 %). The same applies for **USD/JPY** and **GBP/JPY** where deeper setbacks to internal 38.2 % retracements at 95.31/94.32 and to 143.00/142.22 are looming as long as minor 76.4 % retracements at 102.91 and at 155.59 are not broken decisively on hourly close. In such cases the focus would shift to the next higher targets at 108.33/44 (Fib.-projection/monthly trend) and to 161.21 (Fib.-projection) and 163.11 (2009 high).

CHF could turn out to be one of the great beneficiaries of a broader risk setback

Although being highly manipulated it was quite remarkable that **EUR/CHF** stalled right at a projected 4th wave target at 1.2650 (int. 38.2 %). This means that the market is still keeping the option to perform a potentially missing 5th wave decline against the will of the ruling SNB. The latest break below key-pivotal support at 1.2390 is another negative signal which would have to be confirmed via a break below 1.2352 (internal wave 1) though. This would then give room to at least challenge 1.2171/50 (daily trend/int. 76.4 %) which can be seen as the last crucial support before the 1.2000 floor would be back in focus.

Chart 4: EUR/CHF – Weekly Chart: The failure right at the key-T-junction at 1.2650 leaves the downside wide open

USD/CHF is also facing an increased setback risk as long as we don't see a weekly close above 0.9748 (int. 76.4 %). For the latter to be triggered though and to open the downside for a minimum decline to 0.9215/06 (minor 76.4 %/pivot) it would take a break below 0.9501 (key-pivot).

Technical Trades

P&L based on postion size

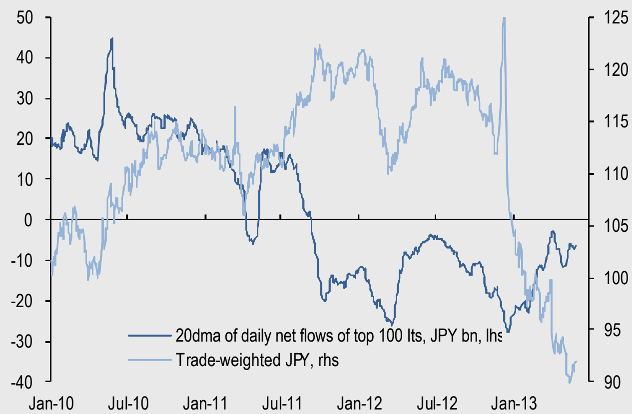
Trade details							P&L	Comments
Long	Short	Entry date	Entry level	Current level	Stop loss	Allocation	since entry %	
USD	CAD	10/05/13	1.0115	1.0355	1.0135	50%	1.19%	Broader bottoming pattern seen as complete
MXN	EUR	13/03/13	16.0415	16.6200	16.6000	100%	-3.61%	Stopped on a failed H & S breakout
KRW	EUR	22/11/11	1548	1469	1505	50%	2.55%	MT decline intact; fifth wave new low expected
USD	NOK	21/11/12	5.6001	5.8597	5.3000	100%	4.70%	Outlook 2013 trade
INR	EUR	21/11/12	70.230	73.414	74.500	100%	-4.13%	Outlook 2013 trade
CAD	JPY	21/11/12	82.22	97.53	91.15	50%	9.31%	Outlook 2013 trade
TRY	JPY	21/11/12	45.64	53.72	50.20	50%	8.85%	Outlook 2013 trade
AUD	EUR	26/04/13	1.2748	1.3055	1.3050	100%	-2.42%	Stopped at 1.3055 on May 14th

Japan flow monitor

This is a weekly note and a condensed version of the monthly publication "Japan Flows in Pictures".

Chart 1: Japanese retail – net flows of 100 largest FX-denominated ITs

¥bn; 20-day moving average of daily net flows of 100 largest investment trusts; ranked in the order of total asset as of March 2011. Positive sign indicates JPY selling.

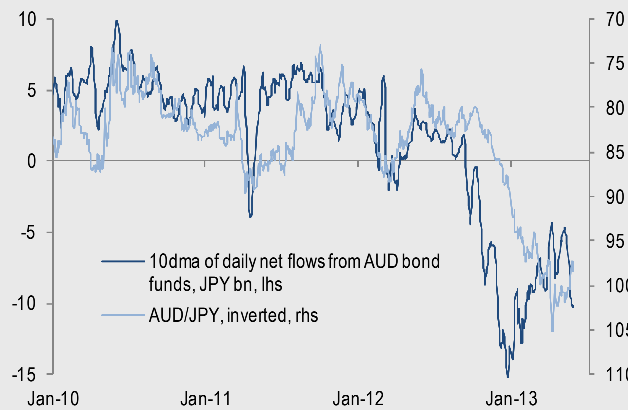


Source: J.P. Morgan, Bloomberg

- Yesterday saw daily net inflow of ¥5.5bn from the top 100 FX-denominated Japanese investment trusts, which was the first day of net inflows since early May. The 20dma of daily net flows is an outflow of ¥6.6bn, which is just slightly below last Friday's level of ¥7.0bn.

Chart 2: Japanese retail – net flows of AUD bond ITs

¥bn; 10-day moving average of daily net flows of AUD bond funds within the 200 largest investment trusts; ranked in the order of total assets as of February 2012. Positive sign indicates JPY selling.

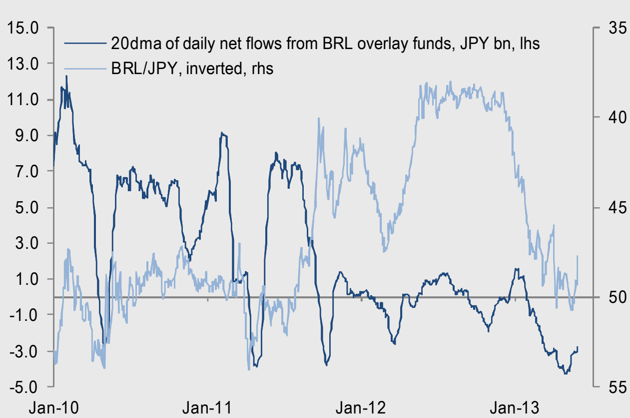


Source: J.P. Morgan, Bloomberg

- The pace of outflows from Japanese AUD bond investment trusts have certainly picked up over the last few weeks. The 10dma of daily net outflows from AUD bond funds is at ¥10.1bn as of yesterday, compared to ¥9.7bn and ¥6.8bn for the two Fridays prior. The current level is in line with the pace of outflows seen in early February.

Chart 3: Japanese retail – net flows of BRL-overlay funds

¥trn; 2-day moving average of daily net flows of top BRL-overlay investment trusts. Positive sign indicates JPY selling.

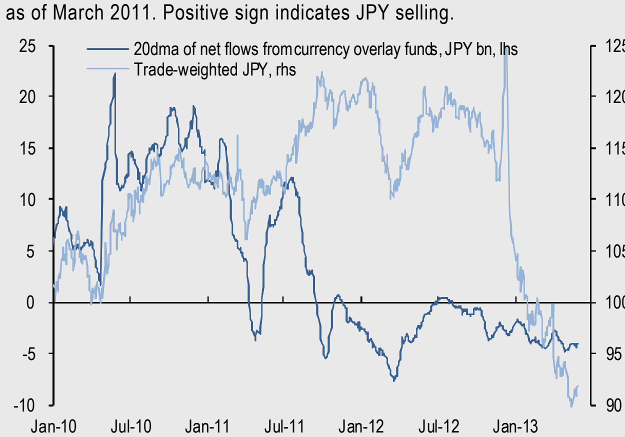


Source: J.P. Morgan, Bloomberg

- The 20dma of net outflows from BRL overlay funds has been declining over the past few weeks, standing at -¥2.8bn as of yesterday, compared to -¥3.1bn last Friday. The current level is 32% below the recent max outflow in early-May.

Chart 4: Japanese retail – net flows of currency overlay funds

¥bn; 20-day moving average of daily net flows of 20 currency overlay funds within the100 largest investment trusts; ranked in the order of total asset as of March 2011. Positive sign indicates JPY selling.

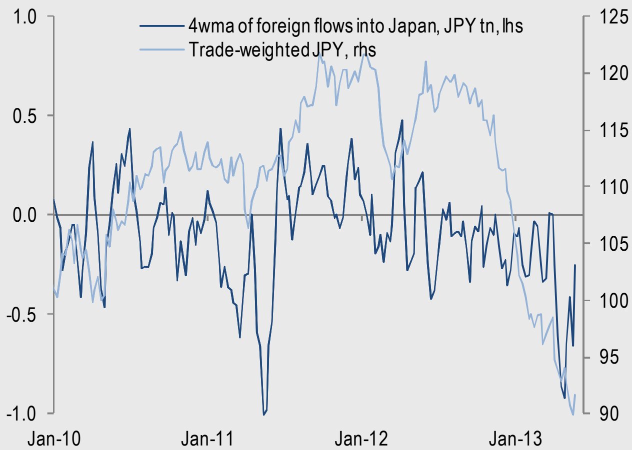


Source: J.P. Morgan, Bloomberg

- The 20dma of net outflows from the top currency overlay funds stood at -¥4.0bn as of yesterday, compared to -¥4.2bn last Friday. As a broad trend, outflows from overlay funds have been increasing slowly from 2H12.

Chart 5: Foreign flows into Japan – weekly portfolio flows

Weekly data, sum of bond and stock flows, ¥tn. Positive value indicates selling of Japanese assets/JPY selling by overseas investors.

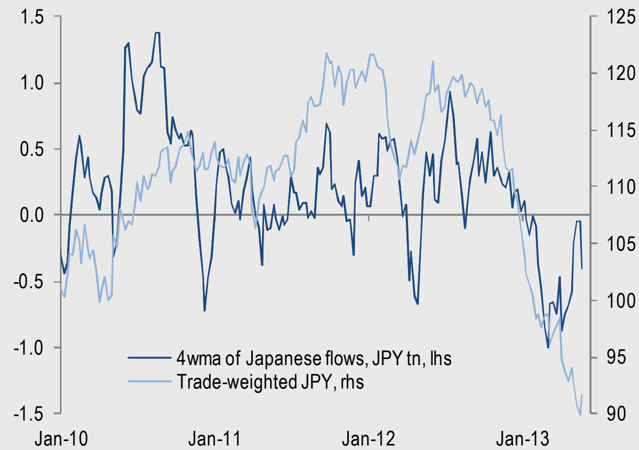


Source: J.P. Morgan, MoF

- Foreign investors were sellers of Japanese bonds by ¥457 billion last week, following roughly flat flows in the previous week (net buy of ¥18 billion). They were net buyers of Japanese stocks for the third consecutive week, although the amount was smaller last week (¥27 billion) compared to the previous two weeks (average of ¥798 billion). The 4wma of foreign flows into Japanese stocks and bonds is currently a net buy of ¥253bn, compared to net buy of ¥659bn in the previous week.

Chart 6: Japanese outbound flows– weekly portfolio flows

Weekly data, sum of bond and stock flows, ¥tn. Positive value indicates buying of foreign assets/JPY selling by Japanese investors.

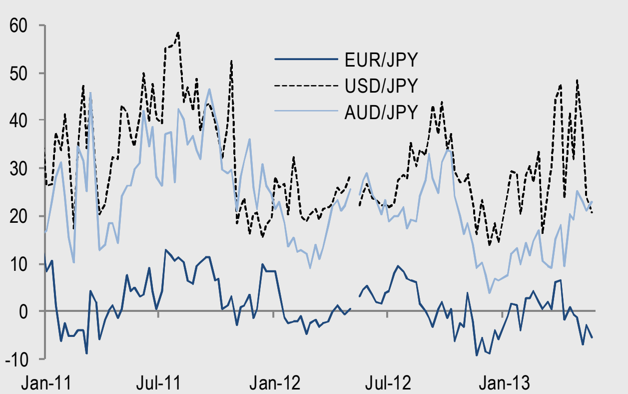


Source: J.P. Morgan, MoF

- Japanese investors net sold foreign bonds for a second consecutive week by ¥1.1 trillion (largest weekly selling since early April) last week, following selling of ¥800 billion in the previous week. They were also net sellers of foreign stocks to the tune of ¥105bn, following ¥137bn of selling in the previous week. The 4wma of Japanese flows into foreign stocks and bonds last week was a net sell of ¥406bn, compared to net sell of ¥54bn in the previous week.

Chart 7: Japanese retail – longs in USD, EUR, AUD against JPY held by retail margin traders

Weekly data, bn local currency; positive indicates long in local currency/short in JPY. Positive sign indicates JPY selling.

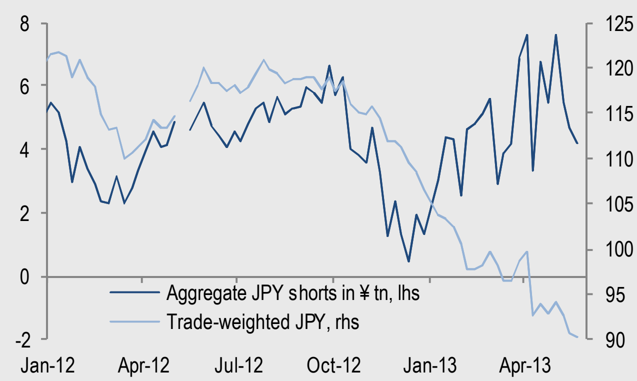


Source: J.P. Morgan, Nikkei Veritas

- USD/JPY longs declined by $3.5bn to $20.7bn between May 15th and 22nd, reaching lows since early March. EUR/JPY shorts extended further from -€3.1bn to -€5.6bn, while AUD/JPY longs increased by A$2.1bn to A$23.1bn.

Chart 8: Japanese retail – aggregate JPY shorts held by retail margin traders

Weekly data, ¥tn; Japanese retail JPY shorts measured by positions in USD, EUR, AUD, NZD, and GBP through six brokers; positive sign indicates increase in JPY shorts/JPY selling.



Source: J.P. Morgan, Nikkei Veritas

- Aggregate JPY shorts held by Japanese FX margin traders decreased for the third consecutive week from ¥4.7trn to ¥4.2trn between May 15th and 22nd. During the same period, the trade-weighted JPY softened by just 0.4%. The current level of aggregate JPY shorts is the lowest since mid-April.

Daniel Hui
(65) 6882-2216
daniel.hui@jpmorgan.com

Research Note

IDR FX Strategy: A concentration of negative risks

- **We elaborate on our decision to underweight IDR on 24 May and we move forward our USD-IDR 10,200 year-end forecast to mid-year.**
- **The current account did not improve in 1Q, and is set to deteriorate further as China is likely to stop importing USD3.6bn of coal annually.**
- **Domestic positioning in IDR is very negative, but will remain that way or even worsen through fears of large-scale repatriation of redemptions, coupons, and dividends in June.**
- **Large underweights by domestics and foreigners are unlikely to be squeezed out in the current environment. Fuel and policy rate hikes may happen, but will unlikely impress FX investors.**
- **FX policy is cautious in maintaining liquidity and stability, because increasing official USD borrowing is masking the scale of FX reserve usage recently.**
- **IDR is the most vulnerable Asian currency to a sharp deterioration of global conditions for EM, especially as the NIIP has been in sharp decline since the global financial crisis.**
- **Strategy: Stay UW IDR. Long USD-IDR 3m tactically through at least the uncertainty in June.**

Last week we recommended long USD-IDR as the best expression of the risk of the fed tapering extending. In this note we elaborate this recommendation, which is premised both on global as well as idiosyncratic domestic vulnerabilities.

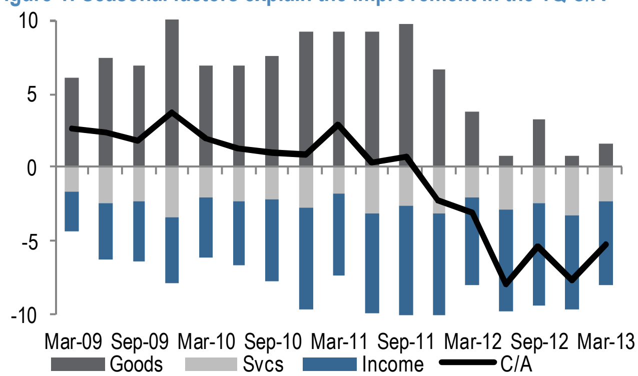
Long USD-IDR is a position that is a timing sensitive trade, given its high carry. We think the coming weeks present considerable risk of USD-IDR substantially higher, not only due to global developments surrounding Fed tapering, commodity and deficit currency selloffs, but due to domestic factors as well.

We entered long USD-IDR and moved IDR to underweight in our GBI-EM model portfolio last Friday, and target 10,200 on USD-IDR by mid-year.

More downside for the current account deficit

The improved 1Q current account number is largely seasonal. While the goods balance did show marginal improvement last quarter, the large bulk of the 2.4bn current account narrowing in 1Q was due to seasonal improvements in the services and income accounts. These accounts have seasonally contributed average 2.1bn improvement in the current account for the past three years (1.7bn this year) from the prior quarter, only to give it back in subsequent quarters.

Figure 1: Seasonal factors explain the improvement in the 1Q C/A



Source: CEIC, JPMorgan

China's plan to ban up to USD3.6bn of Indonesia's coal exports will exacerbate pain to the commodities balance. As our mining sector analyst explains, China's National Energy Administration is expected to fully ban low-rank coal imports, 93%of which comes from Indonesia (see Kang, China Coal sector, 22 May and Ong, Indonesia, 29 May). As a point of comparison, the fall of 3.6bn coal exports our economists expects equals to Indonesia's cumulative trade deficit since June of last year.

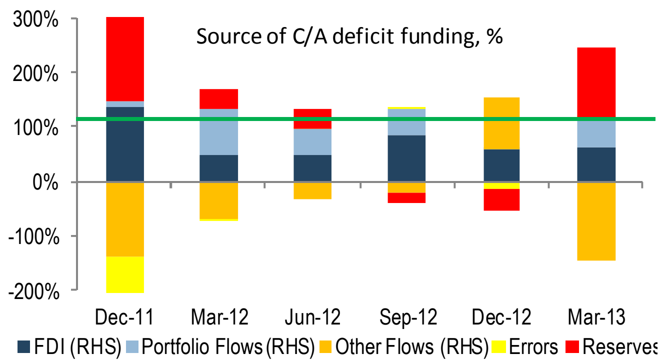
Domestic positioning draining reserves

Meanwhile the big swing into capital account deficit in 1Q was from volatile "other" flows, which mainly represents domestic currency positioning. Fundamental capital inflows were in-fact healthy in 1Q, with the FDI and net portfolio inflows together actually sufficient to fully fund the current account deficit (Figure 2). Instead it was the massive USD15bn swing in the "others" account (into a 7.7bn deficit) that more than offset these inflows and meant that the USD6.6bn in reserves drawdown in 1Q not only had to fully fund the current account deficit, but also some of this domestic accumulation of USDs.[2]

[2] This was in-part due to the central bank's decision to provision USD to fund energy imports, which then increased the ability for domestics to retain and accumulate USDs. Thus, the net effect of

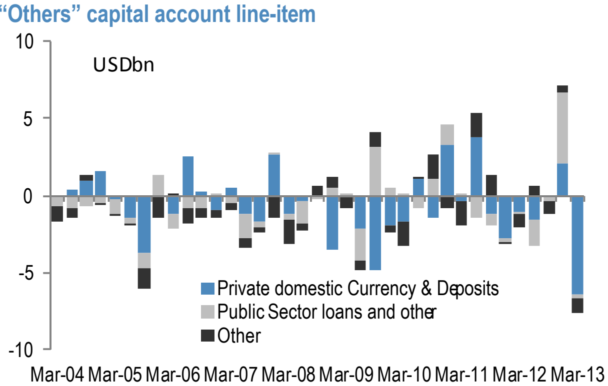
This underscores the point that it is this domestic positioning that has historically drove the swings capital account financing and reserves. FDI and portfolio inflows have in fact been relatively stable and able to fund quarterly current account deficits since they began in 4Q11. This makes understanding the drivers of domestic flows particularly important.

Figure 2:Fundamental capital inflows are mostly adequate, it is domestic positioning causing volatility in C/A deficit funding



Source: CEIC, JPMorgan

Figure 3: Domestic cash positioning driving the swings in the "Others" capital account line-item



Source: CEIC, JPMorgan

This underweight positioning is a positive technical factor but the worsening backdrop is may see underweights extend, if anything. We believe this domestic positioning (similar with the significant foreign investor underweight we have long flagged) reflects a general lack of confidence in the macroeconomic policy regime. Historically these domestic outflows have turned large during periods of uncertainty, as in 3Q05, have required a positive policy shock to catalyze a reversal of these flows.

Not only is a sufficient positive policy shock unlikely, but the list of precautions and worries of domestic investors continues to grow:

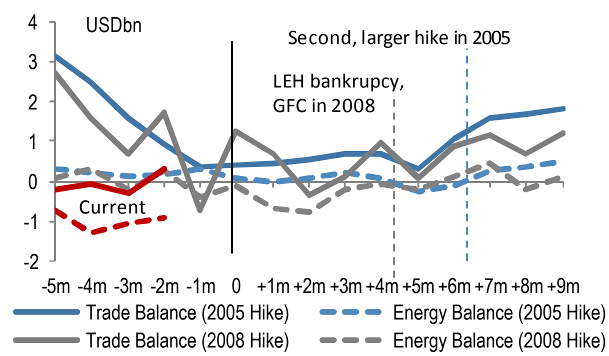
Hikes will not lead to a recovery in IDR

Markets have highly anticipated forthcoming reform of fuel subsidies packaged with an interest rate hike from BI. We have extensively covered the macro and bond market implications elsewhere[3].

Whether these hikes are ultimately delivered is uncertain, but even if they are, they will unlikely be a panacea for the current account or its funding. Beyond our earlier point that other forces will continue to put downward pressure on commodity exports, Indonesia has had a mixed history of engineering soft landings in its external accounts, particularly through fuel price adjustments.

The past two instances has show a limited and lagged ability of these fuel price hikes to improve the trade account. Figure 4 shows the March 2005 and May 2008 experiences, where similar magnitude price and policy rate hikes were delivered. While for those episodes, the hikes stopped trade account deterioration, no subsequent improvement came until further contractionary events took place (a much more aggressive series of hikes in 2005, and the global financial crisis in 2008. Meanwhile there was no material impact on the nominal energy balance in either experience.

Figure 4: Past fuel hikes had muted impact on trade balances



Note: In 2005 fuel prices were initially hiked 33% (March 2005 at t=0 above) while the benchmark rates rose 30bp in the following 2 months– this was followed 7 months later with a much more aggressive 84% fuel price hike and cumulative 500bp hike in policy rates through the period. In May 2008 (t=0) fuel prices were hiked 33% accompanied by a series of 25bp policy rate hike over the next several months.

this policy is a reallocation of USD cash balances from official reserserves to private sector balance sheets. The accounting nuance notwithstanding, the key salient point remains that this strong domestic preference to hold USDs is the key marginal driver of USD-IDR supply and demand.

[3] Indonesia: Fuel price hike, rate hike and higher supply trump INDOGB technicals. Stay short duration, 21 May 2013; Ong Indonesia: Waiting for subsidy plan approval – figuring the potential macro impact, 19 April 2013

The exacerbating consideration today, is that primary concern for markets is the energy balance and BoP, whereas in 2005 and 2008, the primary target of policy was to address market concerns over fiscal deterioration. So in the past, the moves were able to stabilize the IDR, even if it did not improve the trade account. Moreover, like in 2005 and 2008 the proposed fuel price hikes currently will come with an offsetting cash transfer to poor household, which should counteract the contractionary effect on the overall trade balance.

One mitigating consideration is that unlike in past instances, today global energy prices are not in a up-spiral. And therefore there will not be the exacerbating price effect on imported commodities. Also, even before prices are hiked, the trade account has already stabilized somewhat.

Nevertheless, we do not believe that even with the proposed 20-30% fuel price rise and 25bp BI hike, the market would give the benefit of the doubt to IDR, at least immediately, without the underlying indicators proving the measures effective in managing import demand. We believe the case in point is that, even while the BI progressively signaled their intent to hike rates in response to a possible fuel price hike earlier this month, the currency failed to respond positively.

Onshore positioning is exacerbated by redemption and coupon fears for June

Domestic currency outflows last quarter is likely in-part precautionary positioning ahead of a significant amount of USD demand that will come in the coming weeks, as we go through **the peak season of redemption, coupon, and dividend payments**.

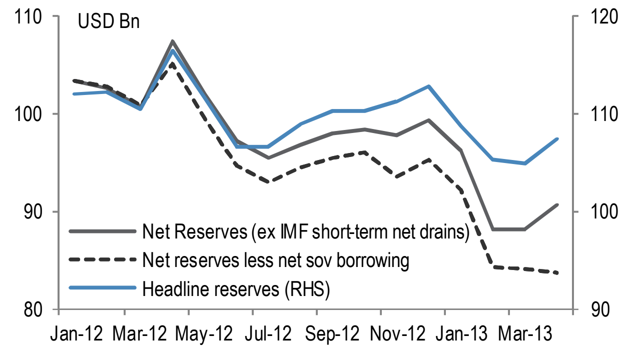
The market is anticipating close to USD2.9bn of potential outflows. June 15 marks the maturity of a ~IDR12trn recap bond, or roughly equivalent to USD12bn. Beyond that are around another USD500m worth of coupon payments, as well as up to USD1.2bn of dividend payments from heavily foreign owned equities.

FX policy still driven by precaution over reserves

Without a significant reassessment of current account dynamics, the market will continue to be focused on backstop funding through reserves in the medium-term.

We have earlier pointed out that official borrowing of USD has been masking otherwise declining net FX reserves (see Asian FX Policy Snapshot, 9 May 2013). Netting out the foreign currency deposits and loans line item disclosed to the IMF, as well as the recent sovereign bond offering, Indonesia's FX reserves would have fallen to 8.5bn from January through April, rather than remaining largely flat, as the headline numbers indicate. Pertamina's USD3bn bond offering will similarly buttress FX reserves when end-May reserves are disclosed next week.

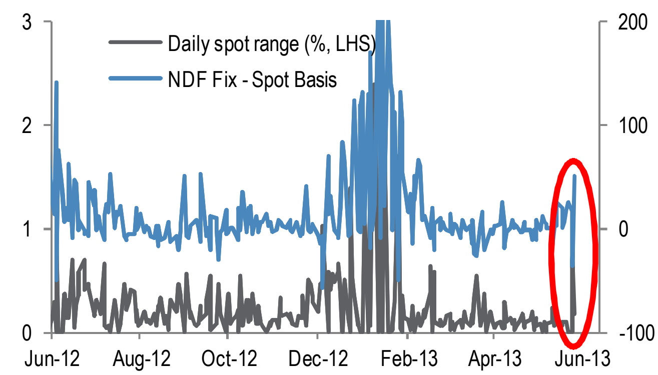
Figure 1: FX reserves have been supported by USD borrowing and other short-term net claims



Source: CEIC, IMF, JPMorgan

The continued decline in net FX reserves is leading FX policy to be cautious again, even as the headline reserves number may stay optically above 100bn,. While a shift in FX reserves policy restored FX market liquidity and stabilized USD-IDR in early February, this has deteriorated again most recently.

Figure 6: FX market conditions have started to deteriorate again



Source: Bloomberg, J.P. Morgan

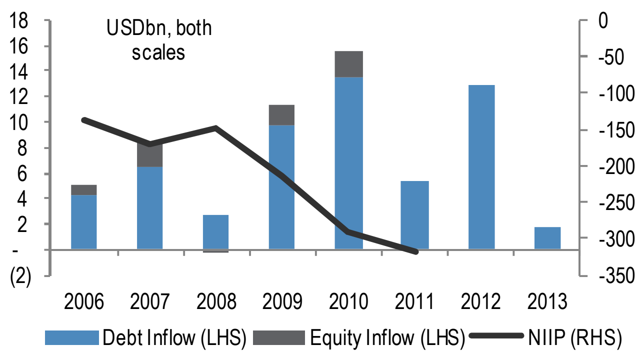
This adds to global risks to EM from more Fed tapering talk

Last week, IDR topped our list of criteria for identifying the most vulnerable Asian currencies to protracted market fears of Fed tapering last week (see Asian Macro Strategy, 24 May 2013). IDR satisfied almost all the criteria of having a BoP funding requirement, destination for reach-for-yield inflows, and commodities exposure, with a lack of near-term long positioning the only mitigating factor.

Daniel Hui
(65) 6882-2216
daniel.hui@jpmorgan.com

In particular, IDR appears relatively highly vulnerable should the global environment for EM turn much more hazardous. Figure X below shows that even before current account deficits began materializing in late 2011, Indonesia's net international investment position had sharply deteriorated following the global financial crisis, probably due to superior yields and mark-to-market valuations of foreign-held domestic assets as compared to domestic-held foreign assets. This leaves Indonesia with the second largest absolute NIIP deficit in Asia after India. This exacerbates the anti-home bias of domestic residents, which as hinted earlier, flee to the USD when uncertainty is high.

Figure 2: Indonesia - large cumulative net debtor to the rest of the world



Source: CEIC, J.P. Morgan

Strategy: short IDR now through June to position for more tapering talk, outflow risk, and hike impact disappointment

Negative factors for IDR are converging both from the domestic and global backdrop. This will well outweigh any constructive technical positioning from significant underweights from both onshore and offshore.

The most concentrated period of upside USD-IDR risk will last through at least the next few weeks during uncertainty over fuel price and interest rate policy, China coal import policy, foreign repatriation of redemptions, coupons, and dividends, and while risks around Fed policy remains in flux.

Trade: We initiated long USD-IDR 3m on 24 May.

Vladimir Werning
(1-212) 834-4144
vladimir.werning@jpmorgan.com

Diego W. Pereira
(1-212) 834-4321
diego.w.pereira@jpmorgan.com

Research Note

Shedding light on Latin America's shadow FX rates

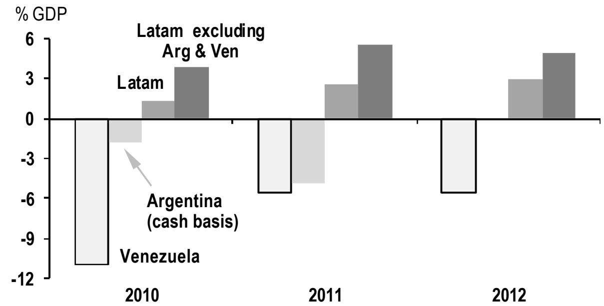
- **Fundamentals, not fear, explain parallel FX spiraling**
- **Interest rate hikes (orthodoxy) currently anchor ARS**
- **Lack of USD bonds (heterodoxy) has left VEF adrift**
- **But election cycle anchors VEF while threatening ARS**

Despite a decade of ample availability of capital for the Latin American region as a whole, the economies of Argentina and Venezuela have suffered persistent private sector capital outflows. Thus, whereas most economies have been challenged with implementing strategies to manage the avalanche of capital inflows, FX policy in both of these economies has gravitated toward institutionalizing strict capital outflow controls. Capital outflow controls have been evolving in Argentina and Venezuela since 2002 and 2003, but were meaningfully tightened in mid-2010 in Venezuela and end-2011 in Argentina. In turn, controls have produced *de facto* parallel FX markets (also briefly *de jure* in Venezuela).

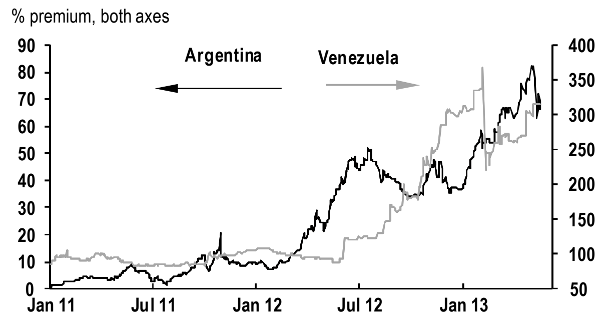
These shadow exchange rates have diverged significantly from official exchange rates, even when the latter are managed with various degrees of flexibility—a discretionary crawl in Argentina, a fixed rate in Venezuela. In Argentina the parallel peso (ARS) rate fell to a low of 9.5 this year (from 4.72 at the start of 2012), implying a premium of 82%. Over the past month, the parallel ARS has retraced to 8.7, or a 66% premium. Likewise, in Venezuela the parallel bolivar (VEF) fell to 23.2 (from 8.9 at the start of 2012), equivalent to a 375% premium before the post-election devaluation of the official FX produced a temporary and partial retracement.

Market panic, illiquidity, or seasonality can be cited as explanations for those gyrations. Yet simple economic principles shed more much light on the path of shadow exchange rates. Empirical evidence shows that monetary imbalances—originating in fiscal deficit monetization—relative to income constitutes the main catalyst for weakness in the shadow peso and bolivar. These imbalances also respond to policy adjustments (interest rate hikes in Argentina, US dollar bond sales to locals in Venezuela, and accelerated or step depreciations in both countries' official exchange rates).

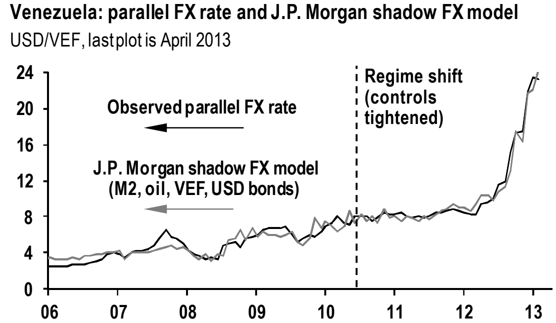
Latin America: private sector capital inflows (incl. errors & omissions)



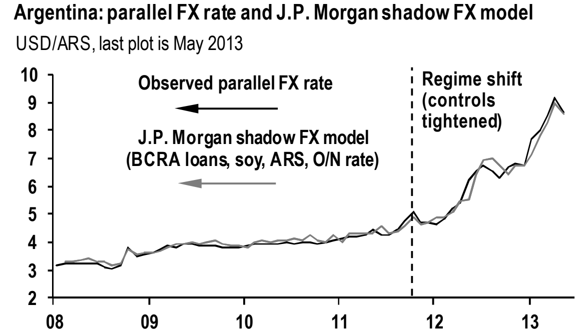
Parallel FX premium



Venezuela: parallel FX rate and J.P. Morgan shadow FX model



Argentina: parallel FX rate and J.P. Morgan shadow FX model



Source for all charts on this page: BCRA, BCA, Bloomberg, J.P. Morgan

Key drivers: money-income imbalances

The foundation for the construction of restrictive FX regimes is well understood by investors: With the root causes of capital flight (preservation of capital from the threat of inflation and/or expropriation) left unaddressed in both Argentina and Venezuela, authorities hope to ration the sale of central bank reserves that would be required to fund

Vladimir Werning
(1-212) 834-4144
vladimir.werning@jpmorgan.com

Diego W. Pereira
(1-212) 834-4321
diego.w.pereira@jpmorgan.com

the abnormal outflow of capital their economies suffer. Thus, controls prioritize trade- and debt service-related transactions at the official rate over FX demand for portfolio rebalancing. And both governments hope that the currencies may anchor domestic goods inflation amid loose monetary policy.

In Argentina and Venezuela, M2 is rising at 32%oya and 63%oya, respectively, despite their economies operating at full capacity. The monetary imbalance needs to be defined relative to some variable—either a stock (for instance, central bank reserves) or a flow (for instance, income). In economies with closed capital accounts, the weight of trade flows in the balance of payments suggests focusing on export earnings, largely dictated by swings in commodity prices. By affecting income growth and spending, these prices impact money demand. Unsurprisingly, the parallel bolivar and peso have very closely tracked the ratio of M2 relative to the price of oil (for VEF) and central bank loans to the Treasury (*adelantos transitorios*) relative to the price of soybeans (for ARS).

Other drivers: bond sales and interest rates

Many observers view periods of stability in shadow FX rates as reflecting government coercion (audits of foreign exchange businesses). Yet short-term reversals of the FX gap often respond to economic management—in both its orthodox and heterodox variants. Orthodox fine-tuning involves step devaluations (in Venezuela) and interest rate hikes (in Argentina): Venezuela devalued VEF 32% in February and Argentina hiked O/N interest rates to 17% (from 10%) in May. Heterodox interventions involve the indirect supply of FX to locals (USD bonds in Venezuela, USD futures in Argentina). These policy responses play a secondary role (to that of deviations in monetary aggregates from income flows) in explaining the path of shadow FX. And their impact tends to be temporary since they are not reinforced with an anti-inflation program, or because they are embraced only briefly.

A key divergence ahead: the political cycle

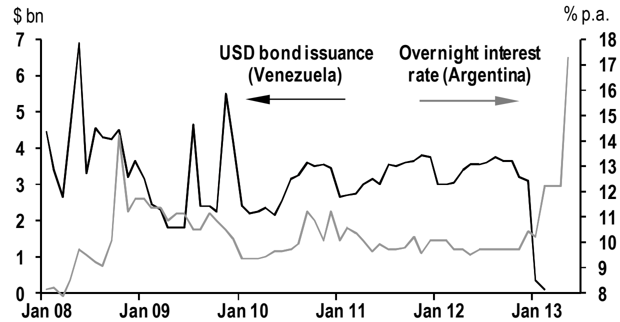
The table provides a reliable (R^2=0.98 and 0.96) and intuitive economic framework for thinking about the path of the parallel peso and bolivar. For instance, if the status quo is maintained, then Argentina's and Venezuela's parallel FX should be expected to end 2013 at ARS/USD 10.3 (a 16% weakening) and at VEF/USD 32.8 (a 41% weakening). For Argentina the status quo is represented by BCRA maintaining interest rates at their current level (17%), money printing to fund Treasury growing at a steady pace (88%oya), global prices of soy unchanged (US$557/tonne), and the official ARS/USD being depreciated at the current pace of crawl (17.7% p.a.). For Venezuela the status quo is

J.P. Morgan shadow FX model: Argentina and Venezuela
Dependent variable: parallel FX (level vs. USD)

Explanatory variables	Model betas[1] Argentina		Venezuela	
Pre-tightening of capital controls				
BCRA loans/soy price (in ARS, official rate)	0.14		...	
Overnight interest rate	0.09	***	...	
M2/oil price (in VEF, official rate)	...		405.70	***
USD bond supply (in VEF, official rate)	...		-72.85	*
Post-tightening of capital controls[2]				
BCRA loans/soy price (in ARS, official rate)	0.96	**	...	
Overnight interest rate	-0.11	***	...	
M2/oil price (in VEF, official rate)	...		349.48	***
USD bond supply (in VEF, official rate)	...		-276.06	***
Adjusted R-squared	0.98		0.96	

Both models include AR(1) control 1. *** Significant at 1%; ** at 5%; * at 10%
2. Dummy for October 2011 (Argentina) and May 2010 (Venezuela)

Policy tools to manage the parallel FX rate in the short term



Source for chart and table: BCRA, BCV, Venezuela Fin Min, CADIVI, J.P. Morgan

defined by an official bolivar fixed at 6.3, M2 growing at the current pace (63%oya), unchanged oil prices ($100/bbl), and no indirect US dollar bond supply. The status quo implies a neutral outlook on commodity prices and policy adjustments. Alternatively, one could ask what is necessary to stabilize the shadow FX given current money supply growth: For Argentina, soy prices need to rise by 26% or interest rates to 30% and for Venezuela the oil price needs to rise by 55% or USD supply by $5.5 billion monthly (via bonds or an alternative platform for selling FX).

Finally, since monetary imbalances are the key driver of the shadow FX and have been influenced by political cycles, it is worthwhile to factor in the latter. In 2013 Argentina is in a pre-election phase while Venezuela is in a post-election phase (suggesting that fiscal deficit monetization will increase in the former and decrease in the latter). If, as a consequence of those cycles (and in the absence of changes in official FX policy), money growth is raised to one-and-a-half times its current pace in Argentina (while interest rates return to 10%) but is cut to half its current pace in Venezuela (while USD supply returns to $3.5 billion per month), the parallel peso and bolivar could be expected to end 2013 at 13.4 (weaker vs. today's 8.7) and 21.7 (stronger vs. today's 23.2), respectively.

Justin Kariya
(1-212) 834-9618
justin.p.kariya@jpmorgan.com

Anna Hibino
(61-2) 9003-7932
anna.hibino@jpmorgan.com

Market movers

(all times GMT; +11hrs for Sydney, +9hrs for Tokyo, -5hrs for New York)

Date	Country		Data/Event		Forecast		Previous	
					JPM	Consensus		
During week	**Russia**	**3-14**	**CBR rate announcement**	**Jun**	**5.50**	**5.50**	**(May)**	**5.50**
Jun 1 (Sat)	**Korea**	01:00	Trade balance (USD bn)	May	na	2.62	(Apr)	2.58
	China	02:00	PMI mfg. (index, sa)	May	50.2	50.0	(Apr)	50.6
Jun 3 (Mon)	**Korea**	01:00	HSBC mfg. PMI (index, sa)	May	52.7	na	(Apr)	52.6
	China	02:00	PMI non-mfg. (index, sa)	May	na	na	(Apr)	54.5
		02:45	HSBC mfg. PMI (index, sa)	May	49.6	49.6	(Apr)	50.4
	Australia	02:30	Retail sales (%m/m, sa)	Apr	0.1	0.3	(Mar)	-0.4
	Taiwan	03:00	HSBC mfg. PMI (index, sa)	May	na	na	(Apr)	50.7
	Indonesia	04:00	HSBC mfg. PMI (index, sa)	May	na	na	(Apr)	51.7
		05:00	Trade balance (USD mn)	Apr	na	53.0	(Mar)	305
	India	06:00	HSBC mfg. PMI (index, sa)	May	na	na	(Apr)	51.0
	Sweden	07:30	PMI mfg. (index, sa)	May	na	50.1	(Apr)	49.60
	Norway	08:00	PMI mfg. (index, sa)	May	na	49.5	(Apr)	48.9
	Switzerland	08:30	PMI mfg. (index, sa)	May	na	50.4	(Apr)	50.2
	UK	09:30	PMI mfg. (index, sa)	May	na	50.3	(Apr)	49.8
	Hungary	08:00	Trade balance (EUR mn)	May	na	na	(Apr)	753.4
		08:00	PMI mfg. (index)	May	na	na	(Apr)	51.7
	Turkey	08:00	CPI (%oya)	May	na	6.88	(Apr)	6.13
	Euro area	08:45	Italy PMI mfg (index, sa)	May	na	46.1	(Apr)	45.5
		08:50	France PMI mfg final (index, sa)	May	45.5	45.5	(May)	45.5
		08:55	Germany PMI mfg. final (index, sa)	May	49	49	(May)	49
		09:00	PMI mfg. index final (sa)	May	47.8	47.8	(May)	47.8
	South Africa	10:00	PMI mfg (Kagiso)	May	na	49.7	(Apr)	50.5
	Brazil	14:00	PMI mfg. (index, sa)	May	na	na	(Apr)	50.8
		19:00	Trade balance ($ mn)	May	na	na	(Apr)	-994
	US	12:20	Fed's Williams speaks in stockholm					
		13:58	PMI mfg final	May	na	52		
		15:00	ISM mfg. index (sa)	May	na	50.5	(Apr)	50.7
		15:00	Construction spending (%m/m, sa)	Apr	na	1.0	(Mar)	-1.7
	Mexico	18:00	PMI mfg. (IMEF)	May	na	na	(Apr)	51.8
		18:00	PMI services (IMEF)	May	na	na	(Apr)	52.2
Jun 4 (Tue)	**Japan**	00:50	Monetary base (%oya)	May	na	na	(Apr)	23.1
		04:45	Japan to Sell 10-Year Bonds					
	Australia	**05:30**	**RBA rate announcement**	**Jun**	**2.75**	**2.75**	**(May)**	**2.75**
	UK	09:30	PMI construction (index, sa)	May	na	49.8	(Apr)	49.4
	Euro area	10:00	PPI (%oya)	Apr	na	0.2	(Mar)	0.7
	Brazil	13:00	IP(%oya)	Apr	na	7.5	(Mar)	-3.3
	Canada	13:30	Trade balance (CAD bn, sa)	Apr	na	-0.6	(Mar)	0.02
	US	13:30	Trade balance ($bn, sa)	Apr	na	-41.0	(Mar)	-38.8
		18:30	Fed's George speaks on economy in New Mexico					
Jun 5 (Wed)	**Australia**	02:30	GDP (%q/q, sa)	1Q	0.8	0.8	(4Q)	0.6
	China	02:45	HSBC services PMI (index, sa)	May	na	na	(Apr)	51.1
	Japan	04:35	Japan to Sell 6-Month Bill					
	UK	09:30	PMI services (index, sa)	May	na	53.1	(Apr)	52.9
	US	01:00	Fed's Fisher speaks on Monetary Policy in Toronto					

Justin Kariya
(1-212) 834-9618
justin.p.kariya@jpmorgan.com

Anna Hibino
(61-2) 9003-7932
anna.hibino@jpmorgan.com

Market movers

(all times GMT; +11hrs for Sydney, +9hrs for Tokyo, -5hrs for New York)

Date	Country		Data/Event		Forecast JPM	Forecast Consensus	Previous	
Jun 5 (Wed)	Euro area	08:45	Italy PMI services (index, sa)	May	na	47.5	(Apr)	47
		08:50	France PMI services final (index, sa)	May	44.3	44.3	(May)	44.3
		08:55	Germany PMI services final (index, sa)	May	49.8	49.8	(May)	49.8
		09:00	PMI services final (index, sa)	May	47.5	47.5	(May)	47.5
		09:00	PMI composite final (index, sa)	May	47.7	47.7	(May)	47.7
		10:00	GDP (%q/q, sa)	1Q	na	-0.2	(1Q)	-0.2
		10:00	Retail sales (%m/m, sa)	Apr	-0.2	-0.2	(Mar)	-0.1
	Poland	**na**	**NBP rate announcement**	**Jun**	**2.75**	**2.75**	**(May)**	**3.00**
	Canada	13:30	Building permits (%m/m, sa)	Apr	na	-2.3	(Mar)	8.6
	US	13:15	ADP employment (ch m/m, 000s)	May	na	170	(Apr)	118.9
		13:30	Nonfarm productivity (%q/q, sa)	1Q	na	0.7	(1Q)	0.7
		13:30	Unit labor costs (%q/q, sa)	1Q	na	0.5	(1Q)	0.5
		15:00	Factory orders (%m/m, sa)	May	na	1.4	(Apr)	-4.9
		15:00	ISM non-mfg. index (sa)	May	na	53.5	(Apr)	53.1
		19:00	Fed Beige Book					
	Brazil	14:00	PMI services (index, sa)	May	na	na	(Apr)	51.3
Jun 6 (Thu)	Japan	00:50	Weekly portfolio flows data					
		04:35	Japan to Sell 3-Month Bill					
		04:45	Japan to Sell 30-Year Bonds					
	Australia	02:30	Trade balance (A$ bn, sa)	Apr	500	180	(Mar)	307
	UK	**12:00**	**BoE rate announcement**	**Jun**	**0.50**	**0.50**	**(May)**	**0.50**
	Euro area	09:30	Spain sells bonds					
		11:00	Germany factory orders (%m/m, sa)	Apr	-1.5	-0.8	(Mar)	2.2
		12:45	**ECB rate announcement**	**Jun**	**0.5**	**0.5**	**(May)**	**0.5**
		13:30	ECB's Draghi holds press conference					
	Brazil	12:30	COPOM meeting minutes					
	US	12:30	Challenger layoffs (%oya)	May	na	na	(Apr)	-6
		13:00	Fed's Plosser speaks on economy in Boston					
		13:30	Initial jobless claims (000ch)	31-May	na	345	25-May	354
	Canada	15:00	Ivey PMI (index, sa)	May	na	55.0	(Apr)	52.2
Jun 7 (Fri)	Korea	00:00	GDP final (%q/q, sa)	1Q	na	na	(1QP)	0.9
	Japan	06:00	Coincident index (CI)	Apr	na	94.9	(Mar)	93.80
		06:00	Leading index (CI)	Apr	na	98.8	(Mar)	97.9
	Norway	09:00	IP (%m/m, sa)	Apr	na	49.5	(Mar)	1.0
	Taiwan	09:00	Trade balance (USD bn)	May	1.9	2.3	(Apr)	2.27
	UK	09:30	Trade balance (GBP bn, sa)	Apr	na	-8.80	(Mar)	-9.06
	Euro area	07:00	Germany trade balance (EUR bn, nsa)	Apr	na	17.0	(Mar)	18.8
		11:00	Germany IP (%m/m, sa)	Apr	-0.7	0.0	(Mar)	1.2
		11:00	ECB announces 3-year LTRO repayment					
	Hungary	08:00	IP (%oya)	Apr	na	na	(Mar)	-0.7
	Brazil	13:00	IBGE Inflation IPCA (%m/m)	May	na	0.38	(Apr)	0.55
	Canada	13:30	Unemployment rate (%, sa)	May	na	7.1	(Apr)	7.2
		13:30	Employment (ch m/m 000s, sa)	May	na	18	(Apr)	12.5
		13:30	Labor productivity (%q/q, sa)	1Q	na	na	(4Q)	0.12
	US	13:30	Private payrolls (ch m/m 000s, sa)	May	na	175	(Apr)	176
		13:30	Nonfarm payrolls (ch m/m 000s, sa)	May	na	165	(Apr)	165
		13:30	Average hourly earnings (%m/m, sa)	May	na	0.2	(Apr)	0.2
		13:30	Unemployment rate (%, sa)	May	na	7.5	(Apr)	7.5
	Mexico	**15:00**	**Banxico rate announcement**	**Jun**	**4.00**	**na**	**(May)**	**4.00**

Justin Kariya
(1-212) 834-9618
justin.p.kariya@jpmorgan.com

Event risk calendar

Month	Date	Country	Event
Jun 2013	6	UK	BoE inflation report
	6	Euro area	ECB rate announcement
	11	Japan	BoJ rate announcement
	11-12	Euro area	German constitutional court scheduled hold two hearing
	13	New Zealand	RBNZ Monetary Policy Statement
	13-14	G8	G8 Summit (UK)
	14	Iran	Presidential election (first round)
	17-18	G8	G8 summit in Northern Ireland
	19	US	FOMC rate announcement (incl. press conference)
	20	Switzerland	SNB rate announcement
	20-21	Euro area	Eurogroup/Ecofin meeting
	27-28	Euro area	EU leaders summit
Jul 2013	1	UK	New BoE Governor Carney takes over
	4	UK	BoE inflation report
	4	Euro area	ECB rate announcement
	11	Japan	BoJ quarterly interim report
	11	Japan	Parliamentary elections
	17	Canada	BoC Monetary Policy Report
	31	US	FOMC rate announcement
Aug 2013	1	UK	BoE rate announcement
	1	Euro area	ECB rate announcement
	7	UK	BoE inflation report
	9	Australia	RBA Statement on Monetary Policy
Sep 2013	2	US	Treasury Sec Lew said the debt ceiling won't be breached until after Labor Day.
	5	UK	BoE rate announcement
	5	Euro area	ECB rate announcement
	5-6	G20	G20 Summit (Russia)
	9	Norway	Norway parlimentary election
	12	New Zealand	RBNZ Monetary Policy Statement
	14	Australia	Australia parliamentary elections
	18	US	FOMC rate announcement (incl. press conference)
	19	Switzerland	SNB rate announcement
	22	Euro area	Germany parliamentary election
	29	Euro area	Austria parliamentary elections

Month	Date	Country	Event
Oct 2013	2	Euro area	ECB rate announcement
	10	UK	BoE rate announcement
	11-13	IMF	IMF World Bank annual meeting
	24-25	Euro area	EU leaders summit
	30	US	FOMC rate announcement
	31	Japan	BoJ semi-annual report
Nov 2013	7	UK	BoE rate announcement
	7	Euro area	ECB rate announcement
	8	Australia	RBA Statement on Monetary Policy
	13	UK	BoE inflation report
	23	Canada	BoC Monetary Policy Report
Dec 2013	5	UK	BoE rate announcement
	5	Euro area	ECB rate announcement
	12	New Zealand	RBNZ Monetary Policy Statement
	12	Switzerland	SNB rate announcement
	18	US	FOMC rate announcement (incl. press conference)
	19-20	Euro area	EU leaders summit
Jul 2014	8-12	China	US-China Strategic and Economic Dialogue in Washington

This page left intentionally blank

Central bank announcement dates in 2013

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Australia		5	5	2	7	4	2	6	3	1	5	3
Brazil	16		6	17	29		10	28		9	27	
Canada	23		6	17	29		17		4	23		4
Chile	17	14	14	11	16	13	11	13	12			
Colombia	28	22	22	26	31	28	26	30	27	25	29	20
Czech Republic		6	28		2	27		1	26		7	17
Euro area	10	7	7	4	2	6	4	1	5	2	7	5
Hungary	29	26	26	23	28	25						
India	29		19		3	17	30					
Indonesia	10	12	7	11	14	13	11	15	12	8	12	12
Israel	28	25	24	22	27	24	29	26	23	28	25	
Japan	22	14	7	4, 26	22	11	11	8	5	4, 31	21	20
Korea	11	14	14	11	9	13	11	8	12	10	14	12
Malaysia	31		7		9		11		5		7	
Mexico	18		8	26		7	12		6	25		6
New Zealand	31		14	24		13	25		12	31		12
Norway			14		8	20			19	24		5
Philippines	24		14	25		13	25		12	24		12
Poland	9	6	6	10	8	5	3		4	2	6	4
South Africa	24		20		23		18		19		21	
Sweden		13		17			3		5	24		17
Switzerland			14			20			19			12
Thailand	9	20		3	29		10	21		16	27	
Turkey	22	19	26	16	16	18	23	20	17	23	19	17
United Kingdom	10	7	7	4	9	6	4	1	5	10	7	5
United States	30		20		1	19	31		18	30		18

David Hensley
(1-212) 834-5516
david.hensley@jpmorgan.com

Global central bank forecasts

	Official rate	Current rate (%pa)	Change since (bp) 05-07 avg	Trough[1]	Jul 11	Last change	Next mtg	Forecast next change	Forecast (%pa) Jun 13	Sep 13	Dec 13	Mar 14	Jun 14
Global		2.13	-225	29	-62				2.12	2.11	2.10	2.14	2.17
excluding US		2.78	-154	30	-70				2.77	2.76	2.75	2.80	2.84
Developed		0.41	-308	0	-40				0.41	0.41	0.40	0.39	0.39
Emerging		5.36	-172	46	-90				5.34	5.31	5.31	5.43	5.52
Latin America		6.02	-475	0	-301				6.16	6.44	6.48	6.53	6.53
EMEA EM		4.55	-190	61	24				4.28	3.93	3.91	3.99	3.99
EM Asia		5.41	-45	90	-60				5.42	5.38	5.38	5.53	5.68
The Americas		1.43	-389	26	-61				1.46	1.51	1.52	1.53	1.53
United States	Fed funds	0.125	-438	0	0	16 Dec 08 (-87.5bp)	19 Jun 13	On hold	0.125	0.125	0.125	0.125	0.125
Canada	O/N rate	1.00	-273	75	0	8 Sep 10 (+25bp)	29 May 13	3Q 14 (+25bp)	1.00	1.00	1.00	1.00	1.00
Brazil	SELIC O/N	7.50	-775	0	-500	17 Apr 13 (+25bp)	29 May 13	29 May 13 (+25bp)	7.75	8.25	8.25	8.25	8.25
Mexico	Repo rate	4.00	-387	0	-50	8 Mar 13 (-50bp)	7 Jun 13	On hold	4.00	4.00	4.00	4.00	4.00
Chile	Disc rate	5.00	31	450	-25	12 Jan 12 (-25bp)	13 Jun 13	On hold	5.00	5.00	5.00	5.00	5.00
Colombia	Repo rate	3.25	-406	25	-125	22 Mar 13 (-50bp)	31 May 13	Nov 13 (+25bp)	3.25	3.25	3.75	4.50	4.50
Peru	Reference	4.25	19	300	0	12 May 11 (+25bp)	13 Jun 13	On hold	4.25	4.25	4.25	4.25	4.25
Uruguay	Reference	9.25	200	300	125	28 Dec 12 (+25bp)	2Q 13	2Q 13 (+25bp)	9.50	9.50	9.50	9.50	9.50
Europe/Africa		1.38	-248	0	-57				1.32	1.25	1.24	1.26	1.26
Euro area	Refi rate	0.50	-248	0	-100	2 May 13 (-25bp)	6 Jun 13	On hold	0.50	0.50	0.50	0.50	0.50
United Kingdom	Bank rate	0.50	-444	0	0	5 Mar 09 (-50bp)	6 Jun 13	On hold	0.50	0.50	0.50	0.50	0.50
Czech Republic	2-wk repo	0.05	-235	0	-70	1 Nov 12 (-20bp)	27 Jun 13	On hold	0.05	0.05	0.05	0.05	0.05
Hungary	2-wk dep	4.75	-238	0	-125	23 Apr 13 (-25bp)	28 May 13	28 May 13 (-25bp)	4.25	**3.50**	**3.25**	**3.25**	**3.25**
Israel	Base rate	1.50	-275	100	-175	13 May 13 (-25bp)	27 May 13	27 May 13 (-25bp)	1.25	1.25	1.25	1.25	1.25
Poland	7-day interv	3.00	-152	0	-150	8 May 13 (-25bp)	5 Jun 13	5 Jun 13 (-25bp)	2.75	2.50	2.50	2.50	2.50
Romania	Base rate	5.25	-294	0	-100	29 Mar 12 (-25bp)	1 Jul 13	1 Jul 13 (-25bp)	5.25	4.50	4.25	4.00	4.00
Russia	Repo rate	5.50	N/A	N/A	N/A	13 Sep 12 (+25bp)	Jun 13	Jun 13 (-25bp)	5.25	4.75	4.75	4.75	4.75
South Africa	Repo rate	5.00	-329	0	-50	19 Jul 12 (-50bp)	18 Jul 13	18 Jul 13 (-50bp)	5.00	4.50	4.50	4.50	4.50
Turkey	Effctve rate	5.09	-1085	0	-116	N/A[2]	18 Jun 13	N/A[2]	4.50	4.50	4.50	5.00	5.00
Asia/Pacific		3.61	-9	70	-51				3.62	3.60	3.58	3.65	3.75
Australia	Cash rate	2.75	-319	0	-200	7 May 13 (-25bp)	4 Jun 13	Nov 13 (-25bp)	2.75	2.75	2.50	**2.25**	**2.25**
New Zealand	Cash rate	2.50	-488	0	0	10 Mar 11 (-50bp)	13 Jun 13	Sep 13 (+25bp)	2.50	2.75	2.75	3.00	3.00
Japan	O/N call rate[3]	0.05	-17	0	0	5 Oct 10 (-5bp)	11 Jun 13	On hold	0.05	0.05	0.05	0.05	0.05
Hong Kong	Disc. wndw	0.50	-548	0	0	17 Dec 08 (-100bp)	20 Jun 13	On hold	0.50	0.50	0.50	0.50	0.50
China	1-yr working	6.00	-14	69	-56	7 Jul 12 (-31bp)	-	1Q 14 (+25bp)	6.00	6.00	6.00	6.25	6.50
Korea	Base rate	2.50	-165	50	-75	9 May 13 (-25bp)	13 Jun 13	4Q 14 (+25bp)	2.50	2.50	2.50	2.50	2.50
Indonesia	BI rate	5.75	-412	0	-100	9 Feb 12 (-25bp)	13 Jun 13	13 Jun 13 (+25bp)	6.00	6.00	6.00	6.00	6.00
India	Repo rate	7.25	38	250	-75	3 May 13 (-25bp)	17 Jun 13	3Q 13 (-25bp)	7.25	7.00	7.00	7.00	7.00
Malaysia	O/N rate	3.00	-24	100	0	5 May 11 (+25bp)	11 Jul 13	On hold	3.00	3.00	3.00	3.00	3.00
Philippines	Rev repo	3.50	-356	0	-100	25 Oct 12 (-25bp)	13 Jun 13	On hold	3.50	3.50	3.50	3.50	3.50
Thailand	1-day repo	2.75	-108	150	-50	17 Oct 12 (-25bp)	29 May 13	**29 May 13 (-25bp)**	**2.50**	**2.50**	**2.50**	**2.50**	**2.50**
Taiwan	Official disc.	1.875	-71	62.5	0	30 Jun 11 (+12.5bp)	2Q 13	1Q 14 (+12.5bp)	1.875	1.875	1.875	2.00	2.125

1 Refers to trough end-quarter rate from 2009-present ² Effective rate adjusted on daily basis 3 BoJ targets ¥50-60tn/year expansion in monetary base
Bold denotes move since last GDW and forecast changes. Underline denotes policy meeting during upcoming week. Aggregates are GDP-weighted averages.

Source: J.P. Morgan

John Normand
(44-20) 7134-1816
john.normand@jpmorgan.com

Justin Kariya
(1-212) 834-9618
justin.p.kariya@jpmorgan.com

J.P. Morgan FX forecasts vs. forwards & consensus

Exchange rates vs. U.S dollar		Current					JPM forecast gain/loss vs Dec-13*		Actual change in local FX vs USD			
Majors		May 31	Jun 13	Sep 13	Dec 13	Mar 14	forward rate	Consensus**	Past 1mo	Past 3mo	YTD	Past 12mos
	EUR	1.30	1.30	1.30	1.30	1.32	-0.1%	2.4%	-1.4%	-0.2%	-1.5%	5.1%
	JPY	100.4	100	102	105	106	-4.5%	0.0%	-3.0%	-6.8%	-13.6%	-22.0%
	GBP	1.52	1.51	1.49	1.49	1.52	-1.7%	0.3%	-2.1%	1.2%	-6.4%	-1.2%
	AUD	0.96	0.99	0.99	1.00	1.01	5.6%	0.0%	-6.6%	-5.9%	-7.6%	-1.4%
	CAD	1.03	1.01	0.99	0.99	0.99	4.9%	3.0%	-2.5%	-0.7%	-4.0%	-0.1%
	NZD	0.80	0.82	0.83	0.83	0.82	5.4%	0.0%	-6.0%	-3.2%	-3.6%	6.0%
JPM USD index		85.0	85.3	85.2	85.7	85.2	-2.6%	-1.7%	2.5%	1.6%	4.2%	1.0%
DXY		83.3	83.1	83.3	83.5	82.6	0.3%	-1.9%	2.2%	1.2%	4.4%	0.3%
Europe, Middle East & Africa												
	CHF	0.95	0.95	0.95	0.94	0.92	1.4%	4.9%	-2.8%	-1.2%	-4.1%	1.8%
	ILS	3.69	3.65	3.70	3.75	3.75	-1.1%	-2.9%	-3.1%	0.8%	1.2%	5.8%
	SEK	6.61	6.54	6.46	6.46	6.33	2.7%	1.8%	-2.1%	-2.6%	-1.6%	10.0%
	NOK	5.86	5.77	5.73	5.69	5.57	3.7%	2.4%	-1.6%	-1.8%	-5.0%	4.4%
	CZK	19.78	19.88	19.77	19.69	19.32	0.3%	3.2%	-1.4%	-0.4%	-3.9%	5.2%
	PLN	3.29	3.19	3.15	3.12	3.03	6.9%	3.1%	-4.0%	-3.4%	-6.0%	7.9%
	HUF	228	223	223	223	220	4.0%	5.9%	-0.5%	-0.7%	-3.1%	6.7%
	RUB	31.90	31.72	31.94	31.28	31.03	5.6%	-0.2%	-1.8%	-3.6%	-4.3%	4.7%
	TRY	1.88	1.80	1.82	1.85	1.85	4.3%	-2.7%	-4.5%	-4.3%	-5.0%	-0.6%
	ZAR	10.18	9.20	9.10	8.80	8.70	19.2%	2.8%	-11.4%	-10.9%	-16.7%	-16.3%
Americas	ARS	5.28	5.60	6.00	6.40	6.85	3.8%	-7.7%	-1.8%	-4.4%	-6.9%	-15.3%
	BRL	2.12	2.05	2.02	2.05	2.05	7.5%	-2.4%	-5.8%	-6.8%	-3.4%	-4.8%
	CLP	495	475	475	475	480	7.1%	0.6%	-4.5%	-4.1%	-3.2%	4.4%
	COP	1890	1825	1825	1800	1800	7.1%	2.8%	-3.4%	-4.1%	-6.5%	-3.3%
	MXN	12.90	12.00	11.90	11.70	11.80	12.2%	2.6%	-5.4%	-1.1%	-0.4%	11.5%
	PEN	2.73	2.60	2.60	2.57	2.55	7.7%	-0.4%	-3.0%	-4.8%	-6.5%	-0.6%
	VEF	6.29	6.30	6.30	6.30	8.50	-0.1%	0.0%	0.0%	0.0%	-31.7%	-31.7%
LACI		101.5	105.4	105.4	105.0	103.9	8.6%	-0.5%	-4.6%	-3.8%	-3.0%	0.8%
Asia	CNY	6.13	6.19	6.17	6.15	6.15	1.2%	-0.8%	0.5%	1.4%	1.6%	3.8%
	HKD	7.76	7.80	7.80	7.80	7.80	-0.5%	-0.4%	0.0%	-0.1%	-0.2%	0.0%
	IDR	9877	9800	9800	9900	10200	3.6%	-2.0%	-1.5%	-2.0%	-0.9%	-4.0%
	INR	56.5	55.5	55.5	55.5	55.5	5.6%	-3.9%	-4.8%	-2.8%	-2.7%	-0.7%
	KRW	1130	1090	1070	1040	1030	9.6%	4.5%	-2.5%	-4.0%	-5.8%	4.5%
	MYR	3.10	3.05	3.02	3.00	2.97	4.4%	-0.7%	-1.7%	0.0%	-1.2%	2.6%
	PHP	42.27	40.55	40.25	40.00	39.80	6.5%	0.5%	-2.7%	-3.7%	-3.0%	2.7%
	SGD	1.26	1.22	1.20	1.19	1.18	6.0%	3.4%	-2.3%	-1.7%	-3.2%	2.1%
	TWD	29.94	29.80	29.50	29.30	29.00	2.1%	-0.2%	-1.5%	-1.0%	-3.0%	-0.3%
	THB	30.35	29.00	28.90	28.90	28.90	6.3%	0.2%	-3.3%	-1.9%	0.8%	4.9%
ADXY		116.8	116.9	119.9	121.4	121.4	3.7%	0.3%	-1.3%	-3.8%	-1.2%	2.5%
EMCI		92.8	95.5	95.9	96.4	96.5	7.2%	0.4%	-3.2%	-2.7%	-3.1%	1.6%
Exchange rates vs Euro									Actual change in local FX vs EUR			
	JPY	130	130	133	137	140	-4.4%	-2.3%	-1.6%	-6.6%	-12.3%	-25.8%
	GBP	0.854	0.860	0.875	0.870	0.870	-1.6%	-2.0%	-0.8%	1.4%	-4.9%	-6.0%
	CHF	1.24	1.230	1.230	1.220	1.210	1.6%	2.5%	-1.5%	-1.0%	-2.6%	-3.2%
	SEK	8.59	8.50	8.40	8.40	8.35	2.8%	-0.6%	-0.8%	-2.4%	-0.1%	4.6%
	NOK	7.62	7.50	7.45	7.40	7.35	3.9%	0.0%	-0.2%	-1.6%	-3.6%	-0.7%
	CZK	25.72	25.85	25.70	25.60	25.50	0.5%	0.8%	0.0%	-0.2%	-2.4%	0.0%
	PLN	4.28	4.15	4.10	4.05	4.00	7.1%	0.7%	-2.6%	-3.3%	-4.7%	2.6%
	HUF	296	290	290	290	290	4.1%	3.4%	0.9%	-0.5%	-1.6%	1.6%
	RON	4.39	4.35	4.45	4.50	4.50	-0.4%	-3.8%	-1.5%	-0.5%	1.3%	2.2%
	TRY	2.44	2.34	2.37	2.41	2.44	4.4%	-4.9%	-3.2%	-4.1%	-3.6%	-5.4%
	RUB	41.46	41.23	41.52	40.66	40.96	5.7%	-2.5%	-0.3%	-3.7%	-2.9%	-0.3%
	BRL	2.74	2.67	2.63	2.67	2.71	7.0%	-4.7%	-3.9%	-6.0%	-1.3%	-8.8%
	MXN	16.77	15.60	15.47	15.21	15.58	12.4%	0.2%	-4.1%	-0.9%	1.2%	6.0%

↑ indicates revision resulting in stronger local FX , ↓ indicates revision resulting in weaker local FX. Source: J.P.Morgan

* Positive indicates JPM more bullish on local currency than the consensus or forward rates. ** Bloomberg *FX Consensus Forecasts*.

J.P. Morgan forecasts: rates, credit, equities & commodities

Interest rates		Current	Jun-13	Sep-13	Dec-13	Mar-14	YTD Return*
United States	Fed funds rate	0.125	0.125	0.125	0.125	0.125	
	10-year yields	2.01	2.00	2.25	2.40	2.50	-0.6%
Euro area	Refi rate	0.50	0.50	0.50	0.50	0.50	
	10-year yields	1.43	1.20	1.30	1.45	1.55	-0.3%
United Kingdom	Repo rate	0.50	0.50	0.50	0.50	0.50	
	10-year yields	1.90	1.85	1.95	2.05	2.20	-0.2%
Japan	Overnight call rate	0.05	0.05	0.05	0.05	0.05	
	10-year yields	0.85	0.50	0.50	0.60	0.70	0.4%
GBI-EM hedged in $	Yield - Global Diversified	5.44				5.62	1.1%

Credit Markets	Current	Index	YTD Return*
US high grade (bp over UST)	151	JPMorgan JULI Porfolio Spread to Treasury	0.7%
Euro high grade (bp over Euro gov)	133	iBoxx Euro Corporate Index	2.1%
USD high yield (bp vs. UST)	463	JPMorgan Global High Yield Index STW	5.3%
Euro high yield (bp over Euro gov)	633	iBoxx Euro HY Index	4.4%
EMBIG (bp vs. UST)	277	EMBI Global	-1.2%
EM Corporates (bp vs. UST)	326	JPM EM Corporates (CEMBI)	1.1%

		Quarterly Averages					
Commodities	Current	13Q2	13Q3	13Q4	14Q1	GSCI Index	YTD Return*
Brent ($/bbl)	104	108	120	120	122	Energy	-2.4%
Gold ($/oz)	1366	1450	1600	1700	1700	Precious Metals	-17.2%
Copper ($/metric ton)	7251	7300	7700	7900	7600	Industrial Metals	-11.0%
Corn ($/Bu)	6.54	6.50	6.00	5.75		Agriculture	-4.2%

Foreign Exchange	Current	Jun-13	Sep-13	Dec-13	Mar-14	3m Cash	YTD Return* CCY vs. USD
EUR/USD	1.29	1.30	1.30	1.30	1.32	EUR	-2.0%
USD/JPY	101.0	100	102	105	106	JPY	-14.7%
GBP/USD	1.51	1.51	1.49	1.49	1.52	GBP	-7.1%
AUD/USD	0.96	0.99	0.99	1.00	1.01	AUD	-5.3%
USD/BRL	2.05	2.05	2.02	2.05	2.05	BRL	1.2%
USD/CNY	6.1	6.19	6.17	6.15	6.15	CNY	2.2%
USD/KRW	1127	1090	1070	1040	1030	KRW	-4.3%
USD/TRY	1.8	1.8	1.82	1.85	1.85	TRY	-1.7%

Equities	Current	YTD Return (local ccy)
S&P	1650	16.7%
Nasdaq	3454	15.1%
Topix	1245	39.5%
FTSE 100	6688	15.5%
MSCI Eurozone*	164	9.7%
MSCI Europe*	1280	13.5%
MSCI EM $*	1046	-1.8%
Brazil Bovespa	56097	-5.3%
Hang Seng	22619	-1.0%
Shanghai SE	2289	2.1%

*Levels/returns as of May 23, 2013
Local currency except MSCI EM $

Sector Performance *	US YTD	Europe YTD	Japan YTD	EM YTD ($)
Energy	14.0%	7.7%	10.4%	-7.4%
Materials	8.5%	-0.8%	34.3%	-16.7%
Industrials	16.1%	12.9%	35.2%	-2.6%
Discretionary	**20.5%**	**14.5%**	**50.9%**	**-1.3%**
Staples	**19.0%**	**17.5%**	**40.6%**	**4.5%**
Healthcare	**24.0%**	**24.9%**	35.5%	**5.1%**
Financials	**20.7%**	**14.6%**	**41.8%**	**2.9%**
Information Tech.	9.8%	12.7%	32.7%	**2.1%**
Telecommunications	14.5%	**14.0%**	**51.0%**	-2.3%
Utilities	13.4%	9.4%	**53.4%**	**1.0%**
Overall	**16.7%**	**13.5%**	**39.5%**	**-1.8%**

Source: Bloomberg, Datastream, IBES, Standard & Poor's Services, J.P. Morgan estimates

David Hensley
(1-212) 834-5516
david.hensley@jpmorgan.com

Carlton Strong
(1-212) 834-5612
carlton.m.strong@jpmorgan.com

Global growth and inflation forecasts

	Real GDP % over a year ago			Real GDP % over previous period, saar							Consumer prices % over a year ago				
	2012	2013	2014	4Q12	1Q13	2Q13	3Q13	4Q13	1Q14	2Q14	4Q12	2Q13	4Q13	2Q14	4Q14
The Americas															
United States	2.2	1.9	**2.4 ↑**	0.4	2.5	2.0	2.0	2.5	**2.3 ↑**	2.5	1.9	1.4	1.2	1.7	1.7
Canada	1.8	**1.6 ↑**	2.1	0.6	**2.3 ↑**	**1.9 ↑**	2.0	2.1	1.9	2.2	0.9	1.4	1.6	1.8	2.0
Latin America	2.6	3.3	3.7	**3.4 ↑**	**2.7 ↓**	4.1	4.0	3.2	3.7	3.5	4.7	5.1	4.7	4.5	4.6
Argentina	1.9	3.0	1.5	5.2	3.5	3.0	1.6	1.5	1.5	1.4	10.6	10.0	11.0	11.0	11.0
Brazil	0.9	3.0	3.5	2.2	3.4	3.5	3.7	3.2	3.8	3.6	5.6	6.6	6.0	5.7	5.8
Chile	5.6	5.2	4.5	**7.9 ↑**	**2.1 ↓**	5.4	5.0	5.0	4.2	4.2	2.2	1.6	2.4	3.0	3.0
Colombia	4.0	4.5	5.0	7.4	4.2	5.5	5.5	5.1	4.5	4.7	2.8	2.0	2.4	2.5	2.5
Ecuador	5.0	4.0	4.5	4.0	5.0	3.0	3.0	4.0	5.0	5.0	4.6	3.7	3.5	3.3	4.4
Mexico	3.9	3.2	3.9	2.7	1.8	5.4	5.1	2.9	3.6	3.2	4.1	4.0	3.4	3.2	3.2
Peru	6.3	6.0	6.5	2.5	5.0	7.0	7.5	6.0	6.5	7.0	2.9	2.5	2.6	2.5	2.5
Uruguay	3.9	3.5	4.0	-4.2	3.0	4.0	7.0	6.0	4.0	3.0	8.5	8.4	7.7	7.1	6.6
Venezuela	5.6	2.0	3.0	5.7	-4.0	2.0	2.0	2.0	4.0	4.0	18.7	31.0	35.7	30.8	27.7
Asia/Pacific	4.8	4.6	4.7	5.2	4.5	**5.0 ↓**	**4.8 ↓**	**5.1 ↓**	**5.4 ↓**	**3.4 ↑**	2.2	**2.4 ↓**	**2.8 ↓**	3.5	**3.2 ↓**
Japan	2.0	1.7	1.2	1.0	3.5	3.2	2.5	2.9	3.4	-3.6	-0.2	0.1	0.7	2.6	2.4
Australia	3.6	**2.6 ↑**	**2.8 ↓**	2.4	**4.5 ↑**	**1.9 ↓**	**0.6 ↓**	**1.5 ↓**	**2.7 ↓**	**4.5 ↑**	2.2	2.8	2.7	**2.6 ↓**	**2.3 ↓**
New Zealand	2.5	2.5	2.9	6.1	2.1	3.5	-2.0	4.4	4.3	2.9	0.9	1.1	2.2	2.5	2.5
Asia ex Japan	6.3	6.3	6.6	**7.3 ↓**	**5.0 ↓**	6.2	6.5	6.6	6.7	6.5	3.4	3.5	3.8	4.0	**3.7 ↓**
China	7.8	7.6	7.7	9.0	6.4	7.4	7.8	7.8	7.8	7.6	2.1	2.6	3.1	3.6	3.2
Hong Kong	1.5	3.3	3.6	5.7	0.8	3.0	5.0	5.0	2.0	3.5	3.8	3.5	3.7	3.7	3.2
India	5.0	5.8	6.5	4.7	6.4	6.5	5.3	5.6	7.6	6.5	10.1	9.0	8.5	7.5	7.5
Indonesia	6.2	5.6	5.4	6.7	5.4	5.0	5.2	5.5	5.5	5.5	4.4	6.1	6.9	4.4	4.5
Korea	2.0	2.5	3.7	1.1	3.5	2.4	4.5	4.0	4.0	3.5	1.7	1.3	1.9	3.3	3.0
Malaysia	5.6	5.1	5.3	7.0	0.7	4.3	4.8	5.0	5.5	5.5	1.3	1.6	1.7	1.4	1.5
Philippines	6.6	5.3	5.3	6.1	4.5	4.9	5.3	5.3	5.3	5.3	3.0	2.7	3.1	3.6	3.3
Singapore	1.3	**2.7 ↑**	**3.7 ↓**	3.3	**1.8 ↑**	**7.0 ↑**	**5.3 ↓**	4.9	0.8	4.1	4.0	**1.0 ↓**	**1.5 ↓**	**3.2 ↓**	**2.4 ↓**
Taiwan	1.3	**2.5 ↓**	**3.8 ↓**	**7.1 ↓**	**-2.7 ↑**	**2.8 ↓**	**4.2 ↓**	4.8	3.4	3.7	1.8	**0.8 ↓**	**1.3 ↓**	**2.2 ↓**	**2.2 ↓**
Thailand	**6.5 ↑**	5.3	4.5	**11.7 ↓**	**-8.4 ↓**	4.0	1.0	4.0	4.5	4.5	3.2	2.2	1.0	2.4	2.7
Africa/Middle East															
Israel	3.2	3.1	3.3	2.6	2.8	2.8	3.6	3.6	3.2	3.6	1.6	1.9	2.2	1.9	2.2
South Africa	2.5	2.3	3.6	2.1	**1.6 ↑**	2.8	3.4	3.6	3.8	3.3	5.6	**5.8 ↑**	**5.6 ↑**	5.4	5.4
Europe	0.1	0.1	1.7	-1.7	-0.3	0.2	1.2	1.4	1.8	1.8	3.0	2.3	2.1	2.1	**2.0 ↓**
Euro area	-0.5	-0.7	1.2	-2.3	-0.9	-0.5	0.5	1.0	1.5	1.5	2.3	1.4	1.2	1.4	1.3
Germany	0.9	0.2	2.1	-2.7	0.3	1.0	1.8	2.0	2.5	2.5	2.0	1.5	1.6	1.8	1.7
France	0.0	-0.5	1.0	-0.8	-0.7	-1.3	0.0	0.5	1.5	1.5	1.7	0.9	0.8	1.3	1.2
Italy	-2.4	-1.8	0.7	-3.7	-2.1	-1.5	0.0	0.5	1.0	1.0	2.6	1.4	1.4	1.4	1.2
Spain	-1.4	-1.8	0.5	-3.1	-2.0	-1.8	-0.8	0.0	1.0	1.3	3.2	1.7	0.4	0.7	0.6
United Kingdom	0.3	1.0	1.9	-1.2	**1.3 ↑**	1.0	1.5	2.0	2.0	2.0	2.7	**2.7 ↓**	**2.6 ↓**	**2.4 ↓**	**2.4 ↓**
Emerging Europe	2.3	2.3	3.2	0.9	1.1	2.6	3.8	2.7	3.0	3.0	5.7	5.5	4.7	4.4	4.6
Bulgaria	0.8	1.2	1.7	...	...	...	...	...	...	...	...	...	...	...	...
Czech Republic	-1.3	-0.9	1.9	-0.7	-3.2	0.4	1.5	1.4	2.0	2.0	2.8	1.7	1.9	1.5	2.1
Hungary	-1.7	0.5	1.5	-1.6	2.8	1.0	1.5	1.5	1.5	1.5	5.4	2.1	2.1	2.8	2.8
Poland	1.9	1.0	2.5	0.0	0.4	1.6	2.3	2.5	2.5	2.5	2.9	0.6	1.3	1.8	2.0
Romania	0.7	2.6	2.3	1.8	2.0	2.4	5.3	2.4	1.6	1.2	4.8	5.5	3.7	3.6	4.5
Russia	3.4	2.5	3.4	1.4	1.6	3.3	4.5	3.0	3.5	3.5	6.5	7.0	5.6	5.1	5.2
Turkey	2.2	3.7	4.5	...	...	...	...	...	...	...	6.8	6.7	6.3	5.8	5.8
Global	2.4	**2.4 ↑**	3.0	1.6	2.3	2.6	**2.9 ↓**	3.1	3.3	**2.7 ↑**	2.5	2.3	2.3	2.7	2.6
Developed markets	1.2	1.0	1.8	-0.4	**1.5 ↑**	1.3	**1.5 ↓**	2.0	**2.2 ↑**	1.3	1.7	1.3	1.3	1.8	1.8
Emerging markets	4.6	4.8	5.2	5.4	**3.8 ↓**	5.1	**5.4 ↓**	5.2	5.4	5.2	4.1	4.2	**4.1 ↓**	4.2	4.1
Memo:															
Global — PPP weighted	3.0	**3.0 ↑**	3.6	2.5	**2.7 ↓**	3.2	**3.4 ↓**	3.6	3.8	3.3	3.0	2.8	2.7	3.0	2.9

Source: J.P. Morgan estimates.
Note: For some emerging economies, 2010-2012 quarterly forecasts are not available and/or seasonally adjusted GDP data are estimated by J.P. Morgan.
Bold denotes changes from last edition of Global Data Watch, with arrows showing the direction of changes. Underline indicates beginning of J.P. Morgan forecasts.

Justin Kariya
(1-212) 834-9618
justin.p.kariya@jpmorgan.com

Sovereign credit ratings and actions

	S&P		Moody's		Fitch		Recent S&P Action		Recent Moody's Action		Recent Fitch Action	
	Rating	View	Rating	View	Rating	View	Rating	Outlook	Rating	Outlook	Rating	Outlook
Argentina	B-	(-)	B3	(-)	CC	(-)	31-Oct-12	31-Oct-12	29-Jun-05	17-Sep-12	27-Nov-12	27-Nov-12
Australia	AAA		Aaa		AAA		25-Feb-11	17-Sep-07	21-Oct-02	24-May-06	28-Nov-11	28-Nov-11
Austria	AA+		Aaa	(-)	AAA		13-Jan-12	29-Jan-13	26-Jun-77	13-Feb-12	10-Aug-94	15-Feb-08
Belgium	AA	(-)	Aa3	(-)	AA		13-Jan-12	13-Jan-12	16-Dec-11	16-Dec-11	27-Jan-12	23-Jan-13
Brazil	BBB		Baa2	(+)	BBB		17-Nov-11	17-Nov-11	20-Jun-11	20-Jun-11	4-Apr-11	4-Apr-11
Canada	AAA		Aaa		AAA		29-Jul-02	18-May-07	3-May-02	24-May-06	12-Aug-04	22-May-07
Chile	AA-		Aa3		A+		26-Dec-12	26-Dec-12	16-Jun-10	16-Jun-10	1-Feb-11	1-Feb-11
China	AA-		Aa3		A+	(-)	16-Dec-10	16-Dec-10	11-Nov-10	16-Apr-13	6-Nov-07	11-Apr-12
Colombia	BBB		Baa3		BBB-	(+)	24-Apr-13	24-Apr-13	31-May-11	31-May-11	22-Jun-11	6-Mar-13
Cyprus	CCC	(-)	Caa3	(-)	B		21-Mar-13	21-Mar-13	10-Jan-13	10-Jan-13	26-Mar-13	26-Mar-13
Czech Republic	AA-		A1		A+		24-Aug-11	24-Aug-11	12-Nov-02	8-Dec-08	4-Mar-08	13-Dec-11
Denmark	AAA		Aaa		AAA		27-Feb-01	26-Sep-07	23-Aug-99	24-May-06	10-Nov-03	18-Dec-07
Finland	AAA		Aaa		AAA		13-Jan-12	14-Jan-13	4-May-98	24-May-06	5-Aug-98	11-Dec-07
France	AA+	(-)	Aa1	(-)	AAA	(-)	13-Jan-12	13-Jan-12	19-Nov-12	19-Nov-12	10-Aug-94	16-Dec-11
Germany	AAA		Aaa	(-)	AAA		13-Jan-12	13-Jan-12	29-Apr-93	23-Jul-12	10-Aug-94	6-Nov-07
Greece	B-		C	WR	B-	WR	18-Dec-12	18-Dec-12	2-Mar-12	2-Mar-12	14-May-13	14-May-13
Hong Kong	AAA		Aa1		AA+		16-Dec-10	16-Dec-10	10-Nov-10	16-Apr-13	25-Nov-10	25-Nov-10
Hungary	BB	(-)	Ba1	(-)	BB+		23-Nov-12	21-Mar-13	24-Nov-11	6-Dec-10	6-Jan-12	20-Dec-12
India	BBB-	(-)	Baa3		BBB-	(-)	25-Feb-11	25-Apr-12	22-Jan-04	20-Dec-11	1-Aug-06	18-Jun-12
Indonesia	BB+		Baa3		BBB-		8-Apr-11	2-May-13	18-Jan-12	18-Jan-12	15-Dec-11	15-Dec-11
Ireland	BBB+		Ba1	(-)	BBB+		13-Jan-12	11-Feb-13	12-Jul-11	6-Sep-12	27-Jan-12	14-Nov-12
Israel	A+		A1		A		9-Sep-11	2-May-13	17-Apr-08	17-Apr-08	11-Feb-08	11-Feb-08
Italy	BBB+	(-)	Baa2	(-)	BBB+	(-)	13-Jan-12	13-Jan-12	13-Jul-12	12-Jul-12	8-Mar-13	8-Mar-13
Japan	AA-	(-)	Aa3		A+	(-)	25-Feb-11	26-Apr-11	24-Aug-11	24-Aug-11	22-May-12	22-May-12
Malaysia	A-		A3		A-		8-Oct-03	27-Jul-11	16-Dec-04	24-May-06	8-Nov-04	9-Jun-09
Mexico	BBB	(+)	Baa1		BBB+		14-Dec-09	12-Mar-13	6-Jan-05	24-May-06	8-May-13	8-May-13
Netherlands	AAA	(-)	Aaa	(-)	AAA	(-)	13-Jan-12	13-Jan-12	5-May-98	23-Jul-12	10-Aug-94	5-Feb-13
New Zealand	AA		Aaa		AA		29-Sep-11	29-Sep-11	21-Oct-02	13-May-99	29-Sep-11	29-Sep-11
Norway	AAA		Aaa		AAA		9-Jul-75	28-May-09	30-Sep-97	13-May-99	13-Mar-95	18-Dec-07
Peru	BBB	(+)	Baa2	(+)	BBB		30-Aug-11	28-Aug-12	16-Aug-12	16-Aug-12	10-Nov-11	10-Nov-11
Poland	A-		A2		A-	(+)	29-Mar-07	27-Oct-08	12-Nov-02	24-May-06	18-Jan-07	21-Feb-13
Portugal	BB		Ba3	(-)	WD	(-)	13-Jan-12	7-Mar-13	13-Feb-12	5-Sep-12	11-May-12	24-Nov-11
Romania	BB+		Baa3	(-)	BBB-		27-Oct-08	29-Nov-11	6-Oct-06	29-Jun-12	4-Jul-11	4-Jul-11
Russia	BBB		Baa1		BBB		8-Dec-08	27-Jun-12	16-Jul-08	12-Dec-08	4-Feb-09	16-Jan-12
Singapore	AAA		Aaa		AAA		25-Feb-11	2-May-08	14-Jun-02	14-May-03	14-May-03	7-Mar-08
Slovakia	A		A2	(-)	A+		13-Jan-12	13-Jan-12	13-Feb-12	13-Feb-12	8-Jul-08	8-Jul-08
Slovenia	A-		Ba1	(-)	BBB+	(-)	12-Feb-13	12-Feb-13	30-Apr-13	30-Apr-13	17-May-13	17-May-13
South Africa	BBB	(-)	Baa1	(-)	BBB		12-Oct-12	12-Oct-12	27-Sep-12	9-Nov-11	10-Jan-13	10-Jan-13
South Korea	A+		Aa3		AA-		14-Sep-12	14-Sep-12	27-Aug-12	27-Aug-12	6-Sep-12	6-Sep-12
Spain	BBB-	(-)	Baa3	(-)	BBB	(-)	10-Oct-12	10-Oct-12	16-Oct-12	16-Oct-12	7-Jun-12	7-Jun-12
Sweden	AAA		Aaa		AAA		16-Feb-04	22-Jan-07	4-Apr-02	15-Nov-03	8-Mar-04	18-Dec-07
Switzerland	AAA		Aaa		AAA		17-Feb-11	1-Dec-03	29-Jan-82	15-Nov-03	10-Aug-94	11-Jun-07
Taiwan	AA-		Aa3		A+		25-Feb-11	11-Jun-10	20-Jul-99	24-May-06	20-Nov-01	26-Jan-11
Thailand	BBB+		Baa1		BBB+		31-Oct-06	9-Dec-10	26-Nov-03	28-Oct-10	8-Mar-13	8-Mar-13
Turkey	BB+		Baa3		BBB-		27-Mar-13	27-Mar-13	16-May-13	16-May-13	5-Nov-12	5-Nov-12
United Kingdom	AAA	(-)	Aa1		AA+		17-Feb-11	13-Dec-12	22-Feb-13	22-Feb-13	19-Apr-13	19-Apr-13
United States	AA+	(-)	Aaa	(-)	AAA	(-)	5-Aug-11	5-Aug-11	2-Aug-11	2-Aug-11	10-Aug-94	28-Nov-11
Venezuela	B+	(-)	B2	(-)	B+	(-)	19-Aug-11	19-Apr-13	7-Sep-04	15-Jan-09	15-Dec-08	4-Apr-12

RATING SCALE	S&P	MOODY's	Fitch
Upper Investment Grade	AAA	Aaa	AAA
	AA+	Aa1	AA+
	AA	Aa2	AA
	AA-	Aa3	AA-
	A+	A1	A+
	A	A2	A
	A-	A3	A-
Lower Investment Grade	BBB+	Baa1	BBB+
	BBB	Baa2	BBB
	BBB-	Baa3	BBB-
Non-Investment Grade	BB+	Ba1	BB+
	BB	Ba2	BB
	BB-	Ba3	BB-

RATING SCALE	S&P	MOODY's	Fitch
Lower Non-Investment Grade	B+	B1	B+
	B	B2	B
	B-	B3	B-
	CCC+	Caa1	CCC+
	CCC	Caa2	CCC
	CCC-	Caa3	CCC-
	CC	Ca	CC
	C	C	C
Default	SD		RD
	D		D

Prior Research Notes available on www.morganmarkets.com

IDR FX Strategy: A concentration of negative risks, Daniel Hui, *May 30, 2013*

Shedding light on Latin America's shadow FX rates, Werning, Pereira. *May 24, 2013*

Asian FX Policy Snapshot: Current FX policy permisiveness will be better tested this month (May 2013), Hui, May 9, 2013

SGD: Introducing a new S$NEER model, Hui, May 3, 2013

JPY: Estimating Japan's overseas investments post-BoJ – how much and by whom? Sasaki, Tanase, Yamawaki, Yamashita & Hibino, April 30, 2013

Post-BoJ EM investments by Japanese investors : How much, and who is the main beneficiary?, Tanase, April 25, 2013

INR: The unspoken and uncomfortable truths about India's current account Chinoy & Aziz, April 17, 2013

CNY FX update: Despite weak Yen, sell USD/CNH on lower onshore fixing, Gu, April 10, 2013

MXN: What took you so long?, Lozano, April 10, 2013

Cross-border M&A in 2013: A potential driver of further yen weakness, Kariya, April 10, 2013

American energy independence and the dollar: The arithmetic is too challenging without Fed help, Normand, Mar 15, 2013

JPM Yen survey results: Universally bearish, moderately short and cautiously optimistic on Abenomics, Tanase, Mar 13, 2013

EMEA EM FX Outlook Christou, Mar 05, 2013

India: a respite for the weary INR, Aziz & Chinoy, Feb 14, 2013

Hungary: a greater tolerance for weaker HUF, but with limits, Szentivanyi, Feb 8, 2013

Another JPY weakness bubble: Japan's defense at the G-20 meeting, Sasaki, Feb 6, 2013

Asia FX: BoJ a wrinkle, not a revolution for FX policy, Hui, Feb 5, 2013

Introducing the weekly IMM chartpack and signaling model: available on iPad & www.jpmorganmarkets.com, Kariya, Jan 31, 2013

Analysis on JPY's Real Effective Exchange Rate (REER): JPY is undervalued in general, but not so much against USD, Tanase, Jan 30, 2013

Asian FX Policy Snapshot: Modest response to stronger flows, weaker yen, Hui, Jan 21, 2013

Investment Strategies No. 77: Optimizing FX reserve management, Lehmann & Hebner, Jan 18, 2013

JPY: Nikkei buying and yen selling led by foreign investors: Contrast to domestic investors becoming clearer, Tanase, Hibino, Jan 10, 2013

MXN: What's taking you so long?, Lozano & Cabiedes, Jan 10, 2013

Global FX Strategy 2013: Less stress, less value, tougher returns, Normand & team, Nov 22, 2012

Asian FX Policy Snapshot: Allowing stronger FX, but not tightening (November 2012) Hui, Panda. Nov 8, 2012

RBNZ leadership change - new boss same as the old boss?, Jarman, Nov 1, 2012

JPY: Deja vu of February/March?: Comparing the current USD/JPY rally with February/March movements, Sasaki & Hibino, Oct 23, 2012

KRW FX: Will 2013 finally be the of the won?, Gochet Mortimer & Hui, Oct 18, 2012

JPY: Foreign bonds purchase by the BoJ: Understanding the current situation and some proposals, Sasaki, Oct 11, 2012

Chile, a conscientious objector, faces "currency war" draft, Werning & Pereira, Oct 5, 2012

Corporate hedging survey: US fiscal cliff having a modest rather than major impact on corporate, Kariya, Hibino Sep 28, 2012

Japan political watch: Abe as new LDP leader - fiscal cliff, Japan-China relations and pressure on the BOJ, Adachi Sep 26, 2012

EM Asia Macro Strategy: Asia FX: ASEAN tops N. Asia in the carry versus FX policy battle, Hui & Panda Sep 17, 2012

USD/JPY to follow US stocks, not UST yields, during QE, Sasaki, Sep 14, 2012

Does the size of the ESM matter anymore?, Mackie, Sep 14, 2012

Antipodean imbalances - the devil is in the detail, Jarman, Sep 13, 2012

Going Dutch: a preview of the 12 Sep parliamentary elections, Wadhwa, Sep 6, 2012

Europe's Busy Political September, Barr, Aug 31, 2012

Convertibility risk in Euro area peripheral bonds, Mac Gorain, Aug 31, 2012

What next from the ECB? Previewing SMP's big brother, Barr & Fuzesi, Aug 24, 2012

Brazil: BRL closer to but stronger than its fair value, Wajnberg, Kariya & Akira Hashizume, Aug 20, 2012

How much risk do the Spanish regions pose?, Wadhwa & Panageas, Aug 13, 2012

Introducing Daily FX Strategy Analytics: available on iPad & www.morganmarkets,com, Normand, Aug 10, 2012

Intra-EMU currency valuations: Estimates for a breakup scenario, Kariya, Aug 9, 2012

The euro in a world with several Japans, Normand, Aug 2, 2012

Keeping it real: life after peak in Aussie terms of trade, Jarman & Kennedy, Jul 26, 2012

Some notable shifts in Japanese retail investments: From Toshin to Uridashi, and from BRL to other high-yielding EM FXs, Tanase & Hibino, Jul 18, 2012

JPM Euro survey results: Universally bearish, moderately short against all regions & unconvinced of EMU break-up or enlargement, Normand, Jul 17, 2012

India and Indonesia: two odd peas in the EM Asia pod, Ong & Chinoy, Jul 16, 2012

ECB to focus on monetary transmission in second half, Fuzesi & Mackie, Jul 13, 2012

RBA's job far from complete in this stop-start easing cycle Walters, Jul 13, 2012

Corporate hedging survey: This summer is different, Kariya, Hibino, Jul 6, 2012

Central bank balance sheet chartpack, Meggyesi, Jul 5, 2012

BoJ's record high-current account deposits and USD/JPY, Sasaki, Jun 29, 2012

Japan to hike the consumption tax: implications for the yen, Sasaki, Jun 26, 2012

Still too early to become AUD bullish Hebner, Jun 22, 2012

What might a Euro area roadmap look like? Mackie, Jun 15, 2012

This page left intentionally blank

John Normand
(44-20) 7134-1816
john.normand@jpmorgan.com

Disclosures

Analyst Certification: The research analyst(s) denoted by an "AC" on the cover of this report certifies (or, where multiple research analysts are primarily responsible for this report, the research analyst denoted by an "AC" on the cover or within the document individually certifies, with respect to each security or issuer that the research analyst covers in this research) that: (1) all of the views expressed in this report accurately reflect his or her personal views about any and all of the subject securities or issuers; and (2) no part of any of the research analyst's compensation was, is, or will be directly or indirectly related to the specific recommendations or views expressed by the research analyst(s) in this report.

Company-Specific Disclosures: Important disclosures, including price charts, are available for compendium reports and all J.P. Morgan–covered companies by visiting https://mm.jpmorgan.com/disclosures/company, calling 1-800-477-0406, or e-mailing research.disclosure.inquiries@jpmorgan.com with your request. J.P. Morgan's Strategy, Technical, and Quantitative Research teams may screen companies not covered by J.P. Morgan. For important disclosures for these companies, please call 1-800-477-0406 or e-mail research.disclosure.inquiries@jpmorgan.com.

Analysts' Compensation: The research analysts responsible for the preparation of this report receive compensation based upon various factors, including the quality and accuracy of research, client feedback, competitive factors, and overall firm revenues.

Other Disclosures

J.P. Morgan ("JPM") is the global brand name for J.P. Morgan Securities LLC ("JPMS") and its affiliates worldwide. J.P. Morgan Cazenove is a marketing name for the U.K. investment banking businesses and EMEA cash equities and equity research businesses of JPMorgan Chase & Co. and its subsidiaries.

Options related research: If the information contained herein regards options related research, such information is available only to persons who have received the proper option risk disclosure documents. For a copy of the Option Clearing Corporation's Characteristics and Risks of Standardized Options, please contact your J.P. Morgan Representative or visit the OCC's website at http://www.optionsclearing.com/publications/risks/riskstoc.pdf

Legal Entities Disclosures
U.S.: JPMS is a member of NYSE, FINRA, SIPC and the NFA. JPMorgan Chase Bank, N.A. is a member of FDIC and is authorized and regulated in the UK by the Financial Services Authority. **U.K.:** J.P. Morgan Securities plc (JPMS plc) is a member of the London Stock Exchange and is authorized and regulated by the Financial Services Authority. Registered in England & Wales No. 2711006. Registered Office 25 Bank Street, London, E14 5JP. **South Africa:** J.P. Morgan Equities South Africa Proprietary Limited is a member of the Johannesburg Securities Exchange and is regulated by the Financial Services Board. **Hong Kong:** J.P. Morgan Securities (Asia Pacific) Limited (CE number AAJ321) is regulated by the Hong Kong Monetary Authority and the Securities and Futures Commission in Hong Kong. **Korea:** J.P. Morgan Securities (Far East) Ltd, Seoul Branch, is regulated by the Korea Financial Supervisory Service. **Australia:** J.P. Morgan Australia Limited (JPMAL) (ABN 52 002 888 011/AFS Licence No: 238188) is regulated by ASIC and J.P. Morgan Securities Australia Limited (JPMSAL) (ABN 61 003 245 234/AFS Licence No: 238066) is regulated by ASIC and is a Market, Clearing and Settlement Participant of ASX Limited and CHI-X. **Taiwan:** J.P.Morgan Securities (Taiwan) Limited is a participant of the Taiwan Stock Exchange (company-type) and regulated by the Taiwan Securities and Futures Bureau. **India:** J.P. Morgan India Private Limited, having its registered office at J.P. Morgan Tower, Off. C.S.T. Road, Kalina, Santacruz East, Mumbai - 400098, is a member of the National Stock Exchange of India Limited (SEBI Registration Number - INB 230675231/INF 230675231/INE 230675231) and Bombay Stock Exchange Limited (SEBI Registration Number - INB 010675237/INF 010675237) and is regulated by Securities and Exchange Board of India. **Thailand:** JPMorgan Securities (Thailand) Limited is a member of the Stock Exchange of Thailand and is regulated by the Ministry of Finance and the Securities and Exchange Commission. **Indonesia:** PT J.P. Morgan Securities Indonesia is a member of the Indonesia Stock Exchange and is regulated by the BAPEPAM LK. **Philippines:** J.P. Morgan Securities Philippines Inc. is a Trading Participant of the Philippine Stock Exchange and a member of the Securities Clearing Corporation of the Philippines and the Securities Investor Protection Fund. It is regulated by the Securities and Exchange Commission. **Brazil:** Banco J.P. Morgan S.A. is regulated by the Comissao de Valores Mobiliarios (CVM) and by the Central Bank of Brazil. **Mexico:** J.P. Morgan Casa de Bolsa, S.A. de C.V., J.P. Morgan Grupo Financiero is a member of the Mexican Stock Exchange and authorized to act as a broker dealer by the National Banking and Securities Exchange Commission. **Singapore:** This material is issued and distributed in Singapore by J.P. Morgan Securities Singapore Private Limited (JPMSS) [MIC (P) 049/04/2013 and Co. Reg. No.: 199405335R] which is a member of the Singapore Exchange Securities Trading Limited and is regulated by the Monetary Authority of Singapore (MAS) and/or JPMorgan Chase Bank, N.A., Singapore branch (JPMCB Singapore) which is regulated by the MAS. **Japan**: JPMorgan Securities Japan Co., Ltd. is regulated by the Financial Services Agency in Japan. **Malaysia:** This material is issued and distributed in Malaysia by JPMorgan Securities (Malaysia) Sdn Bhd (18146-X) which is a Participating Organization of Bursa Malaysia Berhad and a holder of Capital Markets Services License issued by the Securities Commission in Malaysia. **Pakistan:** J. P. Morgan Pakistan Broking (Pvt.) Ltd is a member of the Karachi Stock Exchange and regulated by the Securities and Exchange Commission of Pakistan. **Saudi Arabia:** J.P. Morgan Saudi Arabia Ltd. is authorized by the Capital Market Authority of the Kingdom of Saudi Arabia (CMA) to carry out dealing as an agent, arranging, advising and custody, with respect to securities business under licence number 35-07079 and its registered address is at 8th Floor, Al-Faisaliyah Tower, King Fahad Road, P.O. Box 51907, Riyadh 11553, Kingdom of Saudi Arabia. **Dubai:** JPMorgan Chase Bank, N.A., Dubai Branch is regulated by the Dubai Financial Services Authority (DFSA) and its registered address is Dubai International Financial Centre - Building 3, Level 7, PO Box 506551, Dubai, UAE.

Country and Region Specific Disclosures
U.K. and European Economic Area (EEA): Unless specified to the contrary, issued and approved for distribution in the U.K. and the EEA by JPMS plc. Investment research issued by JPMS plc has been prepared in accordance with JPMS plc's policies for managing conflicts of interest arising as a result of publication and distribution of investment research. Many European regulators require a firm to establish, implement and maintain such a policy. This report has been issued in the U.K. only to persons of a kind described in Article 19 (5), 38, 47 and 49 of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (all such persons being referred to as "relevant persons"). This document must not be acted on or relied on by persons who are not relevant persons. Any investment or investment activity to which this document relates is only available to relevant persons and will be engaged in only with relevant persons. In other EEA countries, the report has been issued to persons regarded as professional investors (or equivalent) in

their home jurisdiction. **Australia:** This material is issued and distributed by JPMSAL in Australia to "wholesale clients" only. This material does not take into account the specific investment objectives, financial situation or particular needs of the recipient. The recipient of this material must not distribute it to any third party or outside Australia without the prior written consent of JPMSAL. For the purposes of this paragraph the term "wholesale client" has the meaning given in section 761G of the Corporations Act 2001. **Germany:** This material is distributed in Germany by J.P. Morgan Securities plc, Frankfurt Branch and J.P.Morgan Chase Bank, N.A., Frankfurt Branch which are regulated by the Bundesanstalt für Finanzdienstleistungsaufsicht. **Hong Kong:** The 1% ownership disclosure as of the previous month end satisfies the requirements under Paragraph 16.5(a) of the Hong Kong Code of Conduct for Persons Licensed by or Registered with the Securities and Futures Commission. (For research published within the first ten days of the month, the disclosure may be based on the month end data from two months prior.) J.P. Morgan Broking (Hong Kong) Limited is the liquidity provider/market maker for derivative warrants, callable bull bear contracts and stock options listed on the Stock Exchange of Hong Kong Limited. An updated list can be found on HKEx website: http://www.hkex.com.hk. **Japan:** There is a risk that a loss may occur due to a change in the price of the shares in the case of share trading, and that a loss may occur due to the exchange rate in the case of foreign share trading. In the case of share trading, JPMorgan Securities Japan Co., Ltd., will be receiving a brokerage fee and consumption tax (shouhizei) calculated by multiplying the executed price by the commission rate which was individually agreed between JPMorgan Securities Japan Co., Ltd., and the customer in advance. Financial Instruments Firms: JPMorgan Securities Japan Co., Ltd., Kanto Local Finance Bureau (kinsho) No. 82 Participating Association / Japan Securities Dealers Association, The Financial Futures Association of Japan, Type II Financial Instruments Firms Association and Japan Investment Advisers Association. **Korea:** This report may have been edited or contributed to from time to time by affiliates of J.P. Morgan Securities (Far East) Ltd, Seoul Branch. **Singapore:** JPMSS and/or its affiliates may have a holding in any of the securities discussed in this report; for securities where the holding is 1% or greater, the specific holding is disclosed in the Important Disclosures section above. **India:** For private circulation only, not for sale. **Pakistan:** For private circulation only, not for sale. **New Zealand:** This material is issued and distributed by JPMSAL in New Zealand only to persons whose principal business is the investment of money or who, in the course of and for the purposes of their business, habitually invest money. JPMSAL does not issue or distribute this material to members of "the public" as determined in accordance with section 3 of the Securities Act 1978. The recipient of this material must not distribute it to any third party or outside New Zealand without the prior written consent of JPMSAL. **Canada:** The information contained herein is not, and under no circumstances is to be construed as, a prospectus, an advertisement, a public offering, an offer to sell securities described herein, or solicitation of an offer to buy securities described herein, in Canada or any province or territory thereof. Any offer or sale of the securities described herein in Canada will be made only under an exemption from the requirements to file a prospectus with the relevant Canadian securities regulators and only by a dealer properly registered under applicable securities laws or, alternatively, pursuant to an exemption from the dealer registration requirement in the relevant province or territory of Canada in which such offer or sale is made. The information contained herein is under no circumstances to be construed as investment advice in any province or territory of Canada and is not tailored to the needs of the recipient. To the extent that the information contained herein references securities of an issuer incorporated, formed or created under the laws of Canada or a province or territory of Canada, any trades in such securities must be conducted through a dealer registered in Canada. No securities commission or similar regulatory authority in Canada has reviewed or in any way passed judgment upon these materials, the information contained herein or the merits of the securities described herein, and any representation to the contrary is an offence. **Dubai:** This report has been issued to persons regarded as professional clients as defined under the DFSA rules. **Brazil**: Ombudsman J.P. Morgan: 0800-7700847 / ouvidoria.jp.morgan@jpmorgan.com.

General: Additional information is available upon request. Information has been obtained from sources believed to be reliable but JPMorgan Chase & Co. or its affiliates and/or subsidiaries (collectively J.P. Morgan) do not warrant its completeness or accuracy except with respect to any disclosures relative to JPMS and/or its affiliates and the analyst's involvement with the issuer that is the subject of the research. All pricing is as of the close of market for the securities discussed, unless otherwise stated. Opinions and estimates constitute our judgment as of the date of this material and are subject to change without notice. Past performance is not indicative of future results. This material is not intended as an offer or solicitation for the purchase or sale of any financial instrument. The opinions and recommendations herein do not take into account individual client circumstances, objectives, or needs and are not intended as recommendations of particular securities, financial instruments or strategies to particular clients. The recipient of this report must make its own independent decisions regarding any securities or financial instruments mentioned herein. JPMS distributes in the U.S. research published by non-U.S. affiliates and accepts responsibility for its contents. Periodic updates may be provided on companies/industries based on company specific developments or announcements, market conditions or any other publicly available information. Clients should contact analysts and execute transactions through a J.P. Morgan subsidiary or affiliate in their home jurisdiction unless governing law permits otherwise.

"Other Disclosures" last revised May 4, 2013.

J.P. Morgan Global FX Strategy

London				
John Normand	MD	Head, FX & International Rates Strategy	(44-20) 7134-1816	john.normand@jpmorgan.com
Paul Meggyesi	MD	FX Strategy	(44-20) 7134-2714	paul.meggyesi@jpmorgan.com
Thomas Anthonj	ED	Technical Strategy	(44-20) 7742-7850	thomas.e.anthonj@jpmorgan.com
Matthias Bouquet	VP	Derivatives Strategy	(44-20) 7134-1819	matthias.bouquet@jpmorgan.com
New York				
Ken Landon	MD	FX Strategy	(1-212) 834-2391	kenneth.landon@jpmorgan.com
Kevin Hebner	ED	FX Strategy	(1-212) 834-4254	kevin.j.hebner@jpmorgan.com
Niall O'Connor	ED	Technical Strategy	(1-212) 834-5108	niall.oconnor@jpmorgan.com
Arindam Sandilya	ED	Derivatives Strategy	(1-212) 834-2304	arindam.x.sandilya@jpmorgan.com
Justin Kariya	Associate	FX Strategy	(1-212)-834-9618	justin.p.kariya@jpmorgan.com
Tokyo				
Tohru Sasaki	MD	Head, Japan FX & Rates Strategy	(81-3) 6736-7717	tohru.sasaki@jpmorgan.com
Junya Tanase	ED	FX Strategy	(81-3) 6736-7718	junya.tanase@jpmorgan.com
Sydney				
Anna Hibino	Associate	FX Strategy	(61-2) 9003-7932	anna.hibino@jpmorgan.com