Morgan Stanley

MORGAN STANLEY RESEARCH

Global Currency Research Team
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July 19, 2012

Currencies

Global

Outlook

FX Pulse

Fed Won't Damage Dollar

We remain USD bullish. In his recent testimony, Fed Chairman Bernanke reiterated the policy options available should the economy continue to deteriorate. Our economists believe a significant worsening of the economy would be necessary for the FOMC to take action in advance of the election. But even if they did, we believe that the impact on USD would be limited. We therefore maintain our bullish USD position, whether or not the FOMC acts in the near future.

Commodity divergence… While the high-beta commodity currencies have enjoyed a rebound-related portfolio diversification in recent weeks, the underlying fundamentals still provide warning signals. We continue to believe that the rebound in the commodity-related currencies will prove unsustainable.

…AUD bearish... From our analysis of the divergence in industrial and agricultural commodity prices we concluded that AUD remains most at risk to the anticipated commodity price developments. Even the NZD, with its high net food exports, will find it difficult to escape the broader bearish trends of industrial commodity prices, in our view.

…with USD to benefit. Our analysis suggests that the US is still the G10 currency best placed to benefit from the anticipated commodity price dynamics and the divergence between industrial and agricultural commodity prices. Hence, we see near-term AUD/USD upside as limited, and we maintain our medium- to longer-term bearish view.

Selling EUR/USD. We make a renewed EUR/USD selling recommendation given the extent of downward pressure building on the EUR via the crosses. This increased EUR bearishness has yet to be reflected against the USD. We also examine short EUR and long correlation strategies via a basket put option vs USD, JPY and SEK as a "tail risk" hedge.

Trade Recommendations

Closed Trades	Entry	Exit	
Short GBP/USD	Closed at 1.5610 on 16-Jul-12		
Short EUR/USD	Closed at 1.2300 on 17-Jul-12		
Long NOK/SEK	Stopped at 1.1380 on 18-Jul-12		
Active Trades	**Entry**	**Stop**	**Target**
Short SGD/PHP 12m NDF	34.15	34.60	32.00
Short AUD/JPY	80.60	82.60	74.60
Limit Order	**Entry**	**Stop**	**Target**
Sell EUR/USD	1.2430	1.2570	1.1900
Sell CAD/MXN	***13.30***	***13.55***	12.00
Active Options Trades	**Entry Date**	**Expiry Date**	**Strike**
Long USD call/SGD put	10-May-12	10-Aug-12	1.2700
Long EUR put/NOK call	17-May-12	21-Aug-12	7.4462
Long USD put/MYR call	14-Jun-12	13-Sep-12	3.1310
Short USD put/MYR call	14-Jun-12	13-Sep-12	3.0400

See page 18 for more details. Changes in stops/targets in bold italics.

MS Major Currency Forecasts

	3Q12	4Q12	1Q13	2Q13
EUR/USD	1.24	1.19	1.15	1.19
USD/JPY	77.0	78.0	80.0	83.0
GBP/USD	1.53	1.51	1.46	1.47
USD/CHF	0.89	0.92	1.00	0.99
USD/CAD	1.04	1.06	1.10	1.08
AUD/USD	1.00	0.95	0.91	0.93
NZD/USD	0.79	0.75	0.70	0.72
EUR/JPY	95.5	92.8	92.0	98.8
EUR/GBP	0.81	0.79	0.79	0.81
EUR/CHF	1.10	1.10	1.15	1.18
EUR/SEK	9.00	9.20	9.40	9.20
EUR/NOK	7.60	7.65	7.70	7.65

Note: Forecasts for end-of-period. G10 forecasts updated on July 3, 2012.

Commodity Divergence: USD Supportive

Ian Stannard

- Commodity currencies have outperformed, but relative commodity price performance suggests caution is required
- We analyse the divergence of industrial and agricultural commodity prices…
- …and find that the USD is best placed of the G10 to benefit
- Although analysis of net exports suggests that the NZD should also gain from the combination of lower industrial and higher agricultural prices…
- …we find that the NZD often struggles to break free from the broader commodity price trends
- Bearish AUDUSD strategies continue to appear the most attractive way to position within the G10 for the anticipate relative commodity price developments
- We would recommend using the current AUD supportive portfolio diversification flows to examine opportunities to establish medium to longer term AUDUSD bearish positions

Commodity Currency Gains Questioned

Year-to-date, the commodity related currencies have been the outperformers among the G10, led by the NZD. While we have questioned the sustainability of this outperformance and warned of the vulnerability of the commodity related currencies in recent research, especially given the signals indicating a broad global growth slowdown, here we also examine the impact of the relative divergence of commodity price performance on FX markets to identify currencies most at risk, and those best placed to benefit.

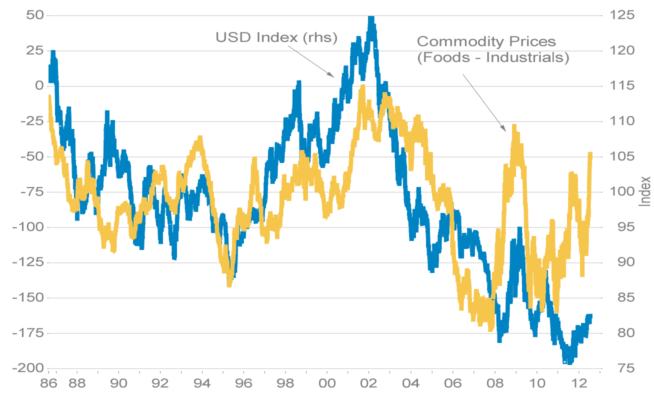
The slowdown in global growth is likely to see the industrial raw material prices coming under pressure. Indeed, the downward revisions to global growth forecasts by international forecasters, including the IMF, suggest a significant impact on the demand for industrial based commodities, including oil. The IMF has reduced its global growth forecast to 3.9% from 4.1% for next year. The EIA has also recently reduced its forecast for global growth and oil demand for the next couple of years.

However, the price developments among commodities are not universal, suggesting that using the broad based commodity price indices could in fact be misleading when analysing the impact on FX markets.

Indeed, while industrial based commodities have been coming under pressure, agricultural commodity prices have been increasing. Wheat prices, for example, have been increasing and our commodity strategy team highlight further upside risks given the potential for supply disruptions. Our commodity strategists have also raised their forecasts for corn prices as a result of anticipated sub-trend yields (see *Agriculture Update: Demand Rationing 2.0: Not Out of the Woods Yet*, July 19, 2012).

Exhibit 1

Relative Commodity prices (Foods-Industrials) and USD TWI



Source: Reuters Ecowin, Morgan Stanley

Industrial vs Food

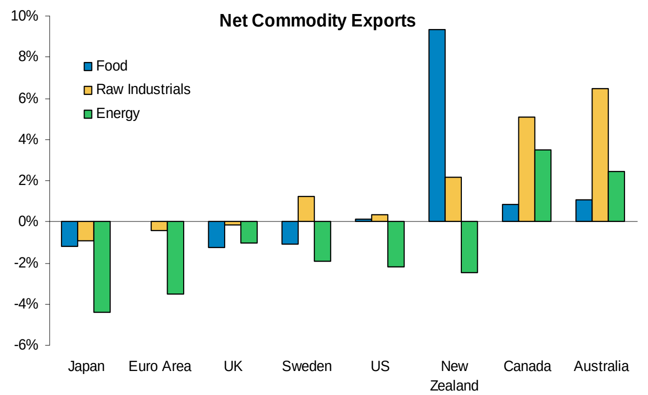
The divergence between industrial and agricultural price indices is now the most significant since 2009, and we suggest this is likely to have an impact on currencies markets. Initial observations suggest that the industrial producers will feel the negative impact of the slowdown, while the food exporters will benefit.

Here we specifically examine the direct impact of this divergent commodity price performance on currency markets and find that among the G10 the USD continues to stand out as the currency most likely to benefit from the anticipated dynamics of lower industrial commodity prices (including lower oil prices) and higher agricultural prices.

Indeed, the USD Index appears to be closely correlated to the relative performance of agricultural to industrial commodity prices (see Exhibit 1). This relative outperformance of agricultural prices to industrial and energy prices is consistent with a USD rebound from a fundamental perspective, in our view. This mix of commodity price developments should provide the USD with support, and the current extent of divergence between industrial and agricultural prices is consistent with USD appreciation of around 15% on a trade weighted basis, if historical relationships hold.

Exhibit 2

G10 Net Commodity Exports as % GDP



Source: Haver, Morgan Stanley

Net Commodity Exports

In Exhibit 2 we analyse this exposure to the differing commodity groups in more detail. Net commodity exports of the G10 counties are displayed in terms of percentage of GDP. We have excluded Norway from this particular graphic given Norway's high exports of oil to GDP, which distort the picture. The favourable mix of US net exports is evident, with negative net energy exports and positive net food exports. While in terms of GDP the exposure appears relatively small, this is a function of the size of the US economy, and the potential impact on the USD is still significant.

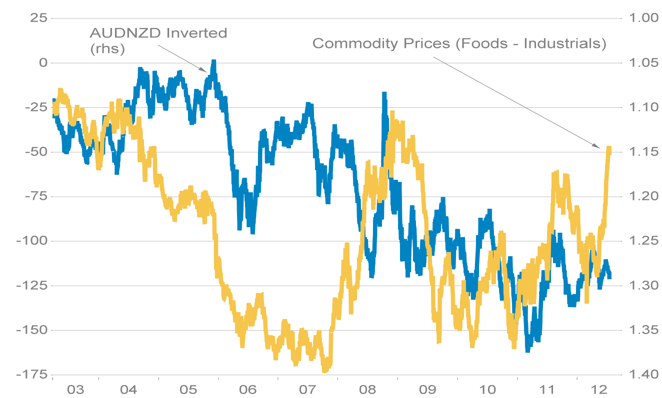
Indeed, our detailed analysis of FX market correlations to relative commodity price performance identifies the USD as being in a position to benefit, consistent with the fundamental backdrop. We also analyse the impact of this divergence in commodity price performance on the traditional commodity related currencies in the G10 (namely the AUD and NZD), with some interesting results.

NZD Food Exposure…

New Zealand stands out with its high net exports of food related commodities and its relatively low net exports of industrial commodities. But also its position as an importer of energy should work to New Zealand's advantage in the current environment. This combination of net exports suggests that the NZD should be relatively well supported, at least against its commodity currency peers.

Exhibit 3

Relative Commodity Prices (Foods-Industrials) and AUDNZD (Inverted)



Source: Reuters Ecowin, Morgan Stanley

…But Struggles to Break Free

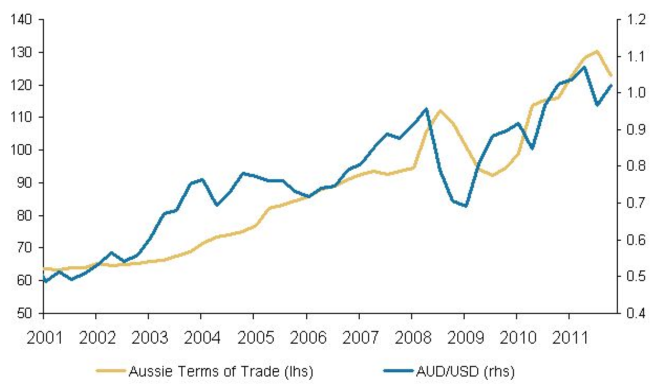
However, while we find that the NZD has the highest exposure to food commodities and is sensitivity to changes in food prices; our analysis suggests that this influence is often not enough to drive the performance of the NZD independently of the broader trends in commodity prices. Indeed, it must be noted that the NZD has one of the highest betas to the global cycle, suggesting that it may not benefit fully from what would appear to be a more positive mix of commodity price developments.

We also argue that the drivers of the current divergence in commodity prices must be taken into account. The lower industrial prices due to weak demand will likely been seen as a negative for the commodity related currencies generally. Meanwhile, higher food prices as a result of supply concerns may not have the necessary offsetting effect, especially if this results in lower exports. Hence, in the current environment, while the NZD may gain some support from an increase in food and agricultural commodity prices, this effect is unlikely to be strong enough for the NZD to break free of the broader decline in commodity prices, in our view.

This finding appears to be confirmed by the performance of AUDNZD compared to the relative food-Industrial commodity price performance. Indeed, while the analysis of net exports suggests there should be a close correlation between AUDNZD and this measure of relative commodity price performance, this does not always appear to be the case in practice. Historically, we have found this relationship to be unstable.

Exhibit 4

Australian Terms of Trade and AUDUSD



Source: Haver, Morgan Stanley

Meanwhile, AUD, with its high dependency on industrial raw materials exports (the highest in the G10), appears to be the currency most likely to be exposed to the anticipated decline in global demand and the fall in industrial commodity prices. Indeed, our analysis finds that the AUD has the strongest and most consistent correlation to industrial raw material prices among the G10 currencies. However, the AUD has put in a relatively robust performance recently and has not reacted fully to the decline in raw material prices. In fact we would argue that the AUD is overvalued compared to the performance of relative commodity prices and the decline of industrial commodity prices in particular.

While the AUD has lagged the decline seen in the industrial raw material prices indices so far, we expect the AUD to become increasingly exposed and to close this gap, especially if the signs of a global slowdown intensify over the coming week (Chinese flash PMI for July due in the coming week). Moreover, at the time or writing the Australian terms of trade data are awaited. A further deterioration in this important measure will put the AUD under renewed pressure (see Exhibit 4). The RBA has expressed concern regarding the terms of trade in recent policy statements.

Despite the differences in their commodity export portfolios, there appears to be a tendency by the market to treat commodity currencies in a similar way, at least with regard to the larger cycles, suggesting that individual currencies are driven less by the performance of their relative commodities exports, but more by the broader commodity indices, although there are relative variations in performance.

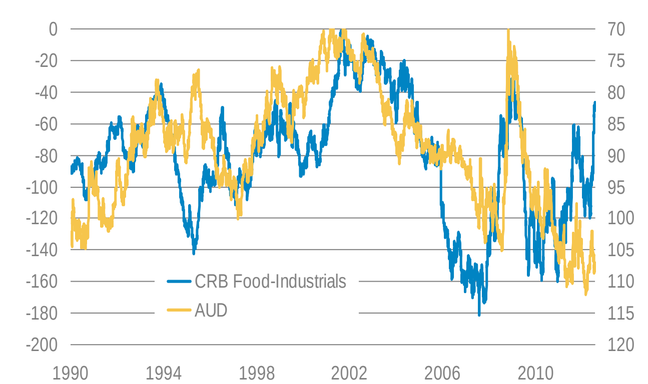
AUDUSD to Position for Commodity Divergence

Taking this in to account, the anticipated decline in industrial commodity prices is likely to outweigh the rise in agricultural commodity prices as far as relative currency performance is concerned. Hence, while bearish AUDNZD positions may look attractive when comparing the composition of exports, in a broader negative commodity price environment the NZD is likely to struggle to benefit fully from the outperformance of agricultural commodity prices, suggesting that AUDNZD declines could prove more limited than implied by the relative commodity price performance. In fact bearish AUDUSD strategies appear to still be the optimal way to position for the current anticipated commodity price developments, with the USD seemingly best placed to benefit (see Exhibit 5).

AUDUSD is currently diverging from the developments in commodity prices, with portfolio diversification flows away from the EUR appearing to be attracted to the AUD (for yield and ratings). However, we remain sceptical regarding the sustainability of these flows and would recommend using the current AUD recovery to examine the potential to establish bearish AUDUSD strategies. We have established a short AUDJPY position (see Strategic FX Portfolio Trade Recommendations, page 18).

Exhibit 5

Relative Commodity Prices (Foods-Industrials) and AUDUSD (Inverted)



Source: Bloomberg, Morgan Stanley

USD: What's Left in the Fed's Toolbox

Evan Brown and Gabriel de Kock

- During the Q&A of his testimony to Congress, Fed Chairman Bernanke signaled greater concern about the economic outlook, and reaffirmed the FOMC's commitment to support economic activity and job creation.
- But the Chairman, unsurprisingly, offered little new discussion of the Fed's policy tools: Additional asset purchases, extension of the forward rate guidance, a cut in the interest rate on excess reserves (IOER) and use of the discount window are on the table.
- Our US Economics team sees a high bar for Fed easing in the near term, but if the Fed were to employ any of these tools, we are skeptical they would disrupt broad USD strength.

Beyond QE

Expectations ran high ahead of Fed Chairman Bernanke's semi-annual testimony to Congress. Following last week's rate cuts by the ECB and key EM central banks, and widespread downgrades of Street growth forecasts, market participants speculated that the Chairman could signal new Fed easing initiatives. And by marking to market the incoming data flow, the testimony did, indeed, convey heightened concern about the pace of recovery.

When it came to policy tools, however, Chairman Bernanke added little to the existing menu of asset purchases (Treasuries and MBS), extended forward rate guidance and a cut in the interest rate on excess reserves (IOER). The only real innovation was a suggestion that the Fed, in a variant of the Bank of England's "funding for lending initiative" could use discount window lending in the context of monetary policy rather than just as a liquidity tool.

Morgan Stanley's US economics team has argued that the Fed, barring a very sharp economic deterioration, is unlikely to take action before the December FOMC. And we are skeptical that the policies under consideration will have a material negative effect on USD. We remain broadly constructive on the greenback, particularly against EUR, GBP, and the G10 high-beta currencies.

For the Record, QE Not Significantly USD Negative

We have argued extensively that additional Fed asset purchases will not have nearly the same USD-weakening impact as with previous programs (See QE3's Not the Charm, June 07, 2012 and QE3 and the Dollar: This Time *Is* Different, Dec 1, 2011). In short, we believe key channels of QE to USD performance – such as lowered policy rate expectations, higher inflation expectations, and liquidity effects – are blocked.

A decision to expand reserves and add MBS purchases to the Fed's current asset purchase program, while more targeted to the beleaguered housing market, would still have a muted economic and currency impact, in our view. With mortgage rates already quite low, adverse house price dynamics, weak household balance sheets, and heightened risk aversion among lenders largely account for weak real estate lending. In the absence of more aggressive policies to speed the restructuring of underwater mortgages, the financial impact of MBS purchases likely will be limited to portfolio substitution effects, and the creation of bank reserves. Notably, as we have seen in Japan, the US, and other countries, an increase in excess bank reserves does not necessarily lead to lending and inflation.

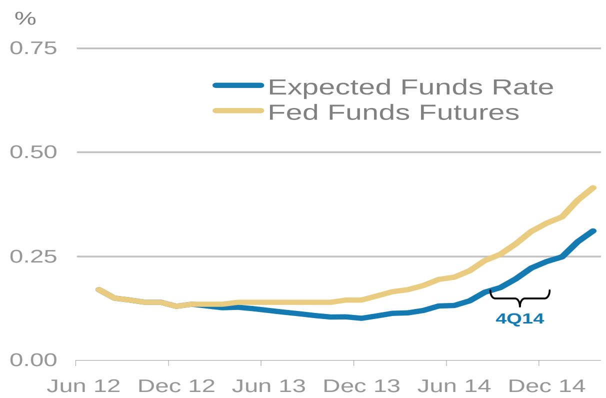
Extending the Forward Rate Guidance

Since its January statement, the FOMC has stated that "economic conditions…are likely to warrant exceptionally low levels of the federal funds rate at least through late 2014." In Exhibit 1 (next page), we extract our estimate of term premium from fed funds futures and show that the market views this guidance as credible.

We have little reason to believe that an extension of the rate guidance to say H2 2015 would undermine the Fed's credibility. But despite the signal to keep rates low for longer, we question how much USD would weaken. The initial rate guidance announced on January 25 shifted the implied probability of a hike out several months, according to fed funds rate futures. Yet the trade-weighted USD appreciated broadly that day, even as equities rallied.

Exhibit 1

The Fed's Forward Rate Guidance is Credible



Source: Bloomberg, Morgan Stanley Research

An extension of rate guidance should lower longer term rates such as the 10-year yield. On January 25, the 10-year declined 7 bps as fed funds futures dropped 10 to 20 bps at the long end of the fed funds futures curve. We would expect a change of the late-2014 signal to mid-2015 to lower the 10-year yield less, given how far long-term yields have already declined. The relationship between currencies and rates can be quite strong at shorter maturities, but the correlation is looser at longer maturities given the number of factors that can drive the long-end of the curve. And we are skeptical that a several bps move in long-term yields, given already near-record lows, would boost risk appetite and portfolio rebalancing enough to shift investors out of USD assets.

Cutting the Interest Rate on Excess Reserves

Chairman Bernanke also put back in play a possible cut in the rate the Fed currently pays to banks on their excess reserves. Morgan Stanley's US Economics team is skeptical of a near-term move in this rate, given concerns about its deleterious effects on the interbank market and the money fund industry expressed at the September 2011 FOMC meeting. That said, we could see an IOER cut after the election as part of a larger Fed package to ease the flow of credit. If implemented, the objective would be to lower the opportunity cost of lending in order to stimulate growth. Indeed, the ECB took this policy step on July 5, when it lowered its deposit rate to zero from 25 bps. EUR/USD depreciated 1.1% on the day and a further 2% to date.

But we cannot attribute the EUR's depreciation to just the deposit rate cut. Crucially, the ECB eased its main policy rate by 25 bps as well, a move that was not fully priced. In our view, the refi rate cut was the key financial and psychological step for the EUR to become a primary funding currency. Indeed, we see little difference in the overnight rate (Eonia) impact of last week's policy action from the ECB's policy moves in November and December.

Prior to and following the July ECB meeting, European banks elected to borrow at the ECB's tender operations (at the refi rate) and park those funds at the ECB's deposit facility for a negative carry of 75 bps. We believe this behavior reflects weak credit demand and banks' preference for liquidity in a particularly uncertain environment. In other words, because banks continue to keep cash close to home despite the deposit rate cut, we attribute most of the EUR drop to the decline in the refi rate.

The US experience is somewhat similar, in our view. We believe the uncertain macroeconomic and political environment will overshadow a modest reduction in the opportunity cost of bank lending. Unlike in Europe, the IOER rate could not be accompanied by an equivalent policy rate cut, with the fed funds rate near zero. Thus while the opportunity cost for banks may decline, we think the Fed shot its most effective bullet, a near-zero fed funds rate, long ago.

Still, if an IOER rate cut were adopted, we could see some USD depreciation due to a decline in 2-year yields. Indeed, following the ECB's deposit rate cut, US Treasury 2-year yields declined almost 10 bps, presumably on speculation that the Fed would follow suit. Over the same time frame, German Schatz yields declined by about the same amount, to negative 5 bps, limiting the rate channel effect on EUR/USD. In theory, a follow through of an IOER cut could possibly lower US 2-year yields in line with the size of the cut. But with the Fed Funds effective rate already trading well below the IOER rate (recently a 16-18 bps range) it would take a larger than 10 bp cut to materially effect the 2-year yield spread, and thus EUR/USD in our view.

Discount Window "Funding for Lending"

A relatively new tool Chairman Bernanke mentioned was use of the discount window in the context of monetary policy, rather than in its traditional role in liquidity provision. We believe this is related to an attempt to ease funding conditions similar to the Bank of England's 'Funding for Lending' program (Funding for Lending: Still Cautious on the Effects, July 16, 2012). In the UK scheme, banks can take loans they've made to households and businesses and exchange them with the BoE for short-term gilts. This short-term debt can then be used as collateral for cheaper financing. Thus, banks that increase loans to the private sector can reduce their overall funding costs.

We suspect Chairman Bernanke has alluded to the discount window as a means to fund such a program, mainly because the Fed has already sold (and will continue to sell) its holdings of short-term US debt through Operation Twist. Admittedly, we are currently speculating on how such a ‘Funding for Lending’ program would work in the US, with little to go on from Chairman Bernanke or other Fed officials to date. Stay tuned.

USD: Unhappy Markets Are All Alike

Ronald Leven

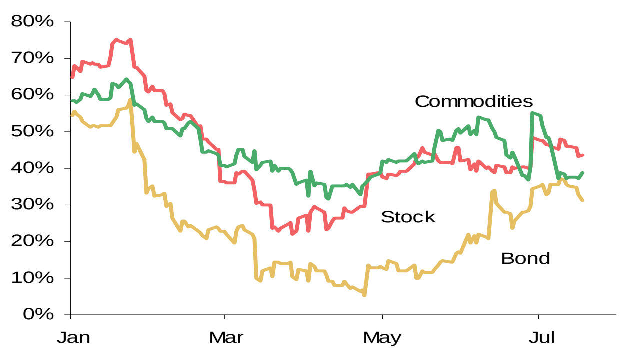
- Cross-market correlation fell for much of the first half of this year but has been on the rise since May
- Cross-market correlation has an equity beta – correlation rises as markets sell off. Thus, unhappy markets are alike
- Cross-currency correlations follow the same pattern, so buying correlation could be a valid "tail-risk" hedge.

All Together Now, Once Again

On numerous occasions over the past few years we have noted how beta – i.e., correlation with equity markets – has been an unusually important driver of currency as well as other markets. (Most recently, this was discussed in the article High-Beta: Delayed Reaction in last week's *FX Pulse*). During the early months of 2012 as shown in Exhibit 1, the trend in the MS Dollar Index and the other major markets – US bonds (TY1), equities (SPX) and commodities (CRB) – moved significantly lower. As this high cross-market correlation emerged in the wake of the financial crisis we saw this decline as a potentially positive indicator that markets were normalizing.

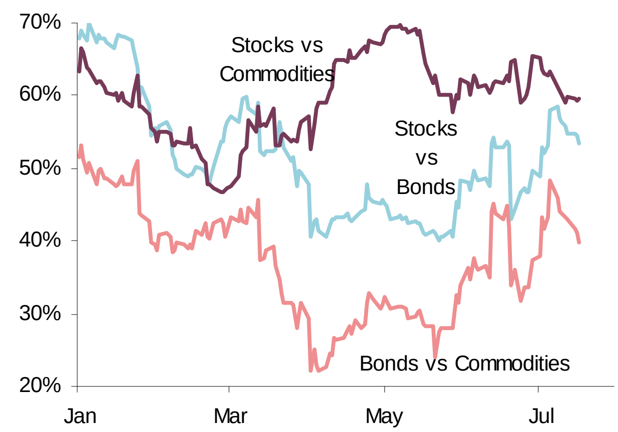
While correlations remain well below the levels at the start of the year, they have been trending back up again – particularly for stocks and bonds. As shown in Exhibit 2, the pattern of correlations basing in April and now in an uptrend also holds for bonds vs stocks and bonds vs commodities. Stocks vs commodity correlations fell less and bottomed earlier.

Exhibit 1
USD 3-Month Correlations



Source: Bloomberg, Morgan Stanley Research

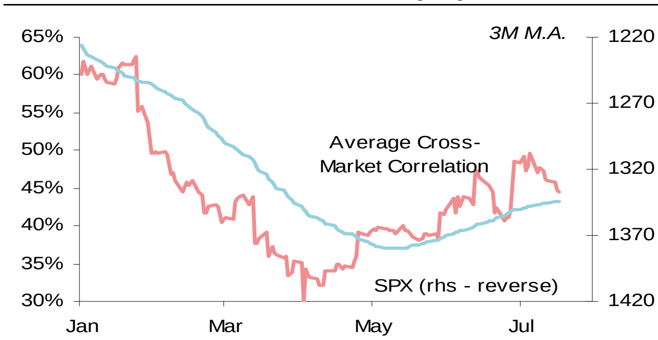
Exhibit 2
USD 3-Month Correlations



Source: Bloomberg, Morgan Stanley Research

Exhibit 3 shows averages among all of the 3M correlations for all of the cross-pairs of these four markets. Again the pattern emerges that correlation based in April and has been trending back up again since early May. More importantly, the correlation trends are generally tracking the SPX itself (note because these are both looks back over the prior three months, the appearance on the chart that the correlation is leading the SPX is mis-leading). It seems that in contrast to Tolstoy, unhappy (bearish) markets are all alike while happy (bullish) markets are all happy in their own way. The tendency for markets to covary during bear trends may be a byproduct of the pressure for investors to deleverage – and hence shrink asset holdings – when equity markets are selling off.

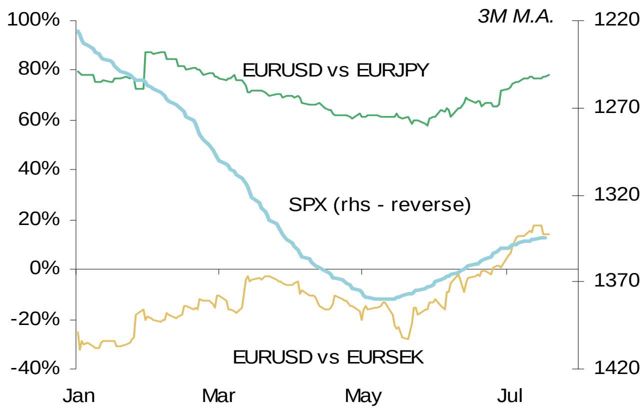
Exhibit 3
Cross-Market Correlation and Equity Trends



Source: Bloomberg, Morgan Stanley Research

Exhibit 4

FX Cross Correlations and Equity Prices



Source: Bloomberg, Morgan Stanley Research

Currencies Correlation Increasingly Aligned

Just as cross-market correlations have tracked the trend in equity markets, the same is generally true for currencies as well. In particular, as shown above, the correlation between EURUSD vs EURJPY follows the familiar pattern of sinking in the first few months of the year and then rebounding over the past month. The correlation with EURUSD and EURSEK has been somewhat more anomalous as it rose – from a substantial negative level – early this year – but then seems to have linked up with equity movements in early March. We suspect that the increasing focus on sovereign problems in the EUR area is causing a breakdown in the traditional link between EUR and SEK trading vs the USD. Given our bearish bias on the EUR for the balance of this year, we believe the break will continue and the correlation would continue to track higher if equity markets sell off. Consequently, we feel that it is relatively attractive to position both for a weaker EUR and have some protection for a selloff in equity prices by purchasing a EUR put basket option (which is indirectly going long correlation) against the USD (1.2271) , JPY (96.43) and SEK (8.4974). Specifically we recommend a 3M at-the-spot EUR put against these three currencies which would cost 0.39%. The price for the basket represents a 66% discount from the 1.16% cost of cheapest plain vanilla (EURSEK). The basket option has unlimited upside, and the risk is restricted to the up front premium which would be lost if the EUR fails to weaken.

Predicting Currency Values: The PCA+ Model

Morgan Stanley & Co. LLC

Juha Seppala

- We have built a model to predict three-month-ahead cumulative spot FX returns. According to this model, EM is cheap while G10 is fairly valued or rich. Out of the 32 currencies we analyze, MXN, COP, and HUF are the most undervalued while JPY, ILS, and SEK are the most overvalued.
- Currently three drivers explain about 80% of the co-variation among 32 currencies we study. We identify those drivers as global risk aversion, carry/commodity driver, and a CEEMEA specific driver. This characterization helps one to understand which currencies are most likely to move together and under what circumstances.
- The fraction of co-variation explained by the first and most important driver is currently at an all-time high, which means that the currencies are unusually correlated at the moment.
- Given the mean reversion in drivers, the first driver should become less important in the near future and hence country-specific characteristics – particularly carry – will become more important. This is bullish for EMFX and bearish for the G10.

The Common Drivers in G10 and EM FX

In this research note, we study the common drivers of EM and DM FX. We ask if there are common drivers, can we identify them, and can we identify/predict periods when some currencies move together and when they diverge. We find that three drivers explain currently about 80% of the co-variation among 32 currencies we study. We identify those drivers as global risk aversion, carry/commodity driver, and a CEEMEA specific driver. We then use these drivers to build a prediction model for 3m ahead spot returns.

The fraction of co-variation explained by the first and the most important driver is currently at all-time high, which means that the currencies are unusually correlated at the moment. Given the mean reversion in drivers, the first driver should become less important in the near future and hence country-specific characteristics – particularly carry – will become more important. This is bullish for EMFX and bearish for the G10. The three currencies which the model is predicting to appreciate the most are MXN, COP, and HUF. JPY, ILS, and SEK are the three currencies forecast to depreciate the most.

PCA Analysis of FX Returns

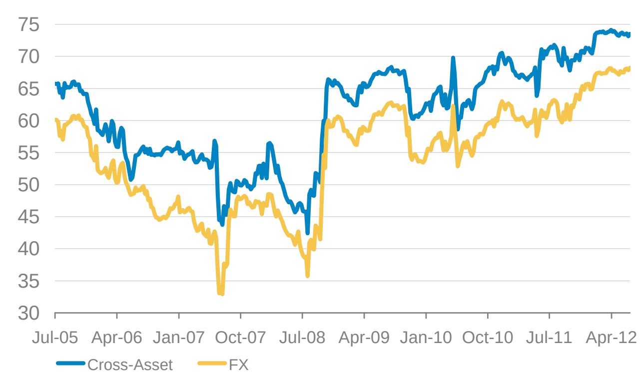
The statistical technique we use in this article is called Principal Component Analysis (PCA). It is a way of summarizing the information contained in large, complex, and interrelated data sets by representing it using independent drivers. The PCA forms combinations of the observed variables to create a small number of (directly unobservable) variables, called *components*, which summarize most of the cross-variation in the original data.

The weights of the original data used to create components are called *loadings*. While the PCA doesn't directly allow one to identify what the specific components are, by looking at the sign and the size of component loadings and how they vary over time, often one can come up with a good idea about what these components might be.

We recently highlighted the results from a previous PCA exercise in *FX Pulse: USD: The Dollar in a Global Portfolio* (July 5, 2012). We looked at 16 different asset classes and examined their weekly returns using data from January 2002 to June 2012 (see Exhibit 2 for the complete list of assets). We then divided the data into rolling 52-week subsamples and for each subsample, performed principal component analysis. In this piece, we have performed a similar exercise for 32 different currencies, both EM and G10, using weekly data from July 2004 to July 2012.

Exhibit 1 displays the fraction of co-variation in these time series explained by the first principal component (PC1). While for the cross-asset returns, this measure is near all-time highs, for FX it is *at* the all-time high.

Exhibit 1
Fraction of Cross-Asset Return Variation Explained by the First Principal Component



Source: Morgan Stanley Research, Bloomberg

Exhibit 2

Loadings for the Cross-Asset First Principal Component

	Loading
EM Equity	0.4855
EM Sovereign Credit	0.1366
EM Local Bonds, FX-Unhedged	0.2005
EM Local Bonds, FX-Hedged	0.0326
EM Money Market	0.1269
EM Corporate Credit	0.0639
S&P 500	0.3633
MSCI World Equities	0.3885
Commodities	0.3173
Real Estate	0.5194
Gold	0.1085
JP Morgan GBI	0.0219
JP Morgan US Agg Bond	-0.0114
Dollar Index	-0.0935
Investment Grade	0.0002
High Yield	0.0986

Source: Morgan Stanley Research

Co-movement for FX at an All-Time High

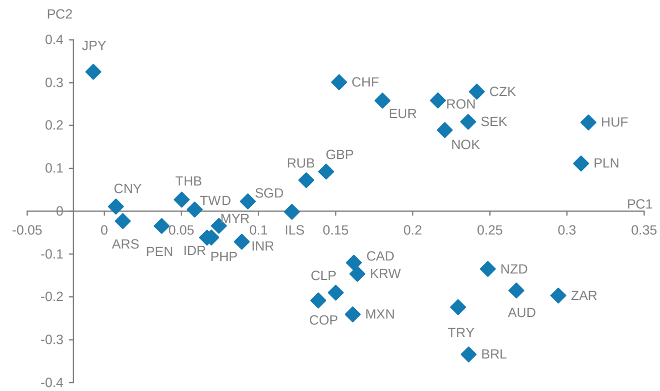
As mentioned, Exhibit 1 displays the fraction of cross-asset return variation explained by the first principal component using the above-mentioned data. How can we interpret the first principal component?

The first observation is that there was a big structural break in PC1 the week after October 10, 2008. That week, EM, US, and world equities fell around 20% each. Before that the share of PC1 was drifting down. After the stock market crash, it jumped permanently higher and has been slowly going up. Hence, one would expect PC1 to have something to do with the global risk aversion.

The second important observation is that PC1 for both FX and cross-assets in Exhibit 1 behaves in a very similar fashion. Exhibit 2 displays the loadings for the first principal component in the cross-asset PCA. The risky assets, such as EM equity, S&P-500, world equities and commodities, have high loadings while less risky assets, such as government and investment-grade bonds and the dollar index, have almost zero or negative loadings. The obvious interpretation is that the first principal component measures global risk appetite/aversion. The more this measure explains the covariance of the asset returns, the more risky assets co-move. The fact that it is close to all-time highs suggests an environment of extreme risk aversion. Given how correlated FX and cross-asset PC1s are, the interpretation should be the same for FX PC1 except that it is currently at an all-time high.

Exhibit 3

Loadings for the First 2 FX Principal Components



Source: Morgan Stanley Research

Identifying the Common Drivers

This is confirmed in Exhibit 3 where we plot the loadings for the first two principal components in the FX data set. High-beta currencies, such as HUF, PLN, ZAR, AUD, NZD, and BRL have high loadings while CNY, ARS, and JPY have very small (or even negative, in the case of JPY) loadings.

What about the second principal component (PC2)? That is a bit harder to interpret. The big negative loadings are for BRL, AUD, TRY, and MXN, among other currencies. On the other hand, the big positive loadings are for JPY, CHF, CZK, and HUF. This suggests that this component probably has something to do with the carry and whether the country is a commodity exporter or importer. To investigate this, we ran regressions of the second principal component loadings on 3m carry and 1y change in the CRB commodity index. Exhibit 4 reports the t-statistics and R2 of the regression for the first group of countries. As expected, the regression is highly significant. In addition, the regression coefficients are positive for commodity exporters and negative for the commodity importer (TRY).

Going back to Exhibit 3, one can roughly observe different groups: (i) “Commodity/carry group”, consisting of BRL, AUD, ZAR, NZD, MXN, COP, CLP, CAD, and KRW[1]; (ii) “CEE high-beta group”, consisting of HUF and PLN; (iii) “Euroarea group”, consisting of CHF, EUR, RON, CZK, SEK, and NOK; and (iv) JPY as its own group.

[1] KRW obviously is not usually thought of as a commodity/carry currency. However, if one regresses FX spot returns on 1w change in carry, the regression coefficient in the case of KRW has the largest t-statistic. We suspect that this may be explained by the central bank smoothing the fluctuations in the spot rate.

Exhibit 4

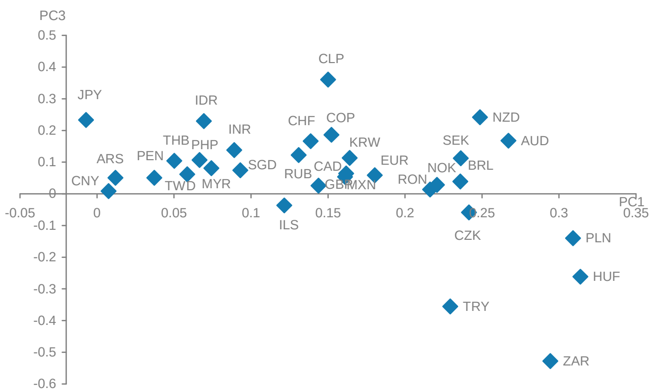
Regression of PC2 Loading on 3m Carry and 1y Change in Commodity Index (t-Statistics and R^2)

Country	Carry t	Commodity t	R2
Brazil	2.21	23.30	0.62
Australia	6.70	6.43	0.15
Turkey	-13.19	-17.55	0.65
Mexico	1.76	14.54	0.45

Source: Morgan Stanley Research, Bloomberg

Exhibit 5

Loadings for the FX PC1 and PC3



Source: Morgan Stanley Research

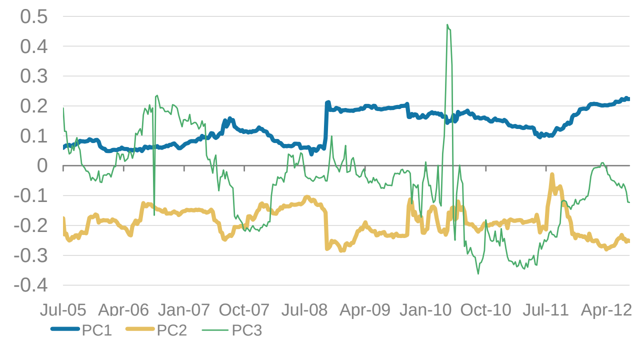
PCA suggests that currencies within each group tend to move together. The rest of the currencies, especially AXJ currencies, are roughly in the same group with varying risk sensitivity but a low loading for the second principal component.

Exhibit 5 displays the loadings for the first and the third principal components. Somewhat surprisingly, the third principal component (PC3) seems to be a kind of "CEEMEA factor" with ZAR, TRY, HUF, PLN, CZK, and ILS having significant negative loadings. The rest of the currencies have positive loadings for the third principal component. Similarly, the other principal components are harder to characterize, accounting for residual variation among individual currencies. Currently, the three principal components explain about 80% of the co-variation among FX returns so it makes sense to concentrate on them.

How do the principal component loadings move over time? Exhibit 6 shows the movements in MXN principal component loadings as a representative example for EM and Exhibit 7 uses EUR as an example. In both countries, both PC1 and PC2 loadings are quite persistent, while PC3 loadings have more noise.

Exhibit 6

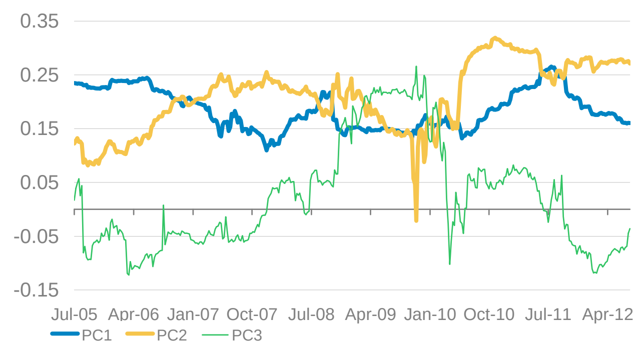
MXN Principal Component Loadings



Source: Morgan Stanley Research

Exhibit 7

EUR Principal Component Loadings



Source: Morgan Stanley Research

It is important to note that PC1 and PC2 are highly negatively correlated – both as far as loadings and as far as the fraction of variation explained by them are concerned. The latter correlation is -0.78. In addition, the fraction of variation explained by the first principal component is significantly negatively correlated with the fraction of variation explained by the third principal component. The correlation is -0.66.

Given that the co-movement is at an all-time high, one would expect PC1 to decline in importance and PC2 and PC3 to become more important. If true, this would mean that correlation will decrease and idiosyncratic factors will become more important.

Using Principal Components to Predict Returns

Motivated by the observations that the first principal component is associated with global risk aversion and the second with carry and commodities, we built a simple regression model to predict 3m ahead cumulative spot returns (in USD) on our 32 currencies using VIX, 3m carry, and 1y change in the CRB commodity index as the explanatory variables. In order to capture the well-documented momentum effects in asset prices, we also included the current realized 3m cumulative spot return as an explanatory variable.

The next step was to include the three principal component loadings as the explanatory variables as well. We document in Exhibit 8 the original R^2 from the return prediction regressions and the new R^2 after the first three principal component loadings have been included as predictive variables.

Adding principal component loadings to the regression improves the results for each and every currency. The mean R^2 for all 32 currencies increased from 0.21 to 0.3. This is true especially for currencies that are not sensitive to global risk aversion, carry, or commodities, such as CHF, JPY, and PEN.

In Exhibit 9, we summarize the model's current predictions. We consider three possible cases. In case 1, the benchmark case, we simply use last Friday's data and the regression coefficients we obtained from our regression. In case 2, we assume the correlations will weaken in the near future and reduce the first principal component's loading by 10%. Finally, in case 3 we take into account the negative correlation between different factor loadings, and we both reduce the first principal component's loading by 10% and increase the second's by 6% and the third's by 4%.

What Does PCA+ Model Indicate about FX?

As we mentioned at the beginning, the fraction of co-variation explained by the first principal component is currently at all-time high which means that the currencies are unusually correlated at the moment. We assume that PC1 should become less important in the near future and hence country-specific characteristics namely carry, will become more important. This is bullish on EMFX and bearish on G10.

In Exhibit 9, this effect can be seen both when we explicitly assume that the first principal component will go down in the future (columns 2 and 3) and when we don't make that assumption (column 1). The second result is due to the mean-reversion in principal components. If a PC is currently unusually high, it is likely to go down in the near future.

Hence, given the current high level of risk-aversion, the model finds the most undervalued currencies to be MXN, COP, and HUF while JPY, ILS, and SEK are the most overvalued.

Exhibit 8

R^2 When Predicting 3m Ahead Cumulative Spot Returns

	R2 w/o PCA	R2 with PCA
TRY	0.20	0.35
ILS	0.25	0.32
RUB	0.35	0.40
PLN	0.22	0.43
HUF	0.18	0.26
CZK	0.19	0.29
RON	0.20	0.22
ZAR	0.26	0.32
KRW	0.22	0.34
INR	0.24	0.35
IDR	0.14	0.20
TWD	0.08	0.17
THB	0.15	0.18
PHP	0.12	0.23
SGD	0.11	0.16
MYR	0.10	0.21
CNY	0.42	0.52
BRL	0.17	0.21
MXN	0.09	0.18
CLP	0.24	0.30
COP	0.17	0.35
PEN	0.13	0.35
ARS	0.17	0.20
EUR	0.26	0.40
GBP	0.35	0.43
JPY	0.08	0.23
CAD	0.25	0.35
AUD	0.30	0.41
NZD	0.41	0.49
SEK	0.24	0.26
NOK	0.26	0.34
CHF	0.07	0.22

Source: Morgan Stanley Research

Exhibit 9

PCA Model Predicted 3m Ahead Cumulative Spot Returns

	Case I	Case II	Case III
TRY	3.08%	2.27%	2.33%
ILS	-1.71%	-1.30%	-1.23%
RUB	2.85%	3.58%	3.55%
PLN	2.61%	3.22%	3.70%
HUF	5.34%	7.01%	7.48%
CZK	2.91%	3.89%	4.18%
RON	4.58%	4.22%	4.30%
ZAR	4.16%	4.38%	4.22%
KRW	3.60%	2.86%	2.94%
INR	2.62%	2.42%	2.40%
IDR	1.86%	1.82%	1.88%
TWD	3.03%	3.25%	3.36%
THB	2.69%	2.73%	2.73%
PHP	1.53%	1.62%	1.62%
SGD	0.86%	1.66%	1.72%
MYR	2.65%	2.61%	2.70%
CNY	-0.07%	-0.10%	-0.10%
BRL	4.12%	3.86%	3.96%
MXN	6.10%	5.18%	5.38%
CLP	2.53%	1.19%	1.10%
COP	6.07%	5.36%	5.11%
PEN	2.34%	2.29%	2.28%
ARS	-1.60%	-1.60%	-1.59%
EUR	2.63%	2.99%	3.62%
GBP	3.02%	3.16%	3.14%
JPY	-2.11%	-2.10%	-2.06%
CAD	0.73%	0.89%	1.02%
AUD	0.32%	0.58%	0.75%
NZD	3.06%	2.04%	2.11%
SEK	-1.69%	-2.44%	-2.35%
NOK	1.37%	2.22%	2.07%
CHF	-1.36%	-0.38%	-0.81%

Source: Morgan Stanley Research

EM: Staying Overweight RUB, Underweight ILS

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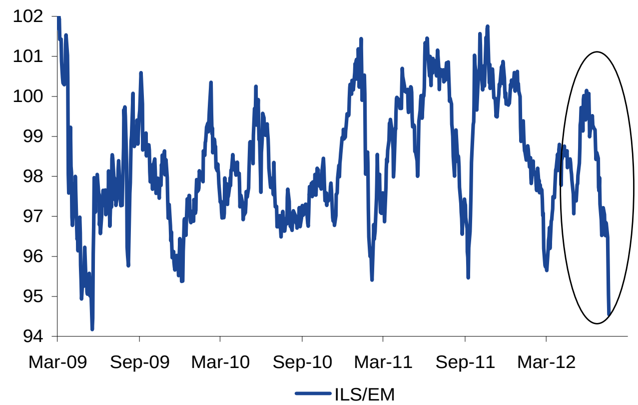
- The ILS/RUB cross has made a large move lower this week. We are approaching our target in the 7.8 area. The ongoing deterioration in Israel's macro data, diverging monetary policy trends between Israel and Russia, and the more stable market backdrop all suggest this trade has further room to run.
- Next week's Bank of Israel's meeting could be a catalyst for a temporary recovery in the ILS. However, we recommend selling into any rebound, looking to add at 8.2.
- We believe that the current environment of range-bound EMFX markets (with a slight bullish bias) is conducive of placing high-carry trades such as short ILS/RUB. Rebounding commodity prices are naturally supportive of this trade, too.
- Our colleagues in G10 FX strategy, meanwhile, are looking to fade the rebound in high beta G10 currencies, such as CAD or AUD.

We continue to believe that EM currencies have priced in a lot of bad news, and stick to our recommendation of accumulating risk on dips. At the same time, our colleagues in G10 FX strategy continue to look to fade the rally in high beta G10 currencies (such as AUD and CAD), which to us suggests a less than certain global risk backdrop. Positioning aggressively in USD/EM is risky, and we believe this environment is conducive to implementing high-carry relative-value trades in EM. Indeed, our recent PCA analysis of EM currency returns suggests that investors are likely to start implementing carry trades soon. (See Global EM Trade Radar: Bracing for a Better Bid, July 16).

The Israeli Shekel has been a significant underperformer in this environment, with USD/ILS breaking above 4.0 this week. As Exhibit 1 shows, the ILS is trading near its weakest point in recent years versus our index of EM currencies. Recent performance has, however, been in line with some indicators of growth prospects – such as the PMI. Israel's PMI is subject to large swings and thus can't always be relied upon to give an accurate read of the economy. But the degree of co-movement with the performance of USD/ILS is extremely strong – particularly in the post-Lehman-crisis era. Over the past 24 months, the correlation between the 3m/3m change in USD/ILS and the PMI has been -71%

Exhibit 1

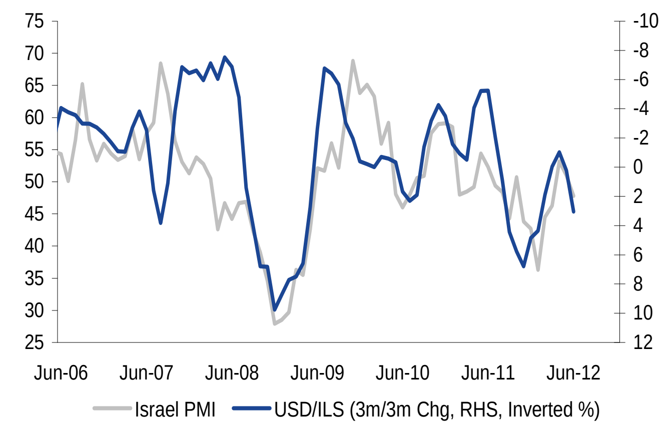
Sharp ILS Underperformance in Recent Weeks



Source: Morgan Stanley Research, Bloomberg

Exhibit 2

But In Line with PMI Slowdown



Source: Morgan Stanley Research, Bloomberg

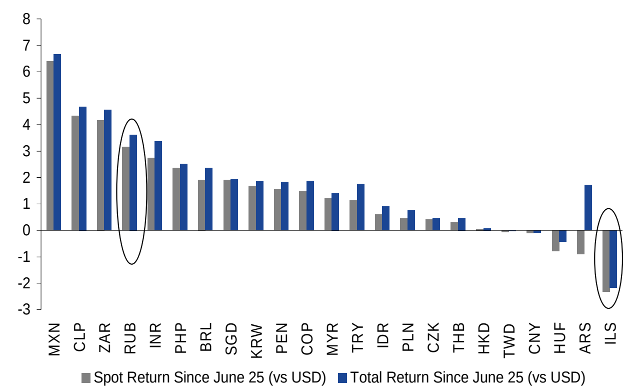
This underperformance has contributed to a sharp fall in the ILS/RUB cross, that we have recommended selling since June 25th (See Global EM Trade Radar: Still Waiting for the Policy Response, June 25).*

**See our Global EM Trade Radar of July 16 for our current EM macro trade ideas and link to trade history. Our trades represent hypothetical, not actual, investments. Reported returns do not take into account transaction fees and other costs. Past performance is no guarantee of future results.*

We continue to recommend staying short this cross, targeting the 7.8 area. When we compare the performance of ILS and RUB versus the USD, we can see that both currencies have contributed in more-or-less equal measure to the fall in ILS/RUB. However, given that most EM currencies have rallied versus the USD in this period, it is the weakness of the ILS that stands out the most. As Exhibit 4 shows, there has been sharp divergence between USD/EM and USD/ILS in recent weeks, in contrast to historically high levels of co-movement.

Exhibit 3

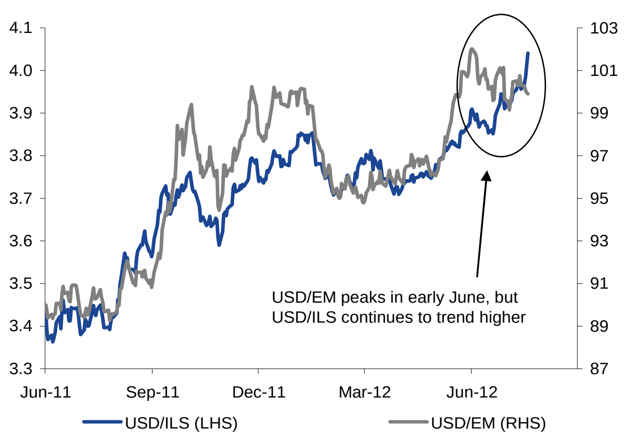
ILS/RUB Fall Driven by Both ILS and RUB Performance



Source: Morgan Stanley Research, Bloomberg

Exhibit 4

Notable Divergence Between EMFX and ILS

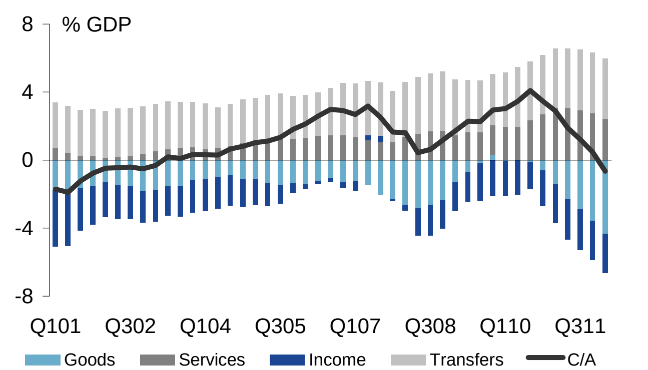


Source: Morgan Stanley Research, Bloomberg

Israeli macro weakness: We believe there are several factors that explain the ongoing weakness of the Israeli shekel. First, the trade balance continues to deteriorate and does not spell good news for incoming current-account data. At first glance, the 28% drop in exports seen in June looks worrying and is the likely cause of the most recent underperformance in the ILS. However, our economist for Israel believes that the data could well be revised higher and the drop in oil prices seen through 2Q should continue to feed through to lower imports soon. But the trend is clear, and Israel's trade balance is deteriorating, primarily on a drop in external demand. Until we see some signs of stabilization, this should continue to weigh on the performance of the ILS.

Exhibit 5

Current Account Deteriorating…

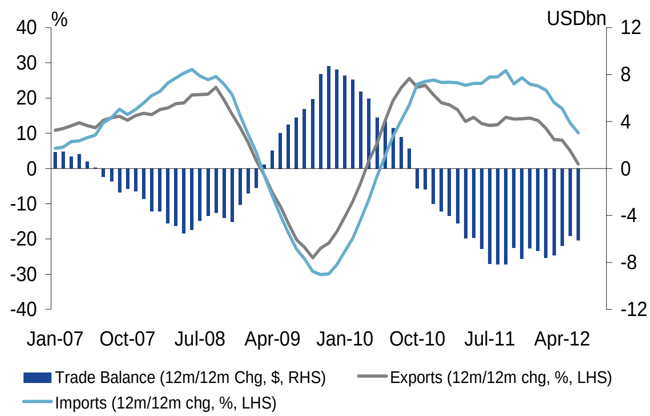


Source: Morgan Stanley Research, Bloomberg

However, next week's Bank of Israel MPC meeting could provide some respite. Indeed, while the June inflation print of 1.0% y/y (the bottom of the BoI's target band and, with the exception of Ukraine, is the lowest inflation rate in EM) has led the market to price in cuts, most economists, including Morgan Stanley's, anticipate an on-hold decision. Depending on the tone of the accompanying statement, this could prompt some short-term strength in the currency – particularly given the extent of short ILS positions that have built up recently. However, we would fade this move and look to sell into any rebound in ILS/RUB at 8.2.

Exhibit 6

… Driven By Export Slowdown



Source: Morgan Stanley Research, Bloomberg

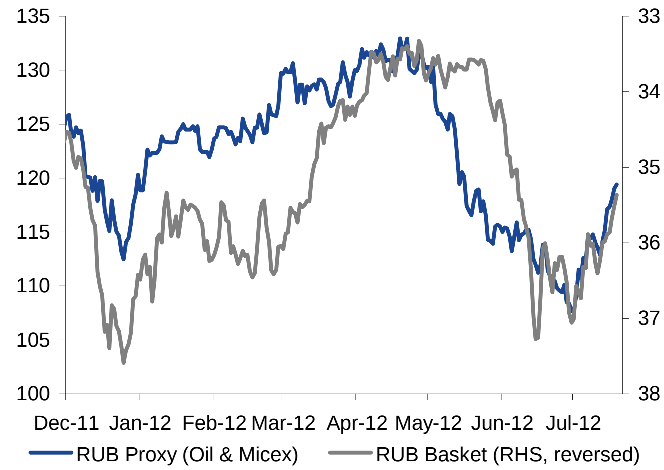
Meanwhile, USD/RUB is moving down towards 32.0, which we see as an important technical support level. Should USD/RUB close below this level, then on a technical basis at least this would open the door toward further RUB gains.

Russia Strength: The most recent data prints continue to support our economist's ambitious call for growth to reach 5%Y for 2012, while inflationary pressures should keep the Central Bank of Russia (CBR) biased to hiking rates for the remainder of the year. Indeed, retail sales, producer prices and real wages all expanded and beat analyst expectations for June. At the same time, inflation has risen recently and our economist's expect it to exceed the CBR target of 6% by September (see CEEMEA Macro Monitor, July 13). These macro dynamics are in sharp contrast to both the macro story in Israel, and that of most of EM.

Furthermore, Urals Crude prices have recovered through July – back above the US$100/bbl mark, and there has been a steady recovery in the MICEX Index. This has coincided with a turn around in RUB performance versus both the EUR-USD basket and our index of EM currencies (see Exhibits 7 and 8), following a period of hefty underperformance through 2Q. We expect this current outperformance to continue, helped by a relatively strong growth outlook, a hawkish central bank, and what we see as still light positioning in the RUB.

Exhibit 7

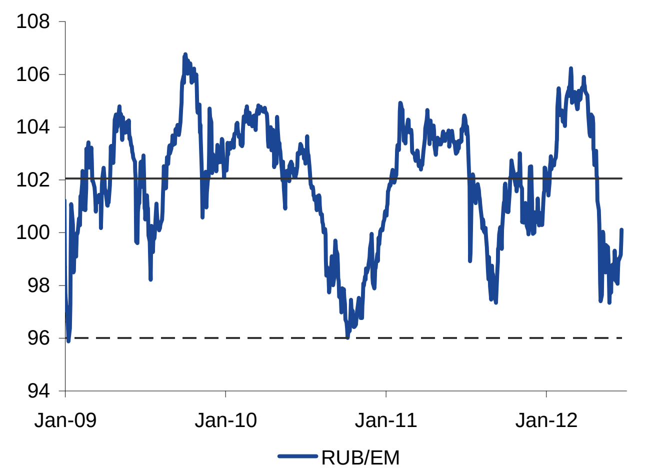
RUB Recovering With Urals Oil and Equities



Source: Morgan Stanley Research, Bloomberg

Exhibit 8

RUB /EM Rebounding Off the Lows



Source: Morgan Stanley Research, Bloomberg

Strategic FX Portfolio Trade Recommendations

Evan Brown and Yee Wai Chong

29 Jun 2012

Entered: 1.2590, Stopped Out: 1.2300

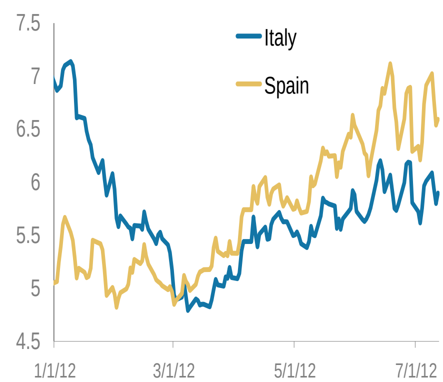
Limit Order: 1.2430, Stop: 1.2570, Target: 1.1900

Close: Sell EUR/USD

New Limit Order: Sell EUR/USD

We booked a profit of $230K on short EUR/USD after tightening our stop last week. Now we look to re-establish EUR shorts at better levels, as the economic and political outlook in Europe is still cloudy. The German constitutional court's decision to take an intermediate review of eurozone's permanent bailout mechanism will delay ESM's launch for at least another 3 months. We believe this could weaken confidence that there is a strong enough firewall to backstop European peripheral debt. Indeed, Spanish and Italian 10-year debt yields remain elevated. Moreover, ECB easing has and will broaden EUR's use as a funding currency. We are skeptical that any additional Fed easing programs would have a prolonged weakening effect on USD (see p. 5).

Italian and Spanish 10y Yields Remain Elevated



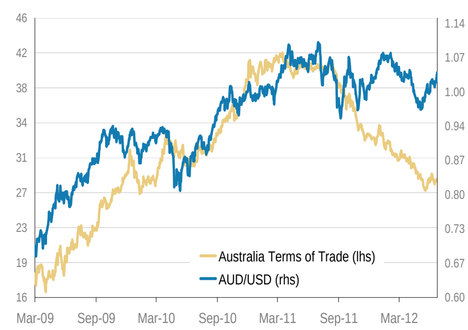
13 Jul 12

Entered: 80.60, Stop: 82.60, Target: 74.60

Entered: Sell AUD/JPY

Despite AUD's recent rally, we are fundamentally bearish on AUD as slowing global growth (including in China) has weighed on commodity prices and Australia's terms of trade. Given these pressures, we think that current levels of AUD are unsustainable and look for a correction in coming months. Indeed, any boost to AUD from speculation of Fed QE will be short lived, in our view. We expect weak investor risk appetite from a still unresolved European sovereign crisis should weigh on a high-beta AUD and boost a safe haven JPY. Meanwhile, we think the BoJ's cautious policies will continue, limiting JPY downside.

AUD Has Diverged from Terms of Trade Fundamentals



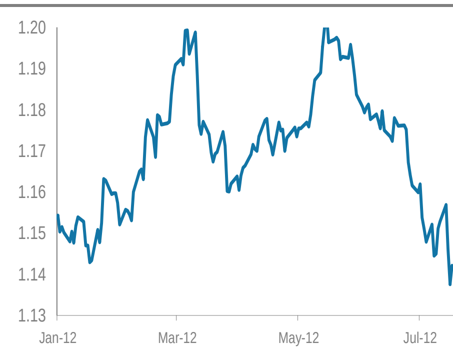
18 Jul 12

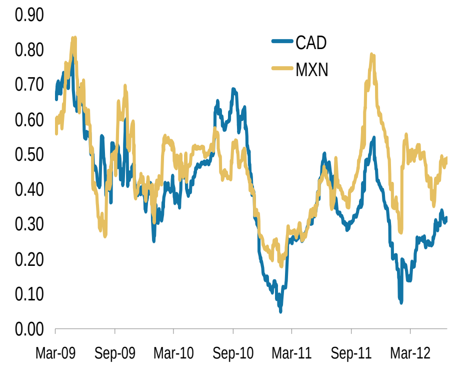
Entered: 1.1450, Stopped Out: 1.1380

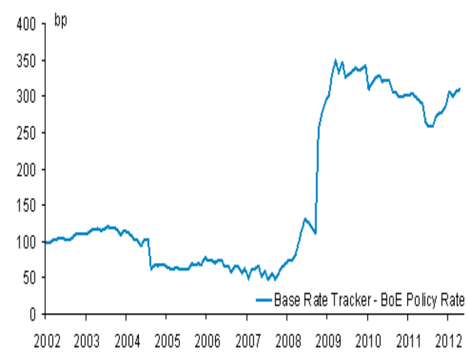
Close: Buy NOK/SEK

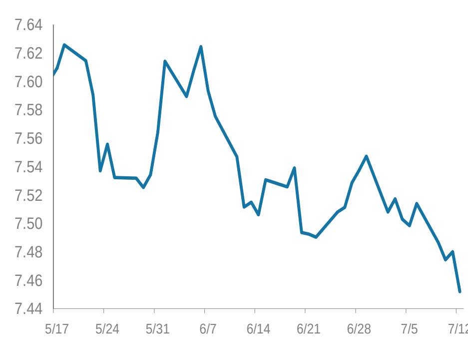
We were stopped out of our long NOK/SEK position on this week's impressive rally in SEK. Driving price action were stop orders from those with long NOKSEK positions as well as reported diversification flows from the SNB. Fundamentally, given the slowing global economic backdrop and increasing probability that the Riksbank cuts interest rates, SEK should weaken. However, as long as Sweden attracts "quasi safe haven" and diversification flows, a bearish outlook on SEK carries significant risk. The end of the domestic oil strike and geopolitical tensions prompting a rise in crude prices are both beneficial for the Norwegian economy. On macro fundamentals, we may look to re-establish this trade at a later date.

NOK/SEK Breaks 2012 Lows



	Limit Order: 13.30, Stop: 13.55, Target: 12.00	CAD & MXN betas to Global Risk Demand Index to Converge
Limit Order: Sell CAD/MXN	We find this NAFTA relative value trade attractive for technical, cyclical and structural reasons. We expect CAD and MXN betas to converge as positioning in MXN normalizes (though admittedly, the betas have diverged in recent weeks). CAD should depreciate due to softer terms of trade and weaker domestic data. Finally, we believe that structural reforms in Mexico carry a positive fundamental story over the medium term. For more detail, see A Break from Europe: Short CAD/MXN (June 28, 2012).	

15 Jun 2012	Entered: 1.5680, Stopped Out: 1.5610	UK Mortgage Rates High Despite Low Policy Rates
Close: Sell GBP/USD	We booked a profit $41K on short GBP/USD after tightening our stop last week. We are still bearish on GBP, given the UK's large trade and banking linkages to a rapidly slowing eurozone. Meanwhile, tight funding conditions have put the housing market under downward pressure, not boding well for domestic demand. We are skeptical that the BoE additional £50 bn in asset purchases (as well as the Treasury's 'Funding for Lending' Policy) will be enough to stimulate growth amid broader private and public sector deleveraging. We have lowered our stop to protect profits.	

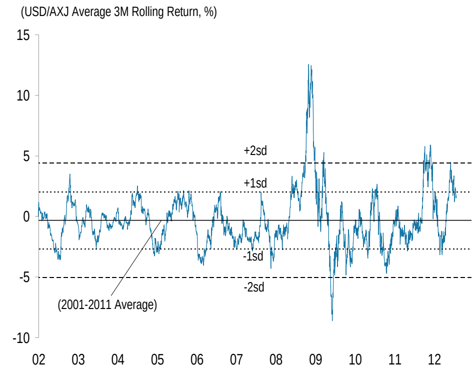
17 May 2012	Spot: 7.5980 Strike: 7.4462 Cost: 0.83%	EUR/NOK
Hold: EUR/NOK Put	We favor low-cost ways to position via options for further EUR downside. In our view, the European situation will worsen before it gets better, prompting safe haven flows into Norway. Moreover, we think that Norges Bank's more hawkish assessment, toned down language on the FX rate and strong growth in Norway will support NOK over the medium term. The risk to this trade is the upfront premium, which would be lost if EUR rebounds.	

14 Jun 2012 **Entry (spot): 3.176, High Strike: 3.131, Low Strike: 3.04, Cost: 0.80%**

USD/AXJ Rally Is Losing Momentum

Hold: Long 3m USD put/ MYR call spread

We like tactical long positions in certain AXJ currencies (see *AXJ: Time to Go Tactically Long*, June 14, 2012). In particular, we favor a 3m OTM MYR call spread because: 1) MYR had underperformed despite having relatively sound fundamentals; 2) Malaysia is one of the most open AXJ economies and hence should benefit more from global reflation policies; and 3) The call spread is downside-protected and cost-effective – it can generate a risk/reward of 3.7x if USD/MYR hits 3.04 at expiry.

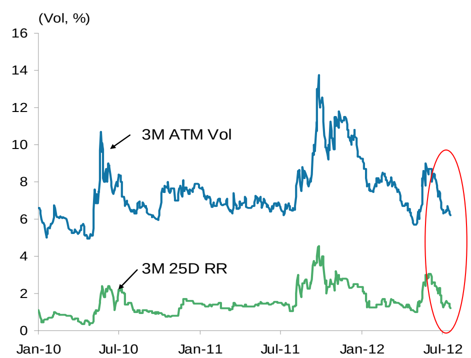


10 May 2012 **Entry (spot): 1.2521, Strike: 1.2700, Cost: 0.87%**

USD/SGD Implied Volatility and Skew Have Normalized for Now

Hold: Long 3m USD call/SGD put

While USD/SGD has retraced from the recent highs, we still think it is prudent to hold on to our existing downside hedge via a SGD-put. This is because the ongoing Eurozone credit turmoil has not been fully resolved, and global growth remains a concern. This position will likely still be an effective AXJ downside hedge because SGD may be used by investors as a liquid 'proxy hedge' for illiquid AXJ positions, should downside tail risks re-emerge.

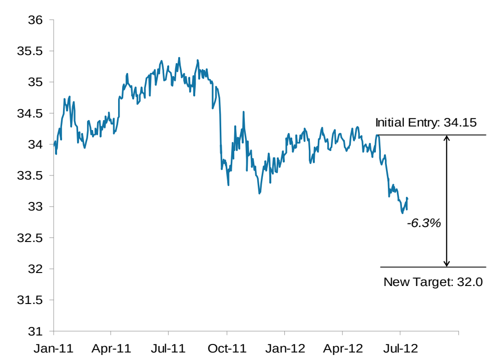


6 Jan 2012 **Entry: 34.45 (NDF), Stop: 34.60 (spot), New Target: 32.00 (spot)**

SGD/PHP

Hold: Sell SGD/PHP 12M NDF

We continue to like holding short SGD/PHP positions because Philippines' relatively closed economy will likely protect PHP from slowing global growth. Singapore's open economy, on the other hand, leaves it susceptible in a risk-off scenario. We believe the ongoing Euroland credit turmoil and lack of imminent global reflation justify our defensive stance for now. We moved the target lower to 32.0 (spot) – after we took profit on half the initial position as the original 33.0 target was hit – and kept the stop unchanged at 34.6 (spot).



Source for all charts: Bloomberg, Haver, EcoWin

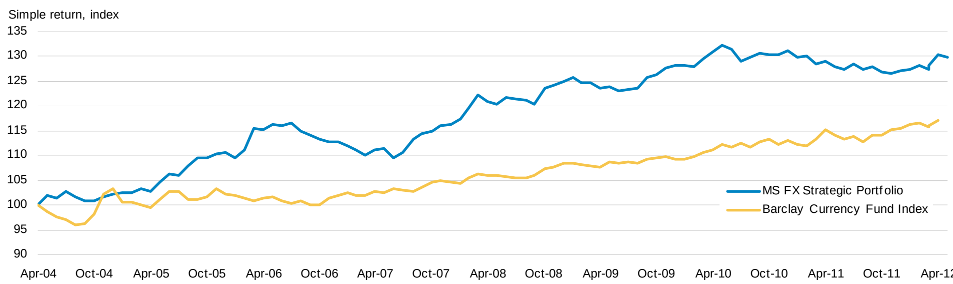
Strategic FX Portfolio

Trade Recommendation	Notional	Nominal Weight	Entry Date	Entry Level	Current	Stop	Target	Spot P&L	Carry P&L	Portfolio Contribution
Closed Trades										
Short GBP/USD	$10.0mn	0.0%	15-Jun-12	1.5680	Closed at 1.5610 on 16-Jul-12			$44.6k	-$3.7k	$40.9k
Short EUR/USD	$10.0mn	0.0%	29-Jun-12	1.2590	Closed at 1.2300 on 17-Jul-12			$230.3k	$0.1k	$230.4k
Long NOK/SEK	$10.0mn	0.0%	17-Jul-12	1.1450	Stopped at 1.1380 on 18-Jul-12			-$61.1k	$0.0k	-$61.1k
Active Trades										
Short SGD/PHP 12m NDF	$5.0mn	5.0%	06-Jan-12	34.15	33.22	34.60	32.00	Levels are spot		$151.3k
Short AUD/JPY	$10.0mn	9.6%	13-Jul-12	80.60	81.99	82.60	74.60	-$175.4k	-$7.0k	-$182.4k
Limit Orders										
Sell EUR/USD	$10.0mn			1.2430	1.2283	1.2570	1.1900			
Sell CAD/MXN	$10.0mn			13.30	13.09	13.55	12.00			
Cash	$87.8mn	85.4%								
Portfolio Mark to Market	$102.7mn									

Source: Morgan Stanley Research
**Stops for all trades are based on spot*

Notes: (1) Stops are based on the WMR fixing. (2) The portfolio represents hypothetical, not actual, investments. For more details regarding calculations, please see "Reading FX Tactical Trade Performance" at the back of FX Pulse. Our FX Trade Performance Data Package contains complete performance statistics. (3) Reported returns are unleveraged. (4) In the case that trade allocations are increased, entry levels are a weighted average. * Global Risk Demand Index – US Pat. No. 7,617,143. We updated our methodology for our portfolio recently (FX Pulse: Watching Europe, October 13, 2011)

Performance on Recommended Discretionary Currency Portfolio and Market Benchmark



Simulated Managed Account Monthly Gross Performance - %													
Year	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Year return**
2004					2.03	-0.73	1.42	-1.07	-0.90	0.23	0.80	0.44	**1.57%**
2005	0.28	0.11	0.68	-0.63	2.08	1.39	-0.20	1.84	1.62	0.15	0.85	0.17	**8.35%**
2006	-1.11	1.70	4.36	-0.37	1.24	-0.44	0.52	-1.47	-0.85	-0.84	-0.58	-0.01	**2.16%**
2007	-0.75	-0.77	-1.08	0.94	0.36	-2.02	1.07	2.75	1.26	0.45	1.16	0.18	**3.56%**
2008	1.07	2.25	2.72	-1.41	-0.53	1.28	-0.17	-0.24	-0.86	3.12	0.62	0.87	**8.72%**
2009	0.74	-0.97	-0.15	-1.09	0.50	-0.87	0.30	0.22	2.00	0.77	1.27	0.55	**3.27%**
2010	-0.01	-0.27	1.71	1.13	1.39	-0.86	-2.36	0.95	0.67	-0.30	0.13	0.66	**2.83%**
2011	-1.20	0.29	-1.71	0.51	-1.11	-0.33	0.84	-1.02	0.50	-1.03	-0.18	0.44	**-4.00%**
2012	0.32	0.47	-0.43	0.49	1.76	-0.43	0.83						**3.00%**

Options Trades

Trade Recommendation	Notional	Entry Date	Expiry Date	Strike	Entry Spot	Entry Vol	Entry Cost	Current Spot	Current Vol	Current Cost	P&L
Active Trades											**-$134.1k**
Long USD call/SGD put	$10.0mn	10-May-12	10-Aug-12	1.2700	1.2521	7.35%	0.87%	1.2532	6.22%	0.12%	-$75.0k
Long EUR put/NOK call	$10.0mn	17-May-12	21-Aug-12	7.4462	7.5980	7.55%	0.83%	7.4387	5.55%	0.62%	-$21.2k
Long USD put/MYR call	$10.0mn	14-Jun-12	13-Sep-12	3.1310	3.1760	8.80%	0.94%	3.1535	6.01%	0.56%	-$38.3k
Short USD put/MYR call	$10.0mn	14-Jun-12	13-Sep-12	3.0400	3.1760	7.25%	0.14%	3.1535	6.28%	0.13%	$0.7k

Source: Morgan Stanley Research; see notes above.

G10 Currency Summary

Calvin Tse and Dara Blume

USD

5.2%

Flight to Safety — **Bullish** — *Watch: Prelim PMI, Home Sales, Durables, Claims, Q2 GDP*

The theme of slowing global growth and inactivity by major central banks continues. In the US, the labour market continues to exhibit signs of weakness and domestic demand has softened as well. Meanwhile, in Europe, growth in both the periphery and core are both slowing. EM economies, which had previously been the global growth engine, are stalling as well. In light of all this, major central banks, including the Fed, have been unwilling to embark on more aggressive policy. In this environment, we expect safe havens, specifically USD, to rally.

EUR

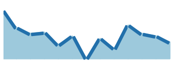
-7.3%

Political and Economic Uncertainty — **Bearish** — *Watch: Consumer Confidence, PMI, M3, German IFO*

Growth in the eurozone is not only stalling in the periphery, but also quickly slowing in the core. Indeed, weakness in the German ZEW survey portends further softness in core economic data, including this week's key IFO survey. Besides weak growth, the mix of uncertainty at the periphery (as evidenced by the recent poor peripheral auctions) and lack of returns at the core also leaves European asset unattractive to the international investor, which should further put EUR under pressure.

JPY

-2.9%

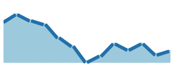


Low Yield Environment — **Neutral** — *Watch: Trade Balance, National CPI, Retail Trade*

With global yields at depressed levels, we are likely to continue seeing repatriation flows back to Japan, given the country's substantial net international investment position. Additionally, with front-end yields so low, most foreign flows are likely to be currency hedged, further supporting the JPY. Lastly, with the BoJ seemingly complacent with the level of USDJPY, we expect the pressure on the cross to remain on the downside.

GBP

-3.4%

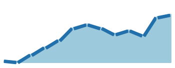


Domestic Decline — **Bearish** — *Watch: Public Finances, GDP, CBI Trends*

With negative data from the UK ongoing and the MPC remaining dovish, we look for GBP to come under pressure. This week's retail sales and labour market data were on the weaker side, and both saw a GBP decline on release. Furthermore, the MPC minutes revealed that the committee had discussed GBP 75bn additional QE and the possibility of a rate cut. For the moment, they remain in wait and see mode, as we watch for the impact of the Funding for Lending programme.

CHF

7.9%

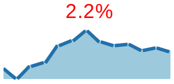


Safe Haven Destination — **Neutral** — *Watch: M3, KoF Leading Indicator*

EURCHF remains just above 1.20 as the SNB continues to defend the floor. Economic data has been mediocre over recent weeks, relieving some of the pressure on the SNB. However, with data in the Euro area equally soft, we do not expect safe haven flows to slow. As a result, we continue to forecast a break in the floor as the SNB eventually becomes overwhelmed by the size of FX reserve purchases necessary to maintain the floor.

CAD

2.2%

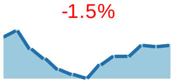


BoC Recognizes Risks — **Bearish** — *Watch: CPI, Retail Sales*

We remain bearish CAD given soft global growth, the lack of response from the Fed, and the structural challenges facing the Canadian export market. Indeed, the BoC reflected these concerns this week in its meeting, coming out slightly more dovish than expected. The BoC does not expect Canadian exports to pass their pre-recession peak until 2014, in line with our view that the economy faces structural challenges to its export market. In this environment, we look to fade CAD strength.

AUD

-1.5%

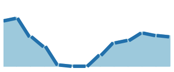


Downwards Adjustment — **Bearish** — *Watch: Terms of Trade, PPI, CPI*

AUD has continued to hold up despite deteriorating external growth and a lackluster domestic situation. The currency even managed to recoup losses after a weak labor market report, which is of particular importance to the RBA at the moment. However, we expect markets to adjust shortly, with a fall in AUD, given the ongoing global uncertainty and likelihood of further RBA cuts. We watch CPI this week to see if the downward trend continues, clearing the way for more RBA cuts.

NZD

-2.8%

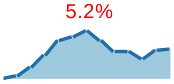


Risks of Dovish RBNZ — **Bearish** — *Watch: Credit Card Spending, Trade, RBNZ Decision*

We expect NZD to decline over coming weeks as the general risk environment and global growth do not support the recent strength exhibited in the currency. Domestically, we look for the RBNZ to stay on hold this week. However, we highlight the risk of a more dovish tone from the RBNZ than in the past, given recent currency strength, a softening global growth environment, and the continued decline in CPI. A dovish statement is likely not fully priced in, and would weigh on NZD.

SEK

5.2%

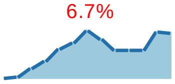


Central Bank Diversification — **Bearish** — *Watch: Economic Tendency Survey, Trade, Unemployment, Retail Sales*

Fundamentally, given the slowing global economic backdrop and increasing probability that the Riksbank cuts interest rates, SEK should weaken. However, as long as "quasi safe haven" and diversification flows continue, pressure will likely remain on the downside in EURSEK. The week ahead will be important on the domestic data front; look out for the economic tendency survey, trade, unemployment rate, and retail sales.

NOK

6.7%



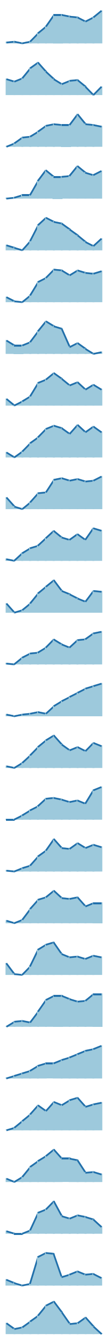
Stronger Oil — **Neutral** — *Watch: Oil Prices*

The end of the domestic oil strike and geopolitical tensions prompting a rise in crude prices are both beneficial for the Norwegian economy. Indeed, Norway is one of the largest oil exporters globally and rising commodities prices increases profits, capex, employment, wages, and aggregate demand; this should eventually feed through to higher rates and thus, lend support to the currency as well.

Charts are 3M performance against USD, as normally quoted

EM Currency Summary

EM Strategy Team



		USD/EM*	
CNY	Bullish	1.1%	We expect the authorities to suspend CNY appreciation against the USD as part of the more aggressive easing measures to boost demand growth.
HKD	Bullish	0.0%	The USD/HKD peg will remain stable.
INR	Bearish	5.9%	INR is still under pressure due to India's negative macro dynamic and BoP stress. The policy response so far also had been insufficient, in our view.
IDR	Bearish	2.9%	Indonesia's current account is moving deeper into deficit. The IDR is also vulnerable to capital flight because of heavy foreigner positioning.
KRW	Neutral	0.9%	KRW's macro-dynamic and balance-of-payment (BoP) supports are weakening, though its cheap valuation may help limit the extent of sell-off.
MYR	Neutral	3.9%	We think MYR might be over-sold compared to its peers in the region, and may lead to a rebound if global sentiment improves.
PHP	Bullish	-1.6%	PHP should be supported by a relatively stable BoP and improving credit outlook
SGD	Neutral	1.3%	SGD should remain broadly range-bound. While SGD is exposed to the global growth slowdown, it should also be helped by any improvement in risk sentiments.
THB	Bullish	2.1%	THB is overvalued and susceptible to weaker external demand conditions, but may be supported by positive macro-dynamic conditions (albeit temporarily).
TWD	Bullish	1.7%	TWD will likely be vulnerable due to the weak global cycle and its negative carry. However, we believe its cheap valuation should provide a margin of safety.
CZK	Bearish	10.0%	CZK will stay under pressure as domestic demand remains subdued, the CNB stays dovish and biased to FX weakness, and Eurozone risk remains high.
HUF	Neutral	4.7%	Formal talks are set to start with the IMF-EU. We expect HUF to be sensitive to related headlines, and are biased to buying HUF on dips, as we think a deal will ultimately be achieved.
ILS	Bearish	5.5%	We do not see valuations as particularly attractive in relation to the rest of the region, given a slowing macro picture, potential rate cuts and a worsening current account deficit.
KZT	Bullish	1.3%	The risk to KZT is the double blow of a weak RUB and low oil prices – though, in this scenario, our economists expect a more flexible KZT and acceleration in investment.
PLN	Bullish	7.8%	We see PLN as a regional outperformer, as growth projections are relatively strong, the NBP is likely to stay on hold and Polish authorities provide a backstop from disorderly FX weakness.
RON	Bearish	12.5%	We think NBR intervention and continuity in policy with the IMF should keep the currency stable and low beta versus the EUR.
RUB	Bullish	10.7%	We think that the level of RUB underperformance is overdone and should start to turn, and we see attractive risk/reward in going short ILS/RUB (target 7.80).
ZAR	Neutral	5.8%	We expect speculative flows surrounding ZAR to stay typically high, and the currency to continue trading with a high beta to USD/EM. In light of such volatility, we stay neutral.
TRY	Bearish	1.0%	TRY has traded with relatively low volatility and high carry, as the CBT has kept to its flexible and unconventional monetary policy approach. We do not expect this to change.
UAH	Neutral	0.8%	We expect the FX market to remain stable, and see the risk of resumption of FX pressure for domestic reasons as being moderate in the coming months.
ARS	Bearish	3.2%	NDF-implied yields are pricing in a 50% devaluation. While we expect to see a weaker ARS in coming weeks due to the seasonal factors, we think the market's positioning for a devaluation may be premature.
BRL	Neutral	8.8%	We believe the BCB chooses to intervene to quell FX weakness only when accompanied by equity and rate weakness. Recent price action indicates that BRL will remain in the 1.90-2.10 range for now.
MXN	Bullish	1.4%	We expect MXN to continue outperforming its peers given the potential for upside with the presidential elections and the country's strong fundamentals. We recommend going long, funded using either EUR or CAD.
CLP	Bullish	0.9%	To hedge our rate receiver in Chile, we expect a RV long CLPCOP to react more quickly to the increasingly positive headlines regarding stimulus out of China in the coming weeks.
COP	Bearish	0.3%	While we do not believe that the verbal intervention by Uribe will significantly weaken COP at these levels, we do believe that he will not allow COP to significantly strengthen.
PEN	Bullish	-1.0%	Central bank intervention to help strengthen PEN makes us confident that it will continue to exhibit a lower beta than its peers and will likely outperform its higher-beta neighbors.

*3 month history

Global Event Risk Calendar

Dara Blume

Date (GMT)	Time (GMT)	Ccy	Event	MS forecast	Market	Previous
20-Jul	13:30	CAD	**CPI (Jun)**		**1.7%Y**	**1.2%Y**
20-Jul	11:00	EUR	**EcoFin Ministers Conference Call on Spain**			
20-Jul	09:30	GBP	PSNB (Jun)		13.4B	17.9B
20-Jul	15:00	MXN	**Banxico Rates Decision**	**4.50%**	**4.50%**	**4.50%**
22-Jul	NA *	EUR	EU and IMF Officials Visit Cyprus			
23-Jul	02:30	AUD	PPI (2Q)			1.4%Y
23-Jul	08:00	CHF	M3 (Jun)			6.2%Y
23-Jul	15:00	EUR	Consumer Confidence (Jul)		-19.8	-19.8
23-Jul	16:30	ILS	**BoI Rates Decision**	**2.25%**	**2.25%**	**2.25%**
24-Jul	03:30	AUD	**RBA's Stevens spks (Sydney)**			
24-Jul	13:30	CAD	Retail Sales (May)			-0.5%M
24-Jul	03:00	CNY	Conference Board Leading Economic Index (June)			
24-Jul	03:30	CNY	**HSBC Flash PMI (Jul)**			**48.2**
24-Jul	08:58	EUR	**Flash PMI Manufacturing (Jul)**		**45.3**	**45.1**
24-Jul	23:00	EUR	ECB Publishes Bank Lending Survey			
24-Jul	13:00	HUF	**MNB Rates Decision**	**7.00%**	**7.00%**	**7.00%**
24-Jul	23:45	NZD	Trade Balance (Jun)			301M
24-Jul	15:00	USD	Richmond Fed Manufacturing Index			-3
24-Jul	15:00	USD	House Price Index (May)			0.8%M
25-Jul	01:00	AUD	Conference Board Leading Index (May)			-1.40%
25-Jul	02:30	AUD	**CPI (2Q)**			**1.6%Y**
25-Jul	09:00	EUR	**German IFO - Business Climate (Jul)**		**104.5**	**105.3**
25-Jul	09:30	GBP	**GDP (2Q)**		**-0.2%Q**	**-0.3%Q**
25-Jul	00:50	JPY	Merchandise Trade Balance (Jun)			-¥910.4B
25-Jul	22:00	NZD	**RBNZ Rates Decision**	**2.50%**	**2.50%**	**2.50%**
25-Jul	08:30	THB	**BoT Rates Decision**	**3.00%**		**3.00%**
25-Jul	15:00	USD	New Home Sales (Jun)	375K	368K	369K
26-Jul	07:00	EUR	German GfK Consumer Confidence (Aug)		5.8	5.8
26-Jul	09:00	EUR	M3 (Jun)		2.9%Y	2.9%Y
26-Jul	01:10	JPY	**BoJ's Shirakawa spks (Tokyo)**			
26-Jul	09:00	PHP	**BSP Rates Decision**		**4.00%**	**4.00%**
26-Jul	08:15	SEK	Consumer Confidence (Jul)			3.1
26-Jul	08:15	SEK	Economic Tendency Survey (Jul)			98.7
26-Jul	08:30	SEK	Household Lending (Jun)			4.6%Y
26-Jul	08:30	SEK	PPI (Jun)			0.3%Y
26-Jul	08:30	SEK	Trade Balance (Jun)			9.8B
26-Jul	08:30	SEK	Unemployment Rate (Jun)			8.10%
26-Jul	13:30	USD	Durable Goods Orders (Jun)	-0.5%M	0.5%M	1.3%M
26-Jul	13:30	USD	Initial Jobless Claims (Week of Jul 21)			386K
26-Jul	15:00	USD	Pending Home Sales (Jun)		1.0%M	5.9%M
26-Jul	16:00	USD	Kansas City Fed Manufacturing Survey (Jul)			3
27-Jul	08:00	CHF	KOF Leading Indicator (Jul)			1.16
27-Jul	NA *	COP	**BanRep Rates Decision**	**5.25%**	**5.25%**	**5.25%**
27-Jul	00:30	JPY	**CPI (Jun)**			**0.2%Y**
27-Jul	00:50	JPY	Retail Trade (Jun)			3.6%Y
27-Jul	08:30	SEK	Retail Sales (Jun)			0.4%M
27-Jul	13:30	USD	**GDP (2Q)**	**1.7%Y**	**1.5%Y**	**1.9%Y**
29-Jul	23:45	NZD	Building Permits (Jun)			-7.1%M
30-Jul	08:00	EUR	**Spanish GDP (2Q)**			**-0.3%Q**
30-Jul	09:30	GBP	Mortgage Approvals (Jun)			51.1K
30-Jul	00:15	JPY	PMI (Jul)			49.9
30-Jul	00:50	JPY	Industrial Production (Jun, P)			-3.4%M
30-Jul	08:30	SEK	**GDP (2Q)**			**0.8%Q**
30-Jul	15:30	USD	Dallas Fed Manufacturing Survey (Jul)			5.8
31-Jul	02:30	AUD	Private Sector Credit (Jun)			0.5%M
31-Jul	13:30	CAD	GDP (May)			0.3%M
31-Jul	13:30	CAD	Industrial Product Price (Jun)			0.0%M
31-Jul	06:30	CHF	SNB publishes interim results			
31-Jul	10:00	EUR	**Flash CPI (Jul)**			**2.4%Y**
31-Jul	10:00	EUR	Unemployment (Jun)			11.10%
31-Jul	06:30	INR	**RBI Rates Decision**	**8.00%**		**8.00%**

Date (GMT)	Time (GMT)	Ccy	Event	MS forecast	Market	Previous
31-Jul	00:30	JPY	Jobless Rate (Jun)			4.40%
31-Jul	00:30	JPY	Overall Hhold Spending (Jun)			4.0%Y
31-Jul	02:30	JPY	Labor Cash Earnings (Jun)			-1.1%Y
31-Jul	06:00	JPY	Housing Starts (Jun)			9.3%Y
31-Jul	04:00	NZD	M3 (Jun)			6.3%Y
31-Jul	13:30	USD	Employment Cost Index (2Q)			0.4%Q
31-Jul	13:30	USD	**PCE Core (Jun)**			**1.8%Y**
31-Jul	14:00	USD	S&P/CaseShiller Home Price Index (May)			135.8
31-Jul	14:45	USD	Chicago PMI (Jul)			52.9
31-Jul	15:00	USD	Consumer Confidence (Jul)			62
01-Aug	00:30	AUD	**PMI (Jul)**			**47.2**
01-Aug	02:00	CNY	**Manufacturing PMI (Jul)**			**50.2**
01-Aug	03:30	CNY	**HSBC Manufacturing PMI (Jul)**			**48.2**
01-Aug	08:58	EUR	**PMI Manufacturing (Jul)**			
01-Aug	09:28	GBP	**PMI Manufacturing (Jul)**			**48.6**
01-Aug	08:00	NOK	**PMI (Jul)**			**46.3**
01-Aug *	NA *	RUB	**CBR Rates Decision**	**5.25%**		**5.25%**
01-Aug	07:30	SEK	**PMI (Jul)**			**48.4**
01-Aug	13:15	USD	ADP Employment Change (Jul)			176K
01-Aug	15:00	USD	**ISM Manufacturing (Jul)**			**49.7**
01-Aug	15:00	USD	Construction Spending (Jun)			0.9%M
01-Aug	19:15	USD	**FOMC Rate Decision**	**0.25%**	**0.25%**	**0.25%**
01-Aug	22:00	USD	Total Vehicle Sales (Jul)			14.05M
02-Aug	02:30	AUD	Trade Balance (Jun)			-285M
02-Aug	02:30	AUD	Retail Sales (Jun)			0.5%M
02-Aug	08:15	CHF	Retail Sales (Jun)			6.2%Y
02-Aug	08:30	CHF	**PMI (Jul)**			**48.1**
02-Aug	12:00	CZK	**CNB Rates Decision**	**0.50%**		**0.50%**
02-Aug	10:00	EUR	PPI (Jun)			2.3%Y
02-Aug	12:45	EUR	**ECB Rates Decision**			**0.75%**
02-Aug	13:30	EUR	**Draghi Press Conference**			
02-Aug	09:30	GBP	PMI Construction (Jul)			48.2
02-Aug	12:00	GBP	**BoE Asset Purchase Target**	**375B**	**375B**	**375B**
02-Aug	12:00	GBP	**BoE Rates Decision**	**0.50%**	**0.50%**	**0.50%**
02-Aug	00:50	JPY	Monetary Base (Jul)			
02-Aug	09:00	NOK	Unemployment Rate (Jul)			2.40%
02-Aug	NA *	RON	**BNRO Rates Decision**	**5.25%**		**5.25%**
02-Aug	13:30	USD	Initial Jobless Claims (Week of Jul 28)			
02-Aug	15:00	USD	Factory Orders (Jun)			0.7%M
03-Aug	02:00	CNY	Non-manufacturing PMI (Jul)			56.7
03-Aug	08:58	EUR	PMI Services (Jul)			
03-Aug	10:00	EUR	Retail Sales (Jun)			0.6%M
03-Aug	09:28	GBP	**PMI Services (Jul)**			**51.3**
03-Aug	07:30	SEK	PMI Services (Jul)			
03-Aug	08:00	TRY	CPI (Jul)			8.87%Y
03-Aug	13:30	USD	**Nonfarm Payrolls (Jul)**			**80K**
03-Aug	13:30	USD	**Unemployment Rate (Jul)**			**8.20%**
03-Aug	13:30	USD	**Avg Hourly Earning (Jul)**			**2.0%Y**
03-Aug	15:00	USD	ISM Non-Manufacturing (Jul)			52.1
0:00	05:30	AUD	**RBA Rates Decision**	**3.50%**	**3.50%**	**3.50%**
09-Aug	NA *	JPY	**BoJ Meeting**	**0.10%**	**0.10%**	**0.10%**
29-Aug	13:00	NOK	**Norgesbank Rates Decision**	**1.50%**	**1.50%**	**1.50%**
05-Sep	14:00	CAD	**BoC Rates Decision**	**1.00%**	**1.00%**	**1.00%**
06-Sep	08:30	SEK	**Riksbank Rates Decision**	**1.50%**	**1.25%**	**1.50%**
12-Sep	NA *	EUR	**German Constitutional Court ESM Ruling**			
12-Sep	NA *	EUR	**Netherlands General Election**			
13-Sep	08:30	CHF	**SNB Rates Decision**	**0.00%**	**0.00%**	**0.00%**
13-Sep	NA *	INT	**G-20 Deputy Ministers Mtg (through 14-Sep)**			
14-Sep	16:00	EUR	**EcoFin Meeting**			
15-Sep	08:00	EUR	**Eurogroup meeting**			
12-Oct	NA *	INT	**IMF Annual Meeting (through 14 - Oct)**			
18-Oct	NA *	EUR	**EU Summit (through 19-Oct)**			
06-Nov	NA *	USD	**US Presidential, House, and Senate Elections**			

* Denotes timing approximate or not confirmed / All times and dates are GMT / Source: Morgan Stanley Research, Bloomberg

Cross-Currency Carry and Vol Opportunities

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Carry – What Moved the Most Since Last Week?

Mixed moves with no clear bias. PHP's 80bps drop was the biggest drop, but it was almost matched by COP's 70bps gain.

Key New Valuation Thresholds Reached:

EURNZD and COP became high on a vol-adjusted basis but neither is historically high outright.

Skew for **EURJPY and USDINR** became historically flat, while skew for **TWD and CLP** became historically extreme for USD calls.

Where Is the Value in Carry?

EUR carry has dropped to extreme – and in some cases record – lows vs a variety of currencies. In particular, EUR 3M rates are now at par with JPY and on a vol-adjusted basis, carry is also at record lows. EUR carry is also near record lows against several other G10 currencies – USD, CAD, NOK and SEK – though net carry for EM crosses is only near record lows for PLN. While the lack of carry does not, in itself, create a trading opportunity, we think it will abet the adoption of the EUR as a global funding currency, which would add to EUR weakness. While EUR cross vols are largely cheap outright, they are not yet low vs where vol is realizing.

The general declines in rates globally are making pure carry opportunities very scarce. So even funding in EUR, higher carry currencies like BRL and TRY does not offer very attractive yields from a historical perspective. One exception is CLP, which is offering historically high carry both outright and on a vol-adjusted basis. The skew for USD calls is also historically high, suggesting that risk reversals are attractive. We are constructive on CLP, but the currency has appreciated 6% since the end of May, so we will look for a pullback in the next few weeks to position.

USDPLN carry is also attractive outright and on a vol-adjusted basis and, here too, skew is extreme. Skew has risen along with the increase in carry. So PLN is also a candidate for a risk reversal. For instance, a 6M 25-delta risk reversal has a short strike of PLN3.8203, which is 12% from spot and has not traded since 2008 and a long PLN3.23 strike, which is 5% from spot and traded last month. However, unlike CLP we have a strong bearish bias on PLN, so while the risk reversal is tempting we will stay on the sidelines.

Vol – What Moved the Most Since Last Week?

Mixed moves but with a strong downward bias, NOK and EUR crosses saw the only gains. GBPJPY was the biggest mover declining 220bps.

Key New Valuation Thresholds Reached:

With vols broadly lower several currencies became cheap outright - **GBPJPY, MYR, CLP, and ILS.** There was also a sharp increase in the number of currencies cheap vs realized: **MYR, BRL, BRLJPY, EURHUF, EURPLN EURRUB and RUB**. Notably, **MYR and BRLJPY** are cheap on both metrics.

EURZAR, contrarily, became expensive vs realized.

The drop in vols steepened curves, particularly in EMEA, and quite a few became extreme in the front end: **EURJPY, GBPJPY, CHFJPY, AUDCAD, AUDJPY, CLP, EURPLN, EURTRY, EURZAR, ILS, PLN, TRY and ZAR**.

Where Is the Value in Volatility?

With vols continuing to drop toward 5-year-plus lows across most G10 and many EM currencies, it would imply that opportunities to buy vol should be emerging. But we remain stymied by the decline in implied vols shadowing a more dramatic downtrend in realized vols so that implied vs realized has yet to move into the cheap zone for most currencies. As a consequence, the one trade where we went long vols – USDCAD – has not yet performed very well. USDCAD 3M implied vol has dropped for the second straight week since we went long and vols are roughly 100bps below where we entered.

BRLJPY and MYR have now joined CNY as being cheap on both metrics. While, in principle, this makes the vols cheap, we are reluctant to get long in the face of the broad vol downtrend. But these are currencies we will be focusing on as buys when we see signs that the decline is basing.

Carry and volatility heat map is on the following page.

Volatility and Carry Global Heatmap

		Implied Vol Metric									RR Metric			Carry Metric							
		3M Im Vol	1W Chg	5-Year Perc.	Imp vs Real	5-Year Perc.	1Y/3M Imp Rat	5-Yer Perc.	5Y/1Y Imp Rat	5-Yer Perc.	3M 25d RR	RR/ Imp	Ratio Perc		3M Carry	1W Chg	5-Year Perc.	Vol-Adj. Carry	5-Year Perc.	1Y/3M Cry Rat	1y Carry/ CallSprd
G10 USD	USDCAD	7.0	-0.6	0%	0.9	21%	1.27	100%	1.06	86%	1.4	20%	84%	USDCAD	0.8	0.0	80%	0.12	100%	0.97	1.85
	USDCHF	9.9	-0.9	9%	1.2	70%	1.21	100%	0.98	94%	0.7	7%	55%	USDCHF	0.9	0.0	80%	0.09	89%	1.32	0.99
	USDJPY	7.6	-0.7	0%	1.0	23%	1.29	97%	1.27	88%	0.1	2%	6%	USDJPY	0.4	0.0	46%	0.05	67%	1.41	2.03
	USDNOK	10.6	-0.9	3%	1.1	68%	1.21	100%	0.98	92%	1.1	10%	48%	USDNOK	1.3	0.1	20%	0.13	61%	0.86	3.50
	USDSEK	10.7	-1.0	4%	1.0	41%	1.23	100%	0.99	93%	0.9	8%	45%	USDSEK	1.4	0.1	59%	0.13	78%	0.76	3.12
	GBPUSD	7.5	-0.6	3%	1.1	54%	1.27	100%	1.15	89%	-1.0	13%	48%	GBPUSD	0.1	0.0	15%	0.01	21%	0.35	2.34
	NZDUSD	10.7	-0.6	0%	0.9	32%	1.24	100%	0.99	98%	-2.2	21%	63%	NZDUSD	2.4	0.0	27%	0.23	79%	0.96	1.09
	AUDUSD	10.1	-0.6	1%	0.9	39%	1.25	100%	0.97	93%	-2.5	24%	72%	AUDUSD	3.3	0.0	31%	0.32	68%	0.89	2.21
	EURUSD	9.8	-0.9	12%	1.2	57%	1.20	100%	0.98	91%	-1.2	12%	51%	EURUSD	0.5	0.0	95%	0.05	95%	1.26	2.47
G10 EUR	EURAUD	8.2	-0.7	0%	1.1	49%	1.24	99%	0.98	87%	0.9	11%	61%	EURAUD	3.8	0.0	58%	0.47	100%	0.93	2.31
	EURCAD	7.8	-0.7	0%	1.3	80%	1.22	100%	1.00	76%	0.1	1%	20%	EURCAD	1.3	0.0	99%	0.17	100%	1.06	2.30
	EURCHF	3.7	0.4	4%	8.5	100%	1.81	98%	1.44	94%	-2.6	70%	99%	EURCHF	0.4	0.0	23%	0.11	62%	1.39	3.23
	EURGBP	7.2	-0.3	5%	1.2	61%	1.24	100%	1.19	93%	-0.7	10%	66%	EURGBP	0.5	0.0	73%	0.08	76%	1.11	2.44
	EURJPY	12.3	-1.4	18%	1.0	30%	1.17	92%	1.18	61%	-2.0	16%	8%	EURJPY	0.0	0.0	100%	0.00	100%	0.10	2.60
	EURNOK	6.1	0.2	7%	1.3	87%	1.19	99%	1.05	89%	0.6	9%	30%	EURNOK	1.6	0.0	85%	0.29	96%	0.96	2.18
	EURNZD	8.7	-0.7	0%	1.1	62%	1.23	99%	0.98	94%	0.9	10%	51%	EURNZD	3.0	0.0	72%	0.34	89%	1.00	
	EURSEK	6.5	0.4	25%	1.1	36%	1.15	96%	1.11	99%	0.5	8%	6%	EURSEK	1.8	0.1	96%	0.28	99%	0.88	2.16
G10 Crosses	GBPAUD	8.2	-0.3	0%	1.1	60%	1.24	100%	1.01	89%	1.9	23%	97%	GBPAUD	3.3	0.0	45%	0.40	95%	0.90	2.09
	GBPCAD	6.7	-0.5	0%	1.3	86%	1.26	100%	0.99	47%	-0.5	7%	74%	GBPCAD	0.7	0.0	80%	0.11	84%	1.03	
	GBPCHF	7.6	-0.3	4%	1.3	82%	1.33	100%	1.16	87%	-1.6	20%	96%	GBPCHF	0.9	0.0	58%	0.12	75%	1.23	2.41
	GBPJPY	10.8	-2.2	4%	1.0	34%	1.20	91%	1.20	62%	-0.8	7%	1%	GBPJPY	0.5	0.0	20%	0.05	41%	1.22	
	CHFJPY	12.7	-1.4	48%	1.0	41%	1.16	91%	1.03	23%	-0.2	1%	0%	CHFJPY	0.5	0.0	95%	0.04	98%	1.24	
	AUDCAD	6.7	-0.4	0%	1.0	30%	1.28	100%	1.02	96%	-0.9	13%	54%	AUDCAD	2.6	0.0	14%	0.38	77%	0.83	2.02
	AUDCHF	8.2	-0.6	0%	1.1	65%	1.42	100%	1.09	99%	-1.8	22%	79%	AUDCHF	4.1	0.0	32%	0.50	100%	0.97	1.98
	AUDJPY	12.7	-1.0	5%	0.9	29%	1.17	86%	1.20	65%	-3.0	24%	29%	AUDJPY	3.7	-0.1	19%	0.29	54%	0.94	2.55
	AUDNZD	5.3	-0.3	0%	1.1	62%	1.31	100%	1.14	99%	-0.5	9%	98%	AUDNZD	0.8	-0.1	43%	0.15	51%	0.71	2.06
	NOKSEK	6.2	0.6	13%	1.1	50%	1.05	61%	1.11	68%	0.4	6%	71%	NOKSEK	2.9	0.0	39%	0.22	73%	1.01	0.05
AXJ BLOCK	USDCNY	1.5	-0.2	7%	0.9	0%	1.64	52%	2.86	91%	0.4	24%	56%	USDCNY	1.9	-0.3	84%	1.30	98%	0.82	2.61
	USDHKD	0.7	0.0	26%	2.5	83%	1.59	82%	5.26	49%	-0.7	100%	76%	USDHKD	0.1	0.0	9%	0.18	10%	0.86	7.01
	USDIDR	10.0	0.0	49%	1.4	57%	1.35	74%	1.32	32%	5.5	55%	92%	USDIDR	4.2	0.0	45%	0.42	48%	1.19	1.80
	USDINR	12.0	-0.2	75%	0.9	7%	1.02	20%	1.18	58%	1.7	14%	10%	USDINR	6.3	-0.3	68%	0.53	56%	0.89	2.25
	USDKRW	9.1	-0.1	13%	1.2	65%	1.30	100%	1.26	90%	2.7	29%	47%	USDKRW	2.1	-0.1	73%	0.23	92%	0.68	1.77
	USDMYR	6.8	-0.3	14%	0.9	9%	1.21	95%	1.26	70%	1.9	28%	83%	USDMYR	2.0	0.0	80%	0.29	94%	0.75	1.78
	USDPHP	6.5	-0.4	3%	1.0	6%	1.22	85%	1.29	61%	1.7	26%	63%	USDPHP	0.7	-0.8	23%	0.10	25%	1.19	1.71
	USDSGD	6.2	-0.3	23%	1.1	17%	1.15	84%	1.41	93%	1.2	19%	68%	USDSGD	0.1	0.1	66%	0.02	69%	2.56	1.64
	USDTHB	7.0	0.0	34%	1.3	41%	1.14	50%	1.25	47%	0.8	11%	22%	USDTHB							2.04
	USDTWD	3.9	-0.4	3%	1.0	17%	1.35	98%	1.39	77%	0.9	23%	89%	USDTWD	0.7	0.0	12%	0.18	23%	1.66	1.54
LATAM BLOCK	USDARS	40.0	0.0	92%	25.3	98%	1.25	11%	1.00	5%	15.0	38%	16%	USDARS	37.5	-0.7	87%	0.94	26%	0.93	3.23
	USDCLP	10.8	-1.8	14%	1.1	26%	1.13	93%	1.16	80%	3.5	32%	90%	USDCLP	4.9	0.3	91%	0.46	99%	0.82	2.08
	USDCOP	12.5	-1.5	20%	1.5	66%	1.08	61%	1.14	57%	3.8	30%	73%	USDCOP	6.1	0.7	77%	0.49	91%	0.71	2.05
	USDMXN	12.7	-0.9	47%	1.0	20%	1.10	64%	1.25	79%	3.5	27%	37%	USDMXN	3.5	0.0	39%	0.28	36%	0.92	1.90
	USDBRL	12.3	-1.4	16%	0.9	10%	1.11	66%	1.31	77%	4.2	34%	57%	USDBRL	5.9	-0.1	10%	0.48	52%	0.77	1.93
	EURBRL	11.1	-1.7	10%	0.8	20%	1.15	61%	1.13	28%	4.4	40%	68%	EURBRL	6.4	-0.1	17%	0.58	61%	0.80	2.07
	EURMXN	11.9	-0.6	37%	1.3	74%	1.09	64%	1.15	76%	2.8	23%	26%	EURMXN	4.0	0.0	63%	0.34	85%	0.96	2.00
	BRLJPY	14.1	-1.6	4%	0.9	13%	1.16	80%	1.33	93%	-5.0	35%	67%	BRLJPY	5.9	-0.1	2%	0.42	64%	0.82	0.56
	MXNJPY	14.7	-1.2	19%	0.9	16%	1.11	75%	1.19	83%	-4.4	30%	75%	MXNJPY	3.8	-0.1	32%	0.26	73%	0.97	0.46
EMEA BLOCK	EURCZK	7.5	-1.0	46%	1.0	33%	1.05	84%	1.00	68%	2.1	28%	82%	EURCZK	0.6	-0.1	75%	0.08	82%	0.67	1.73
	EURHUF	10.2	-0.8	32%	0.9	13%	1.10	80%	0.98	53%	2.7	26%	44%	EURHUF	5.9	0.2	84%	0.58	100%	0.82	2.16
	EURILS	7.7	-0.6	1%	1.1	56%	1.23	99%	1.08	97%	0.0	0%	0%	EURILS	1.8	-0.1	96%	0.23	99%	0.83	2.23
	EURPLN	8.9	-0.6	27%	0.9	15%	1.15	93%	1.00	68%	2.4	27%	65%	EURPLN	4.9	0.2	100%	0.55	100%	0.88	2.10
	EURRUB	8.6	-2.0	22%	0.8	15%	1.14	40%	1.40	58%	1.7	20%	45%	EURRUB	6.7	-0.1	75%	0.78	85%	1.01	2.67
	EURTRY	7.8	-0.6	0%	1.2	65%	1.33	98%	1.35	43%	1.6	21%	25%	EURTRY	7.0	-0.2	43%	0.90	93%	0.97	2.52
	EURZAR	12.8	-0.3	20%	1.3	87%	1.12	89%	1.15	54%	2.4	19%	21%	EURZAR	5.8	0.0	32%	0.45	78%	0.98	2.16
	USDHUF	17.2	-0.8	41%	1.0	36%	1.06	79%	0.99	65%	3.5	20%	52%	USDHUF	5.3	0.0	70%	0.31	68%	0.80	2.01
	USDILS	7.5	-0.1	14%	1.4	93%	1.19	96%	1.05	83%	2.0	27%	98%	USDILS	1.3	-0.1	73%	0.17	86%	0.68	1.85
	USDPLN	16.0	-0.7	35%	0.9	24%	1.08	86%	0.99	64%	3.7	23%	68%	USDPLN	4.4	0.2	99%	0.27	92%	0.84	1.93
	USDRUB	10.7	-2.0	41%	0.8	3%	1.11	31%	1.35	53%	3.2	30%	55%	USDRUB	6.5	-0.1	72%	0.60	82%	0.97	2.21
	USDTRY	9.2	-0.6	0%	1.1	50%	1.30	100%	1.28	30%	3.2	35%	95%	USDTRY	6.7	-0.2	39%	0.73	76%	0.93	2.17
	USDZAR	15.5	-0.4	30%	1.1	54%	1.10	88%	1.11	49%	4.0	26%	65%	USDZAR	5.3	0.0	3%	0.34	31%	0.95	1.99

Volatility figures shaded in blue are the bottom 15th percentile and those in red are in the top 15th percentile. Carry figures are only highlighted for high vol in red. Bolded shading implies that figures are in the tenth percentile. The percentiles for outright numbers are relative to all monitored currency pairs while the percentiles for percent values are determined by that specific currency pair's two-year history
The 1y carry/call spread ratio represents net carry earnings relative to the cost of buying an ATMF option and selling an ATMS option.
For this column, currencies are highlighted if the ratio is above 2 and overall net carry is above 150 bps.

7/18/2012

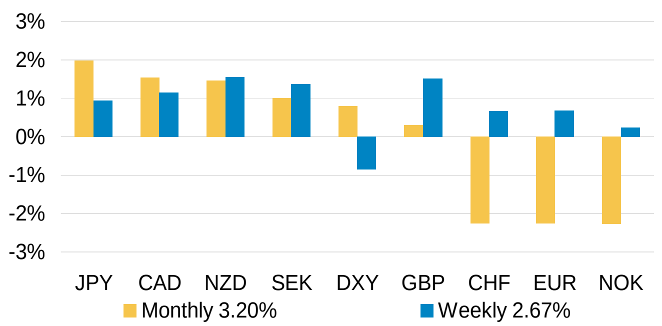
Source: Morgan Stanley Research

Note: Access is available to the carry metrics on an interactive basis at:https://secure.ms.com/eqr/quotient/webapp/servlet/IRSHomeServlet
Contact your Morgan Stanley sales representative if you do not have access.

FX Tactical Indicators

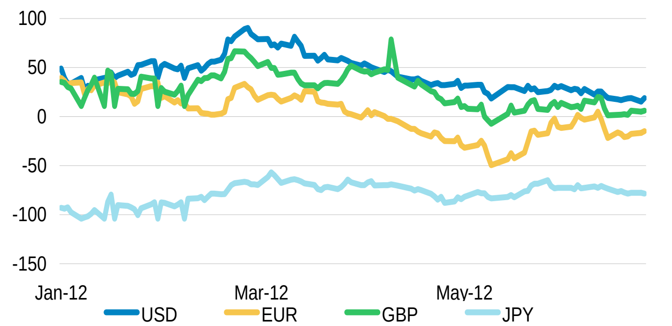
Dara Blume

Exhibit 1
Historical Currency Performance



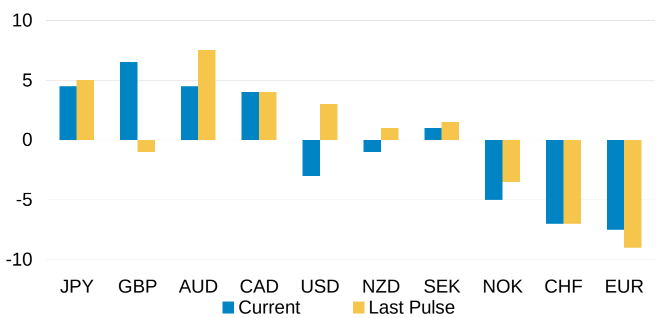
Source: Morgan Stanley Research, Bloomberg

Exhibit 2
Risk-Adjusted Five-Year Yields



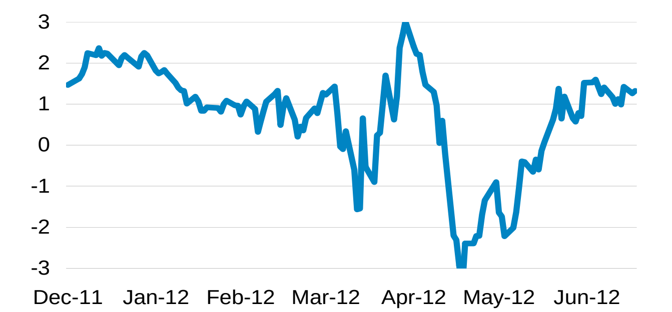
Source: Morgan Stanley Research

Exhibit 3
Relative Momentum Indicator



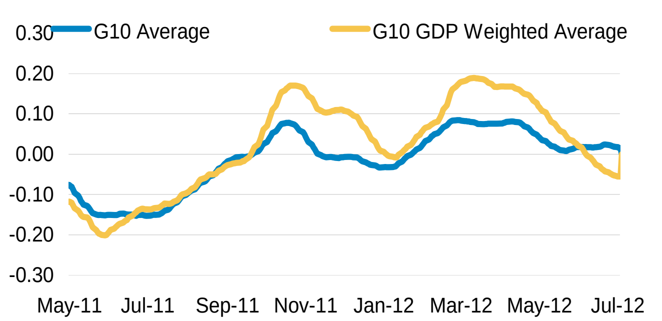
Source: Morgan Stanley Research

Exhibit 4
MS GRDI – Standardized



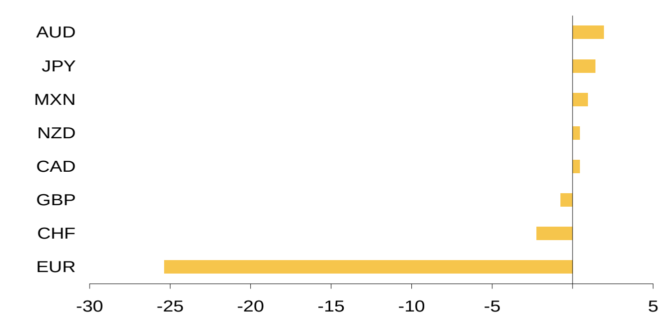
Global Risk Demand Index – US Pat. No. 7,617,143
Source: Morgan Stanley Research

Exhibit 5
G10 Surprise Index



Note: Morgan Stanley Research

Exhibit 6
IMM Positions Summary ($bn)



Note: Aggregate USD positioning in nominal terms, see following page for details
Source: Bloomberg, Morgan Stanley Research

Reading FX Tactical Trade Performance and Indicators

The **FX Tactical Trade Recommendations** page presents the portfolio of tactical trade ideas of the FX Strategy team and the performance of this portfolio over time.

- **FX Tactical Trade Portfolio** *(Note: The portfolios represent hypothetical not actual investments.)*
  - ✓On 10 June, 2010, we implemented changes to our portfolio to make it more robust and to better reflect our confidence levels and relative risk. A detailed explanation of this change can be found in "Portfolio Methodology Update" (10 June 2010).
  - ✓In summary, the trades and the weightings are primarily reviewed weekly on Thursdays and published in the *Pulse*. However, if we think there has been a material change to the risk-reward, we will make intraweek changes. We monitor trades daily. We will continue to publish the portfolio as a list of trades where our strongest conviction ideas will be given the largest weightings. We will, however, also adjust the weights of trades in order to manage our risk exposure.
  - ✓A table showing the trade, trade weight, trade entry date, risk allocation and levels for (average) entry, current, stop and target will be shown in the Tactical Trade Recommendations section of the *FX Pulse*.
  - ✓If we increase the weighting allocated to a trade, the entry level published in the table will be changed to reflect a proportionally weighted rate of the initial entry level and the entry level on the date the weight was increased.
  - ✓The expected portfolio volatility (shown in the bottom right of Exhibit 2) is calculated using the covariance method for Value at Risk (VaR). The 1 Month option implied volatility for each cross and the 3 month realized correlations of daily spot returns are used to construct the covariance matrix for the portfolio.
- **Performance Statistics**
  - ✓We rebalance our portfolio daily at the NY close to keep the weight of each trade consistent with the published weight.
  - ✓We will primarily enter and exit trades using the bid or offer rate of the WMR fixing. If we make an intraday change to our portfolio, we will cite the closest Bloomberg half hourly fix in our published note and enter/exit at this rate.
  - ✓Stops or targets will be triggered if the stated level is met at the WMR fix.
  - ✓Returns shown include the cost of carry using the 1W interbank deposit rate if this is quoted liquidly but do not include any other expenses, slippage or fees and no interest on cash holdings are included. Reported returns are not levered.
  - ✓We have re-estimated our returns from 22 June 2006 to 10 June 2010, when we re-launched the portfolio, to take into account our more robust calculation technique.
  - ✓We provide a monthly breakdown of our historical portfolio performance back to May 2004 in the Discretionary Tradebook section of the Pulse.

The FX Tactical Indicators table highlights the most recently updated indicators we, as a research team, use as inputs to generate both longer and more tactical forecasts.

- **Historical Currency Performance:** Price changes in currency over the past week and past month.
- **Risk Adjusted Yields:** Nominal five year yields adjusted for five year CDS (weighted average for EUR).
- **Relative Momentum Indicator:** Measures the momentum of a currency relative to all other currencies; not indicative of historical performance.
- **MS GRDI*:** An index to assess risk sentiment. It looks at ten different asset classes to gauge risk demand. The GRDI index seen in the graph is a standardized reading of the index based on the 365-day rolling average.
- **G10 Surprise Index:** Measures the performance of actual economic data in G10 countries relative to expectations. G10 Average Index is a simple index; G10 GDP weighted average is based on GDP weights.
- **IMM Commitment of Traders Report**. The "Aggregate USD Index" is the cumulative aggregate positioning of currencies we track on the IMM against the USD. We combine IMM positioning on the AUD, CAD, CHF, EUR, GBP, JPY, and MXN to calculate an aggregate USD index to measure overall net positioning.

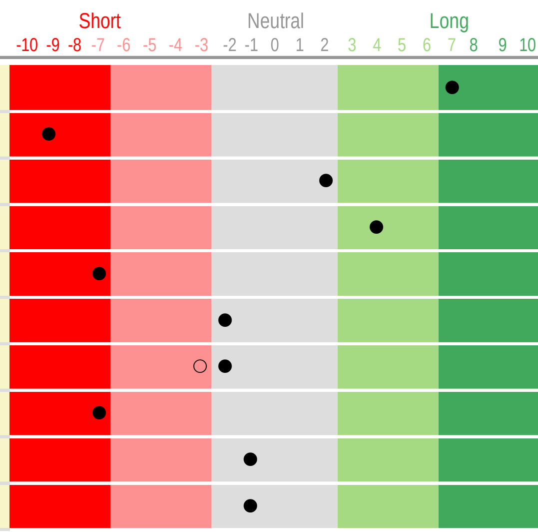
* US Pat. No. 7,617,143.

Morgan Stanley FX Positioning Tracker

Dara Blume

Overall Score

	This Week ●	Last Week ○
USD	7	7
EUR	-9	-9
JPY	2	2
GBP	4	4
CHF	-7	-7
CAD	-2	-2
AUD	-2	-3
NZD	-7	-7
NOK	-1	-1
SEK	-1	-1



Component Scores

MS Flow	IMM	Toshin	Beta	Senti-ment	
7	9		9	3	USD
-10	-9		-9	-7	EUR
3	-5	4	7	2	JPY
8	0		8	1	GBP
-6	-8			-7	CHF
-8	-5			7	CAD
-2	-8			3	AUD
-8	-5				NZD
-1					NOK
-1					SEK

- Since Monday (July 16), positioning in the G10 currencies remains relatively unchanged. We calculate the largest long position to be in USD. The largest short positions are in EUR.
- AUD positioning moved to neutral from short intra-week as sentiment towards the currency improved markedly.
- Positioning in the majors remains in the extremes, with the market heavily long USD and short EUR, we calculate.
- We will provide a full updated report and refresh positioning scores for all of our underlying sub-indicators next Monday.

Methodology

MS Flow - Our internal flow data track all spot and forward trades transacted by Morgan Stanley FX globally.

IMM **-** We use the US Commodity Futures Trading Commission's IMM report to track positioning of non-commercial traders.

Toshin - The Toshin accounts are Japanese foreign currency investment trusts that seek yield abroad. They typically cater to retail investors and offer a higher return by investing in foreign assets on a currency un-hedged basis.

TFX - The Tokyo Financial Exchange (TFX) measures Japanese currency trading on margin accounts, and comprises an estimated 10% of the retail margin market.

Beta - As an alternative proxy for positioning, our Beta-Tracker measures one-month rolling betas of currency managers' and global macro hedge funds' daily returns on major currency indices.

Sentiment - The Daily Sentiment Index gathers opinions on all active US futures, eurozone interest rates, and eurozone equities futures markets.

Macro Forecast Corner

Inflation Target Monitor and Next Rate Move

	Inflation target	Latest month	12M MS fcast	Next rate decision	Current rate	Market expects (bp)	MS expects (bp)	Risks to our call
US	2.0% PCE Price Index	1.7%	1.8%*	01 Aug	0.15	-3	0	-
Euro Area	< 2% HICP (u)	2.4%	1.7%	02 Aug	0.75	-1	0	The ECB cuts a further 25bp
Japan	0-2% CPI (u)	-0.1%	-0.2%	09 Aug	0.05	0	0	-
UK	2% CPI	2.4%	2.1%	02 Aug	0.50	-3	0	Some risk of a rate cut
Canada	1-3% on CPI	1.2%	1.7%	05 Sep	1.00	-2	0	May ease if European risks spill over to global economy
Switzerland	<2% CPI (u)	-1.1%	-	13 Sep	0.00	-4	0	-
Sweden	2.0% CPI	1.0%	1.9%	05 Sep	1.50	-21	0	Downside risk
Norway	2.5% CPI	0.5%	-	29 Aug	1.50	-13	0	Balanced risks
Australia	2-3% over the cycle	1.6%	2.7%	07 Aug	3.50	-11	0	-
New Zealand	1-3% CPI	1.0%	-	26 Jul	2.50	-2	0	No near-term risk of a hike

(u) = unofficial
Notes: Inflation numbers in red indicate values above target; MS expectations in red (green) indicate our rate forecasts are above (below) market expectations. Japan policy rate is an interval of 0.00-0.10%., all forecasts as of July 11, 2012
Source: National central banks, Morgan Stanley Research

Global Monetary Policy Rate Forecasts

	Current	3Q12	4Q12	1Q13	2Q13	3Q13	4Q13	Expected unconventional measures
US	0.15	0.15	0.15	0.15	0.15	0.15	0.15	-
Euro Area	0.75	0.75	0.75	0.75	0.75	0.75	1.00	-
Japan	0.05	0.05	0.05	0.05	0.05	0.05	0.05	-
UK	0.50	0.50	0.50	0.50	0.75	1.00	1.25	-
Canada	1.00	1.00	1.00	1.25	1.50	1.75	2.00	-
Switzerland	0.00	0.00	0.00	0.00	0.25	0.50	0.50	-
Sweden	1.50	1.50	1.50	1.50	1.50	1.75	2.00	-
Norway	1.50	1.50	1.50	1.75	1.75	2.00	2.00	-
Australia	3.50	3.25	3.00	2.50	2.25	2.25	2.25	-
New Zealand	2.50	2.50	2.50	2.50	2.75	3.00	3.25	-

Source: National central banks, Morgan Stanley Research
Japan policy rate is an interval of 0.00-0.10%; all forecasts as of July 11, 2012

Global GDP and Inflation Forecasts

	Real GDP (%)					CPI inflation (%)				
	2009	2010	2011E	2012E	2013E	2009	2010	2011E	2012E	2013E
Global Economy	**-0.8**	**5.2**	**3.9**	**3.5**	**3.8**	**2.0**	**3.4**	**4.4**	**3.4**	**3.1**
G10	**-3.8**	**2.8**	**1.3**	**1.3**	**1.4**	**0.0**	**1.4**	**2.6**	**1.9**	**1.4**
US	-3.5	3.0	1.7	2.1	1.6	-0.3	1.6	3.1	1.9	1.5
Euro Area	-4.1	1.8	1.5	-0.3	0.9	0.3	1.6	2.7	2.3	1.6
Germany	-5.1	3.7	3.0	0.5	1.6	0.3	1.1	2.3	2.1	1.5
France	-2.6	1.6	1.7	0.5	1.2	0.1	1.5	2.1	1.8	1.5
Italy	-5.2	1.8	0.5	-2.0	0.0	0.8	1.5	2.8	2.7	2.0
Spain	-3.7	-0.1	0.7	-2.0	-1.0	-0.3	1.8	3.2	2.6	2.1
Japan	-5.5	4.4	-0.7	2.3	1.0	-1.3	-1.0	-0.3	0.2	-0.3
UK	-4.4	2.1	0.7	0.5	1.8	2.2	3.3	4.5	2.6	2.1
Canada	-2.8	3.2	2.5	2.2	2.2	0.3	1.8	2.9	2.4	2.1
Sweden	-5.1	6.1	4.0	0.5	2.2	-0.5	1.2	2.9	1.2	2.0
Australia	1.4	2.5	2.1	4.0	3.5	1.8	2.8	3.4	1.7	2.4

Source: Morgan Stanley Research; all forecasts as of July 11, 2012

Morgan Stanley Global Currency Forecasts

- We updated our G10 forecasts on July 3, 2012 and our AXJ forecasts on July 5, 2012.
- See *FX Pulse: Bubbles and the EUR*, July 5, 2012.

		2012		2013				2014	2Q13 % change to:	
	Current	**3Q**	**4Q**	**1Q**	**2Q**	**3Q**	**4Q**	**1Q**	**Consensus**	**Forward**
EUR/USD	1.23	1.24	1.19	1.15	1.19	1.22	1.24	1.26	-4.8	-3.7
USD/JPY	79	77	78	80	83	86	89	91	-6.0	-0.3
GBP/USD	1.57	1.53	1.51	1.46	1.47	1.51	1.53	1.56	-4.1	-3.8
USD/CHF	0.98	0.89	0.92	1.00	0.99	1.02	1.03	1.02	-6.6	-4.4
USD/SEK	6.93	7.26	7.73	8.17	7.73	7.46	7.26	7.06	9.8	10.5
USD/NOK	6.09	6.13	6.43	6.70	6.43	6.23	6.09	5.95	8.6	4.4
USD/CAD	1.01	1.04	1.06	1.10	1.08	1.07	1.06	1.05	6.0	4.2
AUD/USD	1.04	1.00	0.95	0.91	0.93	0.94	0.95	0.96	-6.9	-6.2
NZD/USD	0.80	0.79	0.75	0.70	0.72	0.74	0.75	0.77	-6.3	-4.5
EUR/JPY	97	95	93	92	99	105	110	115	-10.8	-4.0
EUR/GBP	0.78	0.81	0.79	0.79	0.81	0.81	0.81	0.81	0.0	0.1
EUR/CHF	1.20	1.10	1.10	1.15	1.18	1.24	1.28	1.28	-10.6	-7.9
EUR/SEK	8.52	9.00	9.20	9.40	9.20	9.10	9.00	8.90	5.7	6.4
EUR/NOK	7.49	7.60	7.65	7.70	7.65	7.60	7.55	7.50	3.4	0.5
USD/CNY	6.37	6.30	6.30	6.30	6.30	6.27	6.24	-	1.4	-1.7
USD/HKD	7.76	7.80	7.80	7.80	7.80	7.80	7.80	-	0.3	0.7
USD/IDR	9,479	10,000	9,800	9,750	9,700	9,650	9,600	-	6.5	-1.0
USD/INR	55.3	58.0	56.0	55.0	54.0	53.0	52.0	-	6.0	-4.0
USD/KRW	1,139	1,190	1,150	1,133	1,115	1,098	1,080	-	4.5	-0.4
USD/MYR	3.15	3.20	3.10	3.08	3.05	3.03	3.00	-	1.6	-3.1
USD/PHP	41.75	43.00	40.75	40.44	40.13	39.81	39.50	-	-1.8	-3.2
USD/SGD	1.26	1.30	1.25	1.24	1.22	1.21	1.19	-	2.5	-0.2
USD/TWD	29.97	30.25	29.75	29.44	29.13	28.81	28.50	-	2.4	0.4
USD/THB	31.70	31.80	31.30	30.88	30.45	30.03	29.60	-	2.6	-2.8
USD/BRL	2.02	1.95	1.85	1.84	1.83	1.81	1.80	-	-5.1	-12.6
USD/MXN	13.12	12.90	12.80	12.70	12.60	12.50	12.40	-	-0.9	-5.4
USD/ARS	4.55	4.79	4.95	5.14	5.33	5.51	5.70	-	-6.1	-18.3
USD/VEF	4.29	4.30	4.30	4.30	4.30	4.30	4.30	-	-33.8	0.1
USD/CLP	488	490	490	486	483	479	475	-	0.0	-3.2
USD/COP	1,776	1,785	1,800	1,800	1,800	1,800	1,800	-	2.9	-2.7
USD/PEN	2.62	2.80	2.80	2.78	2.75	2.73	2.70	-	7.7	5.0
USD/ZAR	8.14	7.93	7.78	7.70	7.90	7.95	8.00	-	-1.5	-8.7
USD/TRY	1.80	1.80	1.80	1.77	1.77	1.75	1.75	-	2.9	-5.7
USD/ILS	4.03	3.75	3.70	3.67	3.65	3.62	3.60	-	-1.3	-8.9
USD/RUB	32.06	29.87	29.48	29.51	29.39	29.12	28.88	-	-7.9	-13.2
RUB basket	35.37	33.10	32.00	31.50	31.90	32.00	32.00	-	-10.1	-14.8
EUR/PLN	4.16	4.28	4.20	4.15	4.10	4.05	3.95	-	2.4	-2.9
EUR/CZK	25.3	25.6	25.2	24.8	24.6	24.4	24.1	-	1.5	-0.7
EUR/HUF	284	295	290	287	285	280	275	-	1.8	-2.4
EUR/RON	4.56	4.40	4.30	4.25	4.20	4.15	4.10	-	-2.1	-9.9
MS Dollar Index	78.7	78.8	80.9	83.8	83.0	82.4	82.2	81.7	2.4	N/A
MS AXJ Index	108.8	106.0	108.5	108.9	110.5	111.6	112.8		-3.0	N/A

G10 Forecasts were updated July 3, 2012. Forecast changes in bold
AXJ Forecasts updated July 5, 2012.
MS Index forecasts based on geometric indices

Source: Morgan Stanley Research

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