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WORLD CURRENCY MARKETS

A Fortuitous Confluence of Events

December 17, 2014



Monetary policies in developed and emerging markets are diverging as the US has ended its long running economic stimulus program and may soon begin raising interest rates. In contrast, Europe and Japan are initiating or deepening monetary easing in moves that are substantially similar to what the US embraced several years ago. The net effect of both these actions will be to inject volatility into what has been for years a stable currency spectrum, one yielding few profit making opportunities.

All that is about to change.

To discuss the possible impact of this global divergence in monetary policies on investors' portfolios, we have asked several of our leading currency experts from teams across our organization, as well as from our global Fixed Income subsidiary Fischer Francis Trees & Watts, Inc. (FFTW), to examine potential outcomes both now and over the years ahead. Leading this discussion is an examination of where divergence can add alpha in currency trading strategies, followed by views on the prospect of renewed currency wars, challenges to the dollar, the effect on emerging markets of the US raising interest rates and other issues related to the almost unique currency marketplace we now have to hand.

To begin...

How do you see this divergence playing out in the years ahead? Will it, or will it not, be a significant source of currency alpha and enable broader portfolio diversification than stocks and bonds alone?

Adnan Akant: Look at the last five years, since the Lehman crisis. The global currency markets have been moribund, with narrow, range-bound movements that have considerably lessened one's ability to make money in this asset class. Some of the larger currency managers, for one, have gone out of business. And the industry as a whole has not done well, traditionally, during periods when volatility is repressed by central banks. It has been since quantitative easing (QE) appeared as a central plank in the monetary policy of the world's largest economy.

You can see this in the range of currency movements. For example, the euro versus the dollar over the last five years has gotten narrower-and-narrower in terms of annual ranges, at least until last year. Before the Lehman crisis, the annual range between the euro and the dollar, their respective highs and lows, was approximately 20 percent.



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After the Lehman crisis, this range narrowed considerably, to about 5 percent by 2013. In this very narrow range, it was very difficult to make any money. With interest rates now at zero, you have no carry and you have no range. Then, in 2014, as expectations rose that the Fed would cut off further stimulus and begin raising interest rates, the range of euro/dollar finally moved back to about 12 percent, yet still shy of the 20 percent high/low range of years before.

As the world normalizes, in say the next 2-3 years, we think the range of the highs and lows in currencies – significant currencies, like the dollar and the euro – will move back to a 20 percent average. As it does, this newly refreshed marketplace will provide much more opportunity for everyone in the industry to make money, as they used to make it in years past.

We think we've just begun a long-term appreciation of the dollar, certainly for the next five years or so. And that, of course, will be reflected in wider ranges and more opportunities in all currencies versus the dollar. One reason for this is that monetary policy in the US is diverging from that of other developed countries. We have tapered off our economic stimulus program, and the Fed's guidance suggests a rise in interest rates by the middle of 2015.

Elsewhere, the other major economies...the euro zone, Japan, China... are all doing the opposite. They're actually easing in various ways. Some of them, such as Japan and Europe, are just beginning to ease aggressively, and they likely will continue to do so for quite a while.

This divergence and its highly positive impact on currency trading hasn't occurred in decades, making it a somewhat uniquely propitious time for investors to revisit the currency asset class as a means of diversifying beyond stocks and bonds, while still getting a Sharpe Ratio analogous to that of passively holding the S&P 500.

Beyond monetary policy, there are also structural reasons as to why the dollar will do well. One of them is energy. One of the main drags on the dollar in the past has been the US trade deficit, where we're constantly importing energy, typically oil, which in turn undermines the current account deficit of the US.

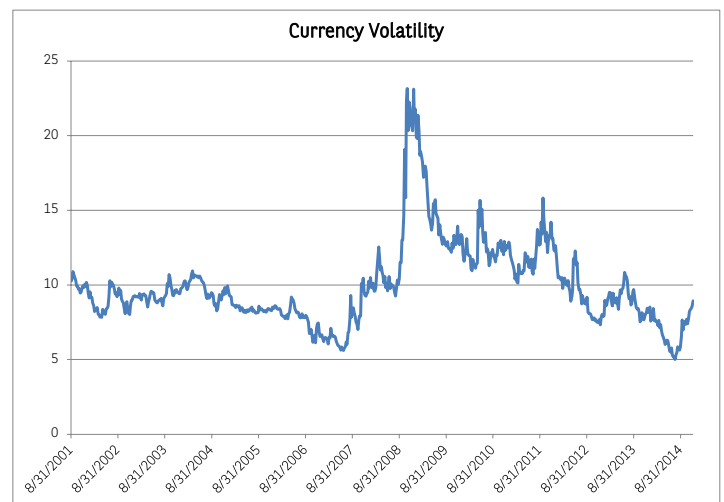
Well, that equation is changing, in fact, changing dramatically. As a result of the shift from oil to natural gas, the US is about to become among the biggest exporters of energy over the next five-years. The US current account deficit is going to shift dramatically in a way that has almost never happened. That also will help the dollar.

Momtchil Pojarliev: I agree with Adnan that the future market environment will be very favorable for currency investing and that the US dollar will do well. The post-crises QE world has been characterized by central bank policies. Particularly, Fed policy was a major driver of asset prices. One of the consequences was a decrease in volatility across all asset classes. In fact, currency volatility hit an all-time low of 5% in July this year (see Exhibit 1). Therefore,

currency markets offered few, if any, opportunities to generate returns. In 2013, this started to change as the Fed began to speak about stopping QE, the Bank of Japan was becoming more and more aggressive and the ECB began to realize it needed to do something. So the divergence in monetary policy resulted in increased market volatility, which is still low but moving toward more normal levels, and this creates great opportunities for alpha generation in currency markets.

Over the next two years, investors should expect to see much bigger currency moves. The US dollar, has been a weak currency for several years, particularly in the 2000-to-2007 period. Since then, it has been slowly inching its way back. Now we should see the dollar outperform, whereas I don't expect any other major currency to follow suit. The risk to institutional investors is to be on the sidelines watching, rather than participating, in the forthcoming renaissance of currency investing.

Exhibit 1: Currency Volatility hit an all-time low in July 2014



Source: FFTW, Bloomberg

Note: We use the Deutsche Bank Currency Volatility Index (CVIX) as proxy for currency volatility.

Moving on to a related topic, what are your thoughts about Europe and Japan? Will they curtail any incipient currency wars, such as occurred in 2013, with the greatly depreciated yen? On the other hand, will they agree that such economic conflicts are ultimately destructive and move on to enact meaningful structural changes?

Colin Harte: Everybody talks about the idea of currency wars and that Europe and Japan are indulging this speculation. But I think "currency war" is a bit of a misnomer. The reality is it's less about a deliberate attempt to knock your currency down and more about policies that lift domestic inflation to some degree. It has really been driven by domestic reasons, which is desire to get inflation



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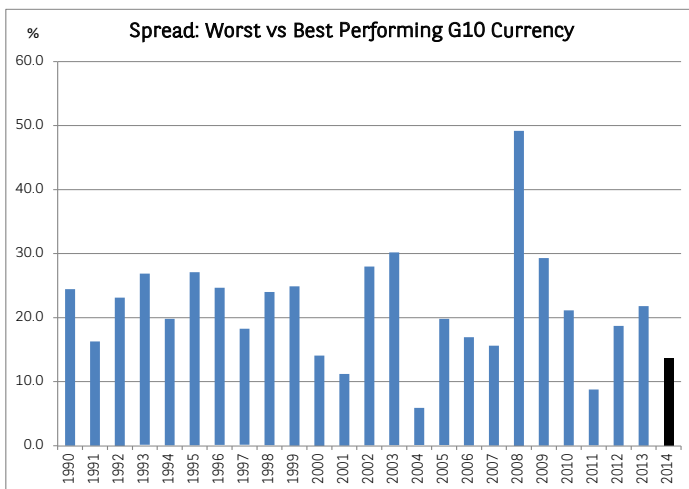
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back. The exchange rate is a byproduct of one of the transmission mechanisms. So their primary purpose is not to drive their currency lower but to increase inflation. I think the focus makes great headlines for journalists and commentators but is misleading.

In the case of Japan and Europe, it's not really a deliberate currency war. It's more a case where the two regions need ultra-loose monetary policy. By definition, against a US that is moving away from ultra-loose monetary policy, you're going to get much weaker exchange rates.

Momtchil Pojarliev: I don't think we can speak about currency wars at the moment because a currency war signals a very significant devaluation of the currency. At the moment it appears as though the currency markets have moved substantially but in reality they haven't. When I look at the difference between the best-performing currency and the worst performing currency (from the major currencies) year-to-date, it's about 14 percent, which is not a big number. This difference has consistently averaged about 20-21 percent over the years (see Exhibit 2) so right now we are in a benign year. In fact, over the last 25 years, we had smaller differences in only 3 years, in 2001, 2004 and 2011.

Exhibit 2: Difference between Worst and Best Performing G10 Currency



Source: FFTW, Bloomberg.

Note: 2014 spread calculated as per end of November.

Also, Europe and Japan need to put in place structural reforms, but in Europe, this is extremely difficult as there are several countries involved. The ECB has said monetary policy is less effective and they would like to see structural reforms, but they do not have the executive power to mandate structural reforms. The ECB's mandate is to ensure price stability. This means inflation has to be less than two percent but close to it. Right now inflation is so low so they have to bring it up and this is what they are going to do.

Adnan Akant: I agree structural changes are key to implement and both economic blocks have announced their intentions to initiate major structural reforms but structural changes are always difficult.

Because Japan has been growing very slowly for decades, its people have come to view low growth as the status quo. Some think its economy actually is going to shrink over time. The main reason they feel this way is a direct consequence of the fact that the country's population is shrinking.

This fact, in turn, limits risk-taking behavior, by implying that new initiatives are doomed from the start, that there is no point in pursuing growth where apparently there is none to be had. Japan's leaders are trying to address these problems, in part, by restructuring traditional attitudes about who can and should enter the workforce. The most important demographic element has to do with traditional values, where women are effectively barred from entering the workforce, or don't really want to work because it's non-traditional. As women could potentially double the country's workforce, their relative lack of participation in it means Japan is really running at half steam. The elimination of this competitive disadvantage is one way Japan can grow beyond its present state.

Another roadblock to reform is changing cultural mores that make it acceptable for women not to have children if they so choose. Another significant impact on slowing, native childbirth is the high costs associated with raising children. One possible solution is loosening controls on immigration.

There are hundreds of less visible reforms, such as inefficiencies in the distribution and the pricing of rice, which the government is attempting to put in place. Yet, doing this is very difficult. It will take time. Significant structural reform is not like monetary policy, where you can essentially press a button and suddenly you've eased.

In Europe, its leaders clearly plan to change the structure of the Euro-block economy. A number of peripheral countries, such as Italy, have very inefficient labor markets keeping the growth rate there close to zero, for a very long time.

To eventually become more competitive in global markets, they're trying to break these types of restrictions in each country, and lift the potential for eurozone growth in years to come. Whether they can achieve this and when is not clear.

But one can be optimistic. A currency war is the easiest and fastest way to achieve growth. If you lower your currency, you can try to export more and at least capture some growth from that perspective. I think this will be the case for both Europe and Japan in 2015. It's much easier to do and more visible than long-term demographic reforms.



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When Japan undertook QE under the recent regime, it drove its currency lower. In the longer run, it's not clear that QE is necessarily bad for the currency, because, at some point, if QE does work, it helps the economy gain traction. When growth picks up, the currency then stabilizes and starts doing better.

In the end, monetary policy immediately affects currencies. In the longer run, it has less impact, clearly, because fundamental prospects of the economy drive currencies through time, not monetary policies that may change at any time.

We've heard talk about the yuan and how it will grow in strength over time, but are there any currencies now that will challenge the dollar in 2015?

Colin Harte: Among the currencies we quite like is the Mexican peso, which we see benefitting as part of the dollar block though weaker oil prices could lead to some short term weakness. As long as the US is gradually tightening policy, Mexico should be able to leverage off of that. I'm not sure that Mexico will make a great deal of headway against the dollar, per se. It may well stay close to it or appreciate marginally. I think Canada will perform in a similar way to that of Mexico in the sense, it probably will not appreciate much against the dollar but it should benefit from holding on to the coattails.

Elsewhere, most currencies are going to see some issues that are going to be problematical and cause them to weaken.

We still expect the yuan to post modest gains against the USD through most of 2015. But a lot of that is going to be dependent on what's actually happening in China. There's considerable uncertainty, as to the state of the economy. So we could get the risk that, later in 2015, after a brief period of modest appreciation against the dollar, the Chinese authorities start to widen the band. This is because they want to try to kick start the economy should there be concerns that growth may not reach their targets. If growth stalls at about 6.5 percent or less, as opposed to 7.0-7.5 percent we may see the yuan start to weaken more significantly against the dollar.

Adnan Akant: Typically, when global growth picks up, the currencies that have done well in the past have been the dollar block, which includes Australia, Canada, and New Zealand, partly because these currencies imply a higher beta, and we see them as more exciting, dynamic countries, which benefit especially from global growth.

This said, it hasn't quite worked out so far this way. Australia, and even New Zealand, has been getting much closer with China than with the US, so they've been dragged down by China's slowdown. I think if China stops being so lethargic and does in fact pick up

some momentum next year, then it could be that the dollar block, meaning Australia, Canada, and New Zealand, might do somewhat better. It's possible, if not entirely probable, but I agree with Colin that there is considerable uncertainty there.

At the moment, it doesn't look like this lethargy will depart any time soon. China has exhibited weakness on many fronts during 2014, so renewed growth there any time soon is problematic.

The commodity block also is not doing particularly well, as commodity prices remain depressed, and in some cases, are actually falling, especially oil prices. These things can change. Commodities have fallen a lot and may have hit bottom in some instances, so naturally their next move may be up.

Moving further afield, as it were, when US interest rates rise, which emerging market currencies are likely to be the hardest hit, and which will not?

John Morton: The short answer is that as US interest rates rise, the most vulnerable EM countries are going to those with weak external positions. By this I mean those countries that are running current-account deficits, have substantial debt outstanding relative to their GDP, and have a need to continuously access portfolio flows from foreign investors.

Going back to what we discussed in another, recent paper about reform being the driving force in EM investing, I would suggest Turkey and South Africa, at this point, are the two most vulnerable local-currency investments. In Turkey, the reason is they haven't created a favorable environment in the country for long-term investing, so there's very little foreign direct investment that goes into this country.

And most of the money that goes into Turkey does so in portfolio flow, so publicly listed securities that can easily be bought and sold. When a more compelling yield comes up somewhere else in the world, you'll start to see the money flow out of Turkey and flow into those higher or competitive yields offered elsewhere.

South Africa is among the most vulnerable because they don't have a sufficient domestic savings base to finance their capital-intensive economy. They tend to take in a lot of foreign investment to finance their industrial sector. When interest rates rise, that makes them very vulnerable.

Looking back, I think the greatest shock to emerging markets took place in the summer of 2013, when then Fed chairman Bernanke signaled that they were going to start to taper the QE. We had large-scale adjustments from that point on.

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So the large-scale adjustments have been done in terms of the EM and other currency valuations. If the Fed moves along a path that's consistent with how investors are viewing the market, I don't see it being terribly disruptive to emerging market debt in general. On the other hand, if it looks as though they need to raise rates more quickly due to a pickup in inflation, there will be some further currency adjustment in the future.

Furthermore, in a global environment of low inflation and still easing monetary policy in core markets, risk assets will remain supported and the search for EM yield likely will be rewarded. With this backdrop, EM rates remain supported as yield curves continue to be repriced; however, the environment remains challenging for EM FX given its short-term valuations, fundamentals, and its exposure to global factors.

The question I posed to my team was how do we capture this yield on these bonds while hedging the currency risk? This is the driving question for us as managers of local-currency/emerging market-debt.

In some instances – if the country is in good shape and the external accounts are balanced – it may make sense just to do it on an unhedged basis. So, we need different ways to get to this emerging market yield, while hedging or buffering ourselves from the volatility of the foreign-exchange rate.

Thank you for taking time with us today to explore the rapidly evolving world currency markets and the investment opportunities inherent in them, both now and in the days to come.

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Coming up, we will interview prominent plan sponsors and the authors of a new book, "THE ROLE OF CURRENCY IN INSTITUTIONAL PORTFOLIOS", to explore the dynamics of today's currency markets and institutional investor perspectives on their role in portfolio management.



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BIOGRAPHIES



Adnan Akant, PhD
Head of Currencies
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Adnan is the Head of the Currencies team and is responsible for setting strategy for currency alpha and overlay portfolios as well as the currency portion of global/international portfolios. After joining FFTW's New York office in 1984, Adnan's primary focus was on US interest rate strategies and proprietary trading. He moved to the global bond and foreign exchange area in 1994 and has been responsible for the development and implementation of foreign exchange strategies since then.

Prior to FFTW, Adnan spent six years managing the World Bank's liquidity portfolio and advising the Treasurer on the Bank's multi-currency borrowing program, thereby gaining considerable experience in analyzing macroeconomic influences on interest rate and currency markets. Adnan left the World Bank as senior investment officer in 1984. He has 36 years of investment experience.

Adnan holds a Ph.D in systems science from MIT (1977), an MS in finance from the MIT Sloan School (1978), as well as BS and MS degrees from MIT in electrical engineering and computer science (1972-1975). He is also a member of the New York Academy of Science and Sigma Xi, The Scientific Research Society.

Adnan is Chair of the Buy-Side of the Foreign Exchange Committee (FXC), established by the New York Federal Reserve in 1978 to provide guidance and leadership to the global foreign exchange market. The FXC includes representatives of major financial institutions engaged in currency trading in the US. In words of the New York Fed, "The Foreign Exchange Committee is a select group of individuals who have achieved stature within both their own institutions and the marketplace". Adnan's leadership role with the prestigious committee dates from June 2008.

Adnan is frequently asked to speak at industry events. In September 2014, he spoke on a panel at the Center for Financial Stability's conference, "Bretton Woods: The Founders and the Future", celebrating the seventieth anniversary of the Bretton Woods system. Adnan was among former central bank governors and management board members, finance ministers, economic ministers and professors speaking at the event.



Colin Harte
Portfolio Manager and Strategist
Multi Asset Solutions
BNP Paribas Investment Partners

Colin is a Portfolio Manager and Strategist on the Multi Asset Solutions team and is based in London. In his position, he focuses particularly on generating currency views and plays an important role in further developing our suite of asset allocation products. He joined BNP Paribas Investment Partners in 2014.

Prior to joining BNP Paribas Investment Partners, Colin worked as the Currency Portfolio Manager at C-View Ltd; as well as a Director of Fixed Interest and Currency/Head of Absolute Return/High Alpha at Baring Asset Management; and as the Investment Director, Head of International Fixed Income at Norwich Union Invest Management Ltd. He has also held investment positions at Natwest/Gartmore Investment Management, WorldInvest Ltd. and Citibank Investment Management. He has 33 years of investment experience.

Colin received his BA in Economics from the University of Liverpool (1979) and his M Phil by Thesis, University of Liverpool (1981).



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BIOGRAPHIES, continued



John Morton, CFA, FRM
Head of Emerging Markets Fixed Income
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John oversees Emerging Markets Fixed Income investments for FFTW, managing external, local and corporate dedicated debt mandates and funds. He joined FFTW in 2012 and is based in Boston.

Before joining FFTW, John was the Chief Investment Officer for Fixed Income and a Managing Director of Rexiter Capital Management, a subsidiary of State Street Global Advisors. In this role, he was responsible for all of Rexiter's emerging markets fixed income investments and oversight of the sovereign risk and relative value analysis. He has been working in the investment management field since 1987, with a focus on emerging markets debt since the early 1990s. Prior to joining Rexiter, John was the Director of Global Credit Strategy for State Street Global Advisors. He has 29 years of investment experience.

John earned his BA from Suffolk University. He is a current CFA Charterholder.



Momtchil Pojarliev, PhD, CFA
Senior Portfolio Manager - Currencies
FFTW

Momtchil is a Senior Portfolio Manager on the Currencies team at FFTW where he focuses on generating alpha for portfolios as well as contributing to the investment process, both in the judgment and quantitative styles. Momtchil also contributes to the growth and development of FFTW's currency alpha strategy as a stand-alone product. He joined FFTW in 2013 and is based in New York.

Prior to joining FFTW, Momtchil was a director and senior portfolio manager at Hathersage Capital Management, responsible for both investments as well as business development for foreign exchange portfolios. Before that he was head of currencies for Hermes Fund Managers. Prior to Hermes he was a senior FX portfolio manager at Pictet Asset Management. Momtchil began his investment career at Invesco Asset Management, first as a senior economist and then as a senior FX portfolio manager. He has 13 years of investment experience.

Momtchil has advised various asset management firms, including PIMCO and Goldman Sachs Asset Management, in the area of currency return analytics. He has published extensively in finance and investment journals, including the *Journal of Portfolio Management* and the *Financial Analysts Journal*. Most recently, Momtchil has co-authored the book *A New Look at Currency Investing*, published by the Research Foundation of CFA Institute. He is a member of The Economic Club of New York and the Swiss Society for Financial Market Research. He currently serves on the Editorial Board of the *Financial Analysts Journal*.

Momtchil holds an MSc in finance from Vienna University of Economics and Business Administration (1998) and a PhD in financial econometrics from University of Basel (2001). He is a current CFA Charterholder.



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