MAKENA STRATEGY INSIGHTS – September 30, 2014

US Dollar Strength: What This Means for the Global Economy

Q3
PERIOD ENDING
September 30, 2014

Portfolio Strategy & Macroeconomic Outlook

Perhaps the most important development in markets over the past few months has been the emergence of US dollar strength against a swathe of currencies. Since the beginning of the summer, the trade-weighted US dollar has appreciated approximately 8%, or over 35% on an annualized basis. Because the US dollar remains the cornerstone of the international monetary system, such a change has important ramifications for trade, growth and income on a global basis. Furthermore, as we show in this letter, a confluence of fundamental factors have driven US dollar appreciation, and in our opinion those factors are durable, providing sustained tailwinds to the US dollar. In other words, we can count on the dollar to remain strong for the foreseeable future. As stewards of long-term capital, we must assess how this important development may impact investors.

US Dollar Strength – The Trappings of Economic Success

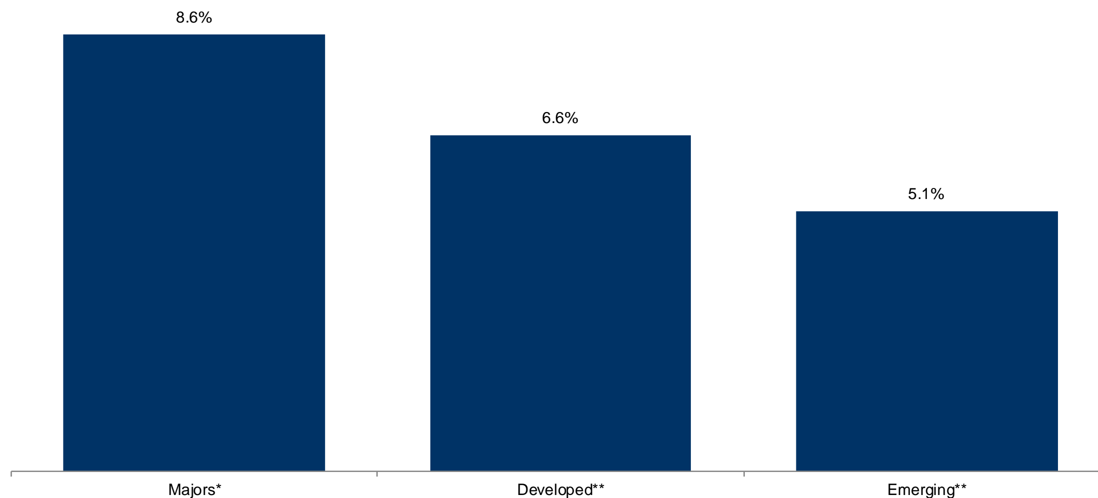
In our commentary this quarter we will focus on the newfound strength of the US dollar. We will first seek to explain why fundamentals support a stronger US dollar, and show that those fundamentals are set to provide a sustained tailwind to the dollar. We then explore the wide-ranging ramifications that a strong dollar has on the global economy: commodity prices, household expenditure patterns, and the geography of trade and growth.

Year-to-date, the dollar has strengthened substantially against a broad range of currencies. As can be seen in Figure 1 below, the dollar has appreciated to the greatest extent against the major developed currencies followed by all developed market currencies and finally EM currencies.

USD Appreciation: 2014 YTD

Percent (%)

As of: 11/5/14



Source: FRB, Bloomberg, Makena Analysis
*DXY Index, consisting of : EUR (57.6%), JPY (13.6%), GBP (11.9%), CAD (9.1%), SEK (4.2%), CHF (3.6%)
*Based on Federal Reserve 2014 Trade Weights, excludes heavily managed currencies (e.g. CNY, HKD etc.)

Figure 1: US Dollar Appreciation vs. Different Currency Groupings (2014YTD)

There are several factors that individually would be sufficient to provide tailwinds to US dollar valuation, yet as we describe next, many of the factors one could think of are all indicating a *sustained* advantage to the US dollar. Rarely does such an alignment of fundamental factors all pointing in one direction exist. It is difficult not to conclude that we are about to enter an extended period of enduring US dollar strength.

To summarize, the key factors driving the US dollar are:

i. Superior US growth among developed market economies
ii. A broad-based recovery due to improved labor conditions relative to other developed markets

iii. Interest rate differentials increasingly favorable to the dollar versus other currencies
iv. A dramatically improved current account deficit, driven by an improved trade account, in turn driven by the "shale revolution"
v. A likewise dramatically improved federal government deficit outlook

Growth Outperformance – The Fundamental of Fundamentals

The most important factor driving US dollar strength has been the acceleration in the US recovery and in particular its outperformance relative to peers. Figure 2 below compares the IMF's growth projections for the US, EU and EM. Not surprisingly, this shows that EM is projected to grow substantially faster than the US and the US faster than the EU in the coming years. What is important from the perspective of currency is the fact that US growth projections have been upgraded while those in EM and the EU have been reduced - the US has momentum on its side. Indeed, in the case of the EU, one could argue that the terminal growth rate of 1-1.5% shown below assumes successful policy response, which may well not materialize.

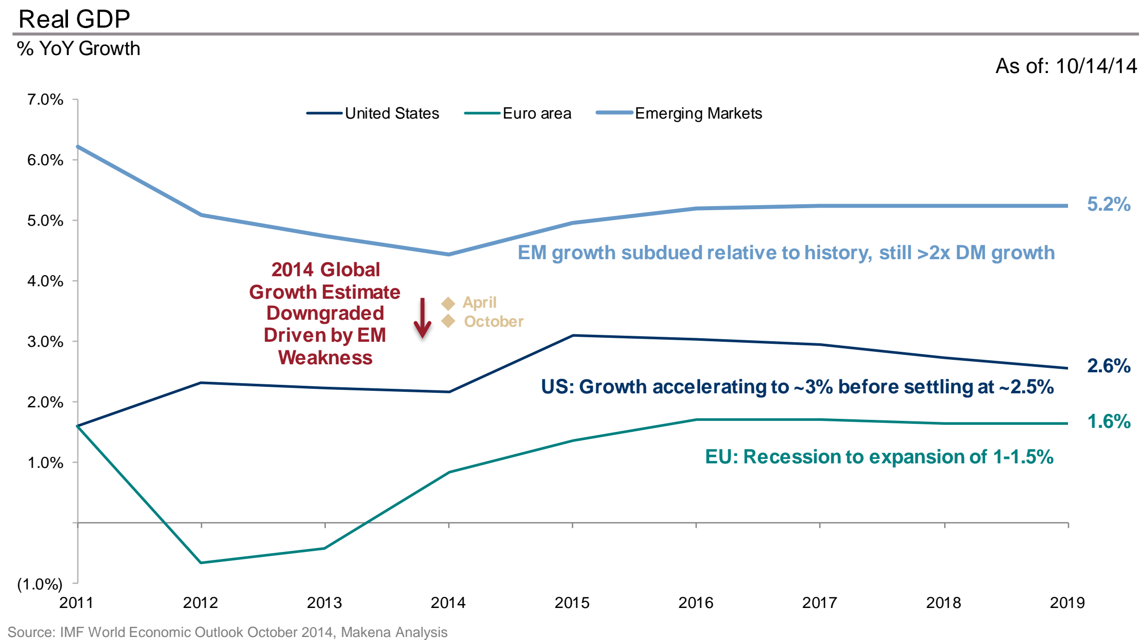


Figure 2: US Growth Projected to Remain Higher than EU, and Narrows the Gap with EM

A Recovery Shared By the Labor Market

While income and employment trends in the US remain weak relative to history, they shine relative to the developed world, particularly Europe. A comparison of labor market performance further supports US growth outperformance relative to the Eurozone. Figure 3 below illustrates the steady downtrend in US unemployment as compared to the EU.

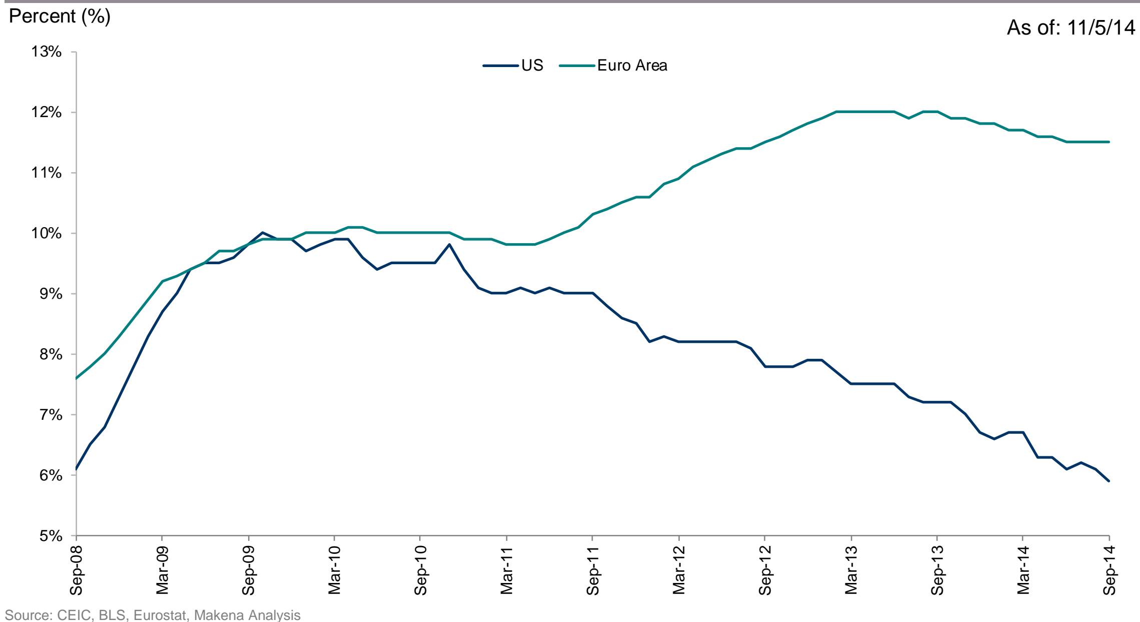


Figure 3: US Labor Market Outperforming Euro Area

As a result of both an accelerating recovery in US growth and healing labor markets, the Fed recently ended its asset purchases under QE3 and markets have begun to price in the eventual "lift-off" of rates from current zero levels. By contrast, Japan and Europe's economies have been faltering. The BOJ recently surprised markets by announcing an expansion of its Quantitative and Qualitative Easing (QQE) program, in order to continue its fight against deflation. The ECB is promising a €1 trillion intervention to boost flagging inflation. China is mulling loosening reserve requirements; Brazil and Russia are effectively in recession and need rate cuts.

Overall, it is fair to say that monetary authorities in large parts of the globe are more likely to be on a path to further loosening of monetary conditions, with the US being the only major country on a path to tightening conditions.

The result has been an increasingly positive difference between US rates and other G10 countries' rates. The larger the interest rate differential between the US dollar and other currencies, the more penalized investors are when investing in non-US dollar denominated assets. In effect, this positive interest differential can be thought of as an additional hurdle rate required for investing in G-10 countries outside the US of approximately 100 basis points. The trend of an improving interest rate differential in favor of the US dollar is illustrated in Fig 4 below – an approximately 120 bps improvement since January 2013. Note that Figure 4 also shows the correlation between the US dollar and the interest rate differential, whereby the recent dollar move has been a belated "catch-up" to the improved interest rate differential – on this metric the dollar is barely keeping up with fair value. As we mentioned above, the continued divergence in economic performance between the US and the rest of the developed world should continue to provide a widening interest rate differential in favor of the US dollar.

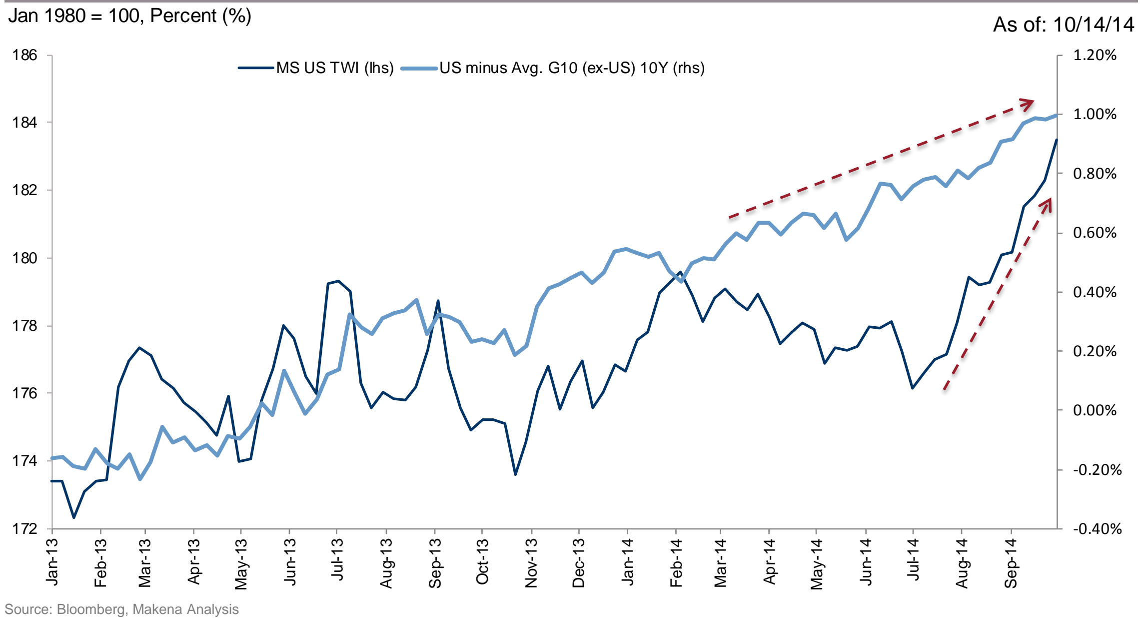


Figure 4: USD Rates Differentials in Favor of USD, Trend to Continue

The Current Account Deficit – Less Dollars in the Hands of Sellers

While rising rate differentials and improved economic performance attract flows into US dollar denominated assets, a reduced current account deficit (CAD) has mitigated natural selling pressure on the dollar. Said differently, the US is sending fewer dollars overseas than in the past and therefore less foreign holders of US dollars need to sell dollars to convert back into their local currencies. Figure 5 below shows that the US current account deficit has improved dramatically (2σ) relative to its own recent history and is now no longer a significant outlier relative to other countries (<1σ).

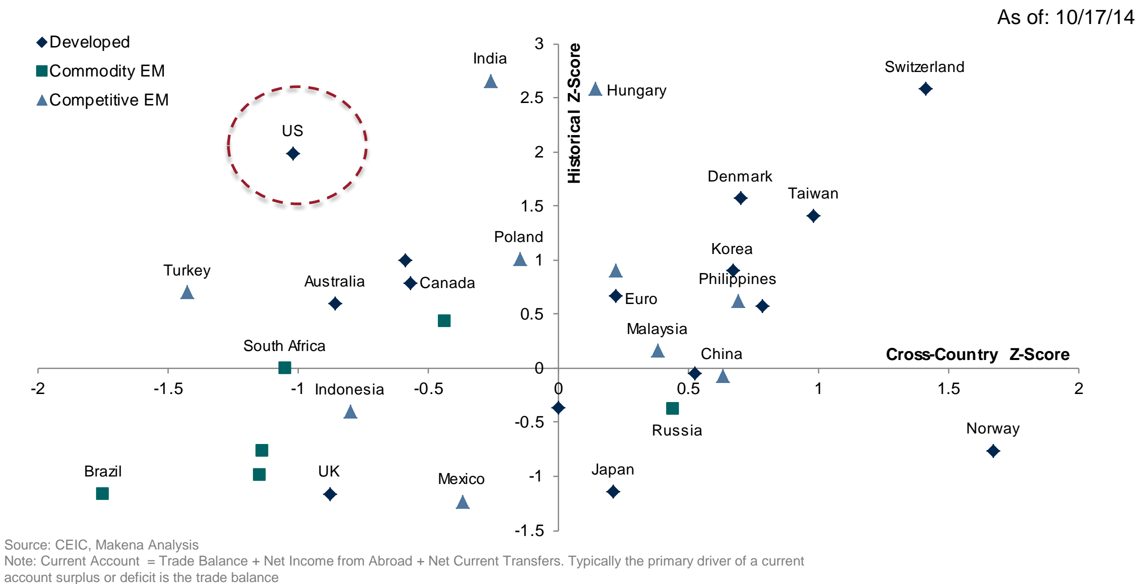


Figure 5: US Current Account Has Dramatically Improved Relative to Own History and Relative to Other Countries

A Stabilized and Near-Term Sustainable Fiscal Outlook

Growth in combination with recent changes in tax laws have resulted in a dramatically improved US fiscal situation (see Figure 6 below). Lower deficits result in less need for importing capital, again ultimately resulting in fewer US dollars in the hands of potential overseas sellers.[1] Note that the deficit situation is projected to remain stable over the next 5 years, therefore putting less pressure on the US dollar relative to recent history for a sustained period of time.

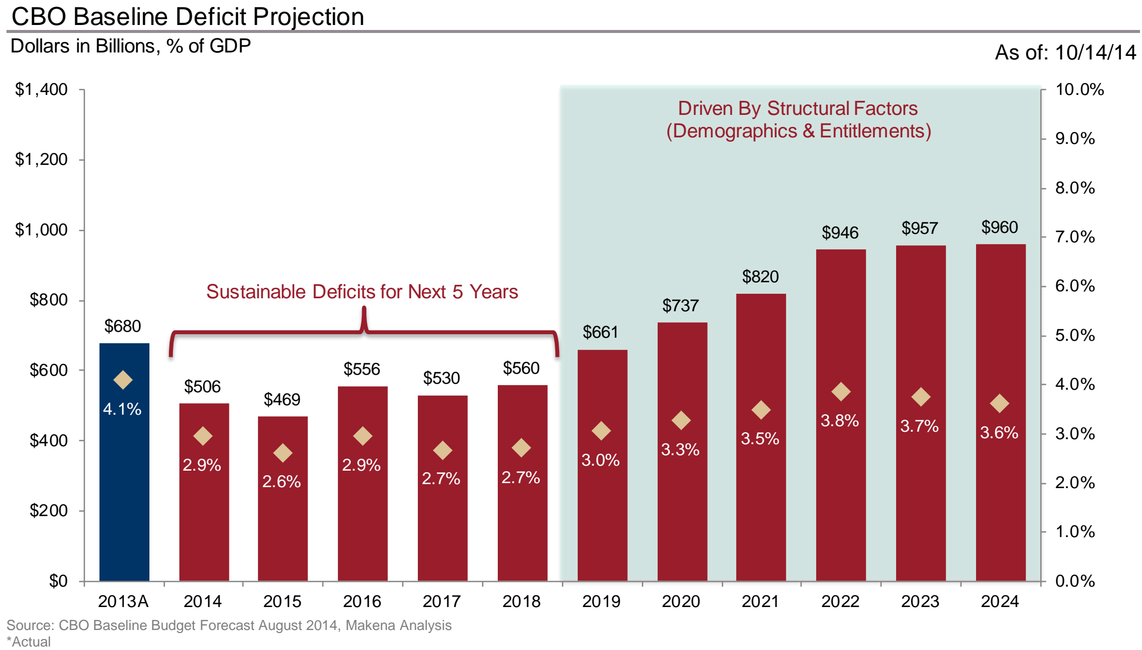


Figure 6: US Deficit Has Declined, Projected to Remain Stable in Near- to Medium-term

The Shale Revolution Is a Dollar Revolution

A significant driver in reducing the CAD has been the so-called "shale revolution", which has substantially reduced US imports of oil. Figure 7 below highlights the dynamics of oil imports. Note that pre-crisis, the US oil deficit was approximately 0.8% of GDP – given that the economy today is now larger than pre-crisis, it would make sense for the oil deficit to be once again near those levels. However, it currently stands at less than half that level, and if forecasts prove correct, could come close to being zero in the next few years. This is a dramatic change for the US balance of payments and perhaps the most durable of all the factors we have enumerated in favor of US dollar strength.

[1] In balance of payments terms, a lower capital account deficit, due to less imports of foreign capital, also improves the current account deficit.

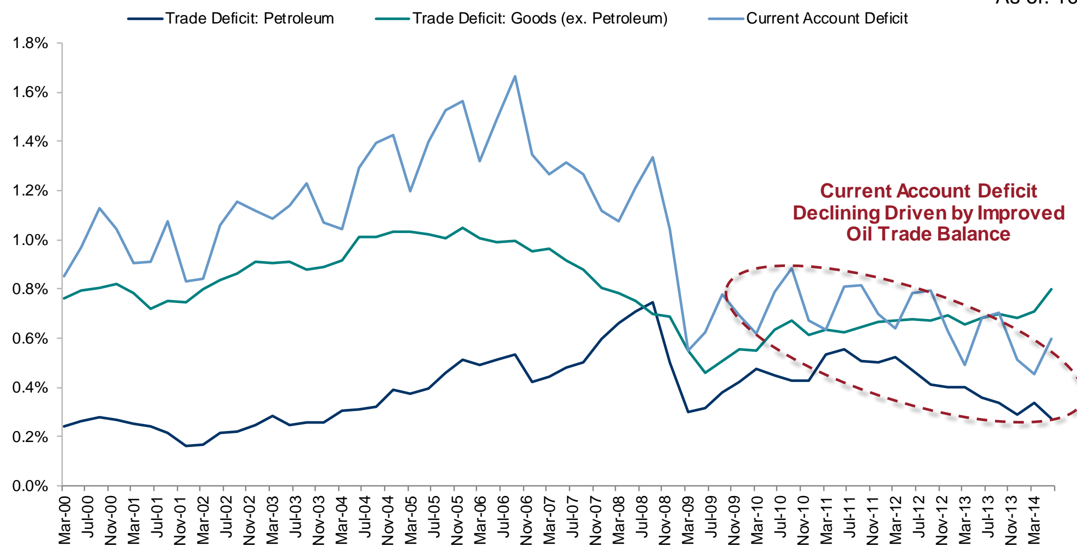


Figure 7: US Current Account Deficit is Declining, Driven by Shale Revolution

The Future Looks a Lot Like Today for the US Dollar

Importantly, neither absolute surpluses nor improvements in the current account are guarantees of currency appreciation or of overall economic "health". In mathematics jargon they could be thought of as "necessary but not sufficient conditions" for an appreciating currency. Consider the Eurozone, which runs a sizeable and increasing current account surplus, yet the EUR is down 10.2% and 6.2% against the dollar and pound, respectively.

The difference is growth and the risks to that growth, which drive the future prospects of asset valuation. Capital flows can dominate currency valuation and can do so for extended periods. This brings us back to the dollar and the question of whether the dollar's recent strength is sustainable or indeed whether it may appreciate further.

According to the Bureau of Economic Analysis' first estimate, the US economy grew at an annual rate of 3.5% in the third quarter. Meanwhile, a spate of statistics including personal consumption expenditures, PMIs, financial conditions measurements and disposable income, which has broken its 6-year flat trend, support the robustness of the recovery. Taken individually, none of these figures are particularly impressive but the breadth of positive data suggests a sustainable near-term acceleration in growth. In keeping with our past letters, we maintain that potential growth in the US will be lower than historically but this does not preclude a near-term acceleration and still less outperformance versus other developed markets. It is against this backdrop and a correspondingly strengthening labor market that the Fed has recently ended its purchases under QE3.

By contrast, EU growth has broken down (again) as the European Commission acknowledged when it recently reduced its 2014 growth forecast from 1.2% to 0.8%. Notably, the revision was driven by downgraded outlooks in the core countries, Germany, France and Italy (which is expected to shrink 0.4%). The breadth of weak data in the EU provides a foil to the strong US data. Meanwhile, the market response so far to the announcement of banks' asset quality review (AQR) results has been a general shrug while banks have continued to cut back on providing credit to the corporate sector[2]. It is therefore no surprise that the ECB recently confirmed its intent to restore its balance sheet to the March 2012 size (~€3 trillion), which implies €1 trillion of stimulus in total.

In Japan, GDP and consumption growth have failed to rebound following the adverse shock from the national sales tax hike. Wage growth has increased but not to the extent necessary to escape deflation convincingly. The weaker yen has improved corporate margins but has failed to boost exports enough to reverse the widening trade deficit. As a result, the Bank of Japan (BOJ) recently announced an expansion of its qualitative and quantitative easing (QQE) program, reiterating its commitment to

[2] See our Q3 2013 letter as well as our Europe white paper for a discussion on the importance of the banking sector in Europe.

achieve its 2% inflation target, and Abe has called for a new round of elections as a referendum on postponing the next scheduled sales tax hike.

The above analysis suggests that US outperformance is likely to continue and furthermore, that the G3 central banks are now on different trajectories, the ECB and BOJ loosening on margin, the Fed either on hold or tightening. This should support further increases in interest rate differentials over time, thereby providing support to US dollar strength.

Implications of a Strong Dollar on Commodity Prices

There are of course many consequences for the global economy of a strong US dollar. Here we will focus on a few key consequences. The clearest and most direct effect of a strong dollar is weaker commodity prices. Because of the way in which commodity markets operate, with output prices typically in US dollars, but costs often not in US dollars, a strong dollar means lower *dollar* production costs for foreign commodity producers. Therefore, with a stronger dollar, a commodity producer should be willing to accept a lower US dollar commodity price and still be able to maintain margins. As an example, imagine that ultra-deep water Brazilian oil production costs 150 Reais a barrel to produce. Two years ago that was nearly $100, whereas today that figure is closer to $60, thanks to the Real's large depreciation (or the dollar's appreciation). Therefore, a Brazilian oil producer should be indifferent between oil at $110/barrel (a $10 margin) two years ago and oil at $70/barrel today (still a $10 margin). This is the intuition behind the strong inverse correlation between the GSCI commodity index and the trade-weighted dollar, as depicted in Figure 8 below.

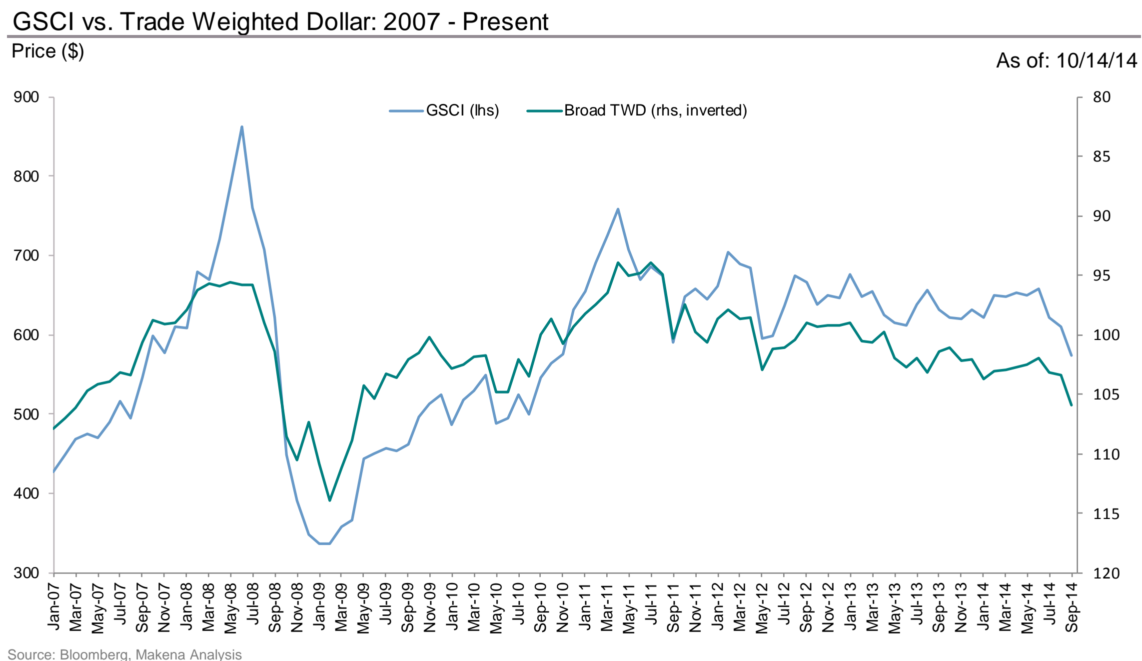


Figure 8: Dollar Major Driver of Commodities Prices

A similar analysis on oil prices (WTI) against the trade-weighted dollar shows stronger results, with correlation of approximately -0.90 (vs. -0.85 for GSCI). As a result it is not surprising that year-to-date 2014 WTI has declined by 21% and Brent by 29%.

An Aside on the Outlook for Commodity Prices

Given our earlier analysis on the sustainability of fundamentals supporting the US dollar, the question that immediately springs to mind is, will commodity prices continue to drop indefinitely? We focus our attention here on crude oil, though much of what we argue is likely applicable to other commodities. Given that oil demand is relatively inelastic, commodity prices should continue to fall as the dollar appreciates to the point where there is a supply response.

It is important to bear in mind that a supply response will be driven by cash production costs. Once capital is sunk and the well is operating, the producer's decision whether to shut down or continue operating hinges on whether the cash cost of extracting the oil is less than the market price of oil. As long as cash costs are covered, the producer should not shut down production.

This is a different analysis from the decision to invest in a new well, where capital costs and their recovery are important factors to consider.

Figure 9 below illustrates the cash production costs of oil – think of this is as a global oil supply curve. The implication is that oil prices would need to fall substantially below $50 before current production would become unprofitable. Therefore, on an economic basis, one should not expect any existing production to shut down given oil prices in the mid $70s.

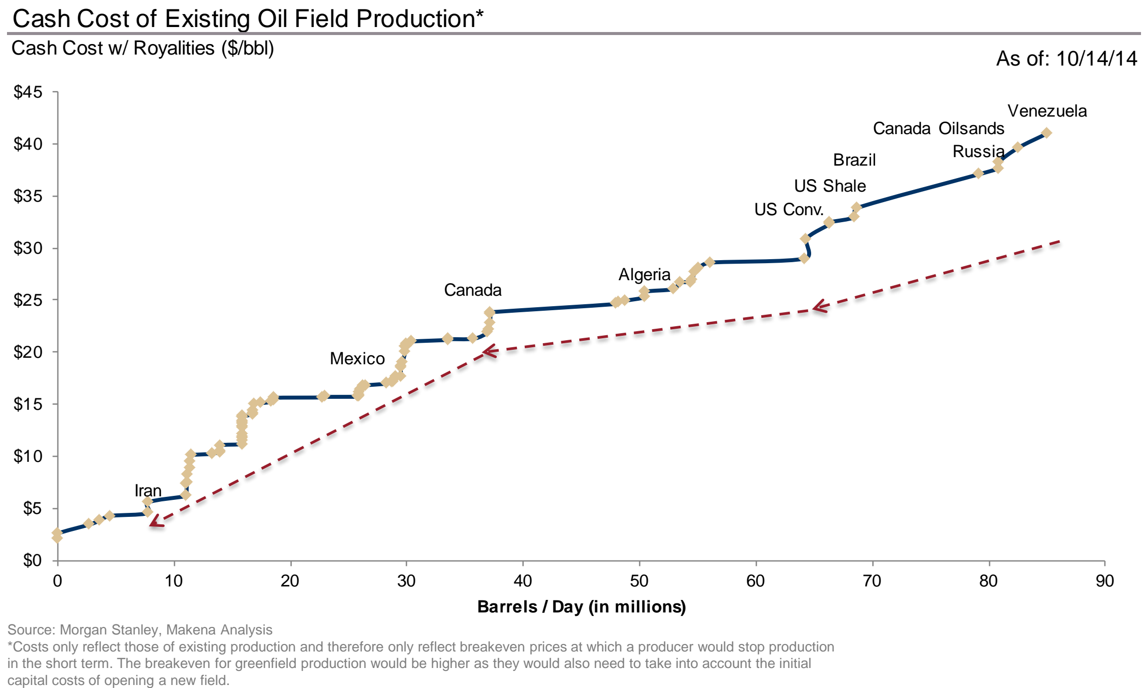


Figure 9: Cash Costs on Current Crude Oil Production below $50/barrel

Furthermore, even including capital costs, many shale basins in the US remain profitable at current oil prices. Indeed, as of the writing of this letter, the aggregate capex intentions as disclosed by listed US energy companies are flat for 2015 versus 2014, despite the 30% correction in oil prices that has already occurred. Said differently, current oil prices have not discouraged aggregate investment into US shale, but have just slowed the pace of growth of the shale movement.

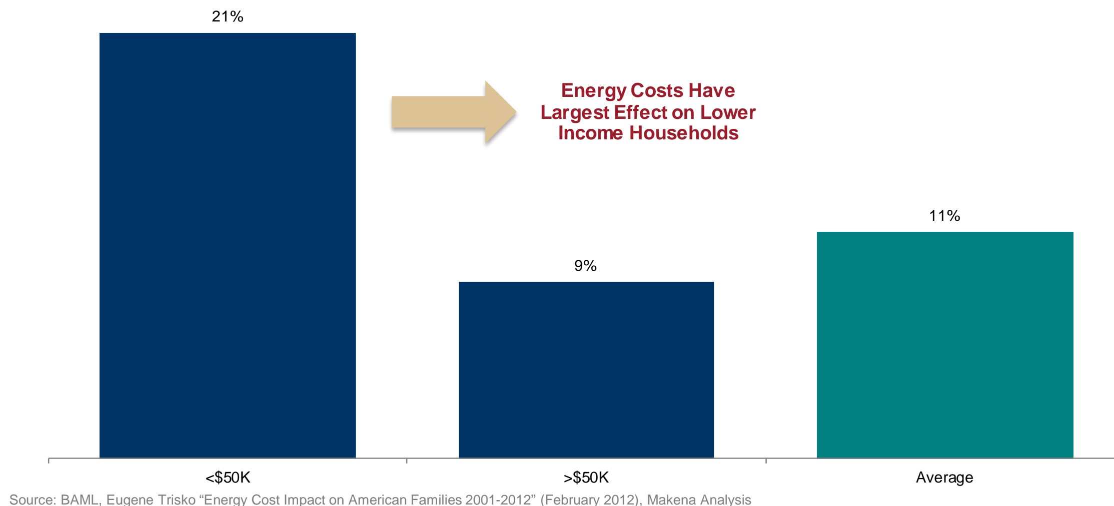
Dollar Strength – What Is It Good for?

We have just established that as the dollar strengthens, commodity price weakness will continue until a supply response materializes. If recent dollar strength persists, as we have argued it will, then we must ask what the implications are for the global economy. We therefore now turn to assess the impact on the US, Europe and EM, respectively. At the highest level, lower oil prices are essentially transfers of wealth from oil producers to oil consumers.

US Implications

As we have shown, a stronger dollar translates to lower commodity prices, oil especially. This in turn results in lower input costs for businesses and an increase in disposable income (excluding energy) for households. Figure 10 below shows energy costs as a percent of after-tax income for US households at different income levels. Note that the effect of lower oil prices would be most acutely felt by lower-income households, which have benefited the least in the current recovery (see our Q4 2013 letter). Given lower-income households' high propensity to spend, one can expect a significant pick up in consumption expenditure in the US – this is good news for the retail sector, and indeed for domestically-focused companies in general.

Household Energy Costs in 2012
Percent of After-Tax Income (%)
As of: 10/22/14



Source: BAML, Eugene Trisko "Energy Cost Impact on American Families 2001-2012" (February 2012), Makena Analysis

Figure 10: Lower Income US Households Benefit Significantly from Lower Energy Costs

Of course, the flip side of the strong dollar is that for corporations that are significant exporters, a stronger dollar will reduce foreign earnings. Such earnings are substantial for large-cap US corporations. The weak Euro in particular presents a challenge as many US multinationals have minimal operations in Europe given the historically high cost of doing business there – as a result, a high proportion of Euro-denominated revenue flows directly to earnings. From this perspective, earnings growth will be at risk especially for export-oriented S&P 500 companies. By contrast, domestic-oriented firms (most mid-caps) will not be handicapped in this way and should benefit fully from the strengthening domestic demand conditions underlying the stronger dollar as well as from lower material/energy input costs as described above. S&P 500 Q3 earnings reports are already showing the effect: earnings growth for companies that generate more than 50% of sales *in* the US was 9.0% while for companies that generate more than 50% of sales *outside* the US, EPS growth was 6.5%.[3]

A Weak Euro Is No Panacea

A weaker Euro will help the Eurozone's external competitiveness, though export competitiveness has never been an issue for Europe. Figure 11 below shows the Eurozone's large and growing current account surplus, driven by an export-led recovery across both periphery and core countries[4], and accompanied by a collapse in domestic demand in the periphery countries. A weaker euro will of course magnify this effect by improving the competitiveness of European exports and further restraining European imports – both should be supportive of economic recovery in Europe, and both will continue to support a substantial current account surplus into the foreseeable future.[5]

[3] Factset Insight S&P 500 November 14, 2014 report
[4] See our Q3 2013 letter for a lengthier discussion on this topic.
[5] Without such a strong current account performance, the Euro would likely have weakened even more than it has.

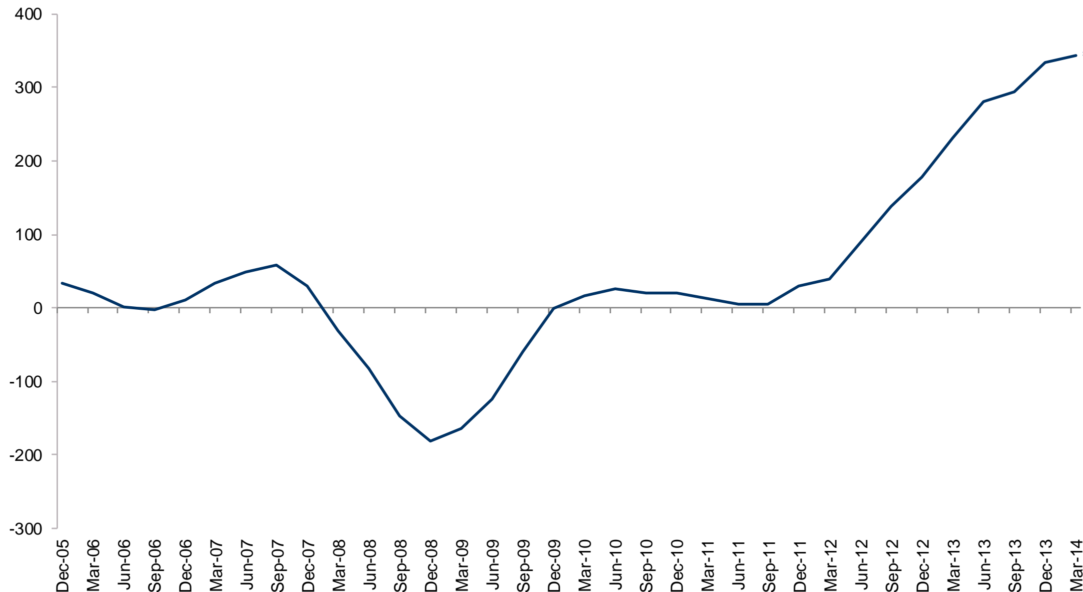


Figure 11: EU Current Account Surplus Continues to Grow

Unfortunately, the root of many Eurozone problems lies in the substantial *internal* imbalances that exist across Eurozone countries. The internal imbalances are driven by the differences across countries of so-called unit labor costs – the cost in each country to produce one unit of output. Figure 12 below shows unit labor costs for a number of Eurozone countries over time. Three findings can clearly be seen: (i) the smaller countries, Portugal, Ireland, Greece and Spain have undergone dramatic internal deflation, driving their wages down to the European average as a result of pro-cyclical austerity policy; (ii) Italy and France have not attempted to force deflation on their economies, and as a result wages have grown above the European average; (iii) Germany meanwhile has managed wage growth below the European average. Importantly, the combination of (ii) and (iii) implies that with every passing day German industry becomes more competitive relative to the rest of Europe. A weaker Euro helps every country equally but does nothing to resolve this conundrum. In this sense, a weaker Euro just buys some time for Europe while the German / French / Italian standoff continues.

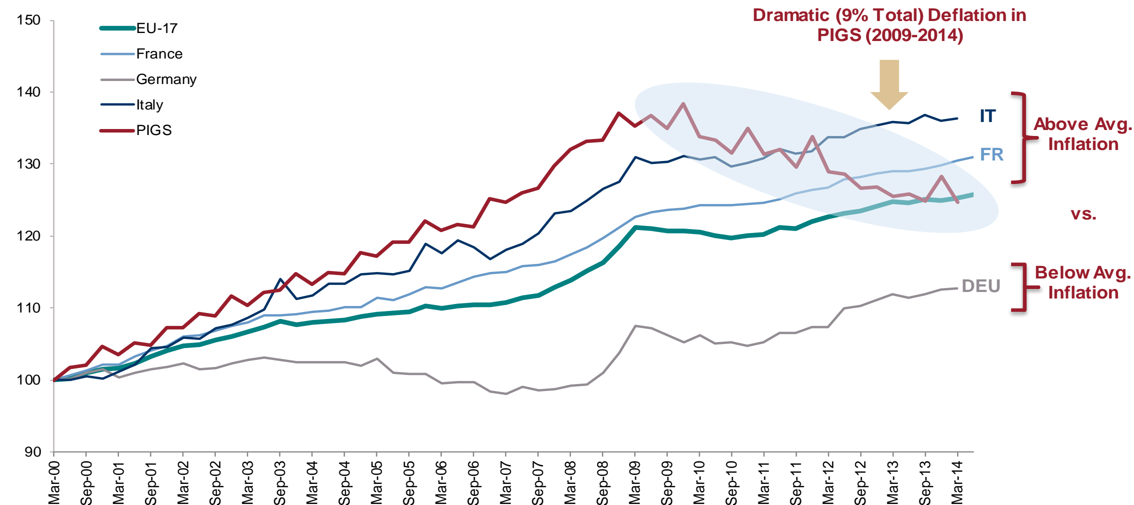


Figure 12: Substantial Imbalances Remain in Europe

Winners and Losers in EM

The stronger dollar and correspondingly lower commodity prices will have a bifurcated impact on emerging economies, depending on whether the economies are more commodity dependent or not.

Commodity exporters (e.g. Latin America, Africa, Russia) will see national income fall as exports bring home less – while some of that impact will be mitigated by weakening currencies, the import bill will rise substantially as well. For emerging markets in particular, where an important component of imports are capital goods, the increased cost of imports will dampen capex and investment in those economies, leading to weaker future growth prospects.

By contrast, emerging economies that are large energy importers should benefit from lower input costs and increased demand from the US consumer. Not by coincidence, most manufactured goods exporters are precisely those energy poor countries. In a nutshell, many Asian countries will benefit from the stronger dollar.

Where Art Thou Inflation?

Our last topic on the implications of the strong dollar is US domestic inflation. We have made the case for a reasonably strong US recovery, but due to the structure of the US economy, observed inflation is likely to remain low in the near-term. Figure 13 below shows the two traditional inflation metrics used in the US: the CPI and the PCE (the Fed's preferred measure). In both cases, the inflation rate has recently slowed, and both remain well below the Fed's 2.0% target.

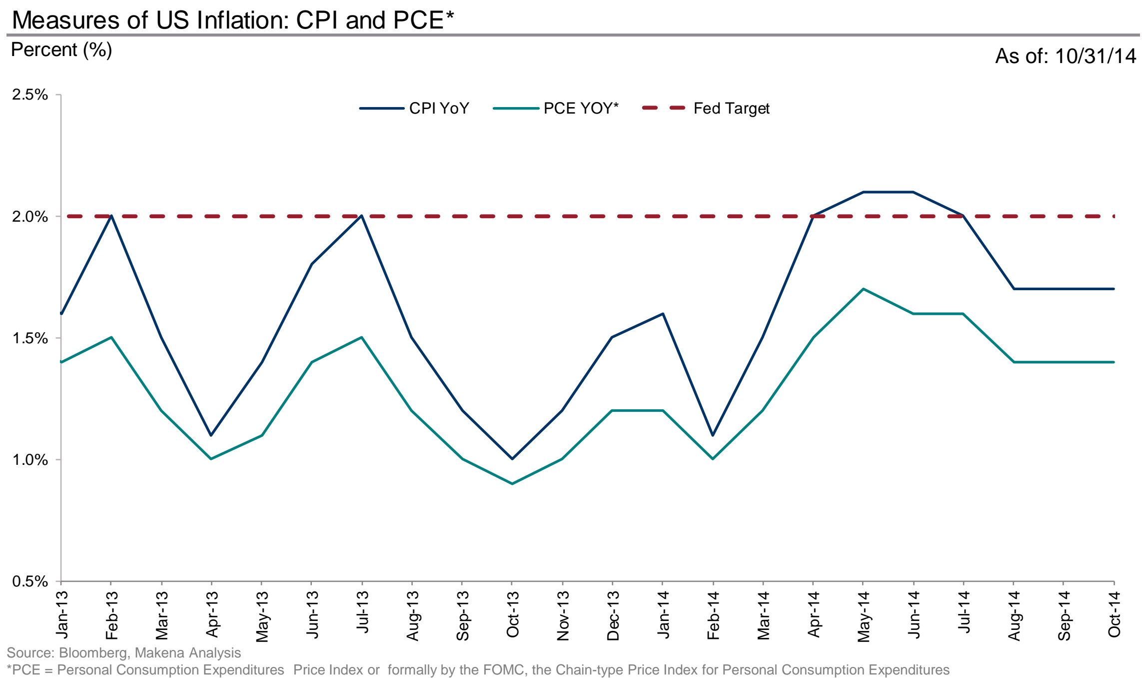


Figure 13: US Inflation Remains Well below Fed Target

Figure 14 below highlights that expectations of inflation in the future have weakened as well.

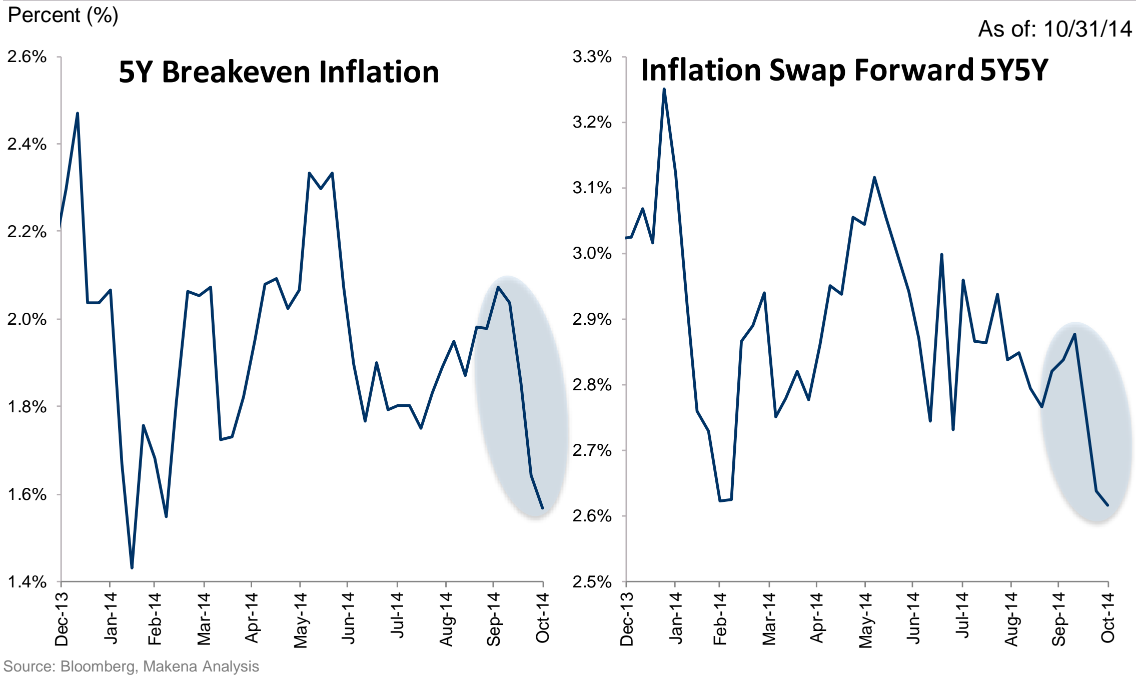


Figure 14: Market Measures of Inflation Expectations Have Broken Down

Understanding how inflation indices are calculated sheds some light on this phenomenon. Figure 15 below highlights the components of the US CPI. Note that approximately 1/3 of the CPI is in categories that are "traded" and therefore sensitive to exchange rate movements. The other 2/3 of the CPI are essentially services, which by their very nature are not traded (e.g. health care, retail, or education). Services have one important element in common no matter what the service – they are labor intensive industries. Therefore to generate inflation in services, one has to generate wage inflation.

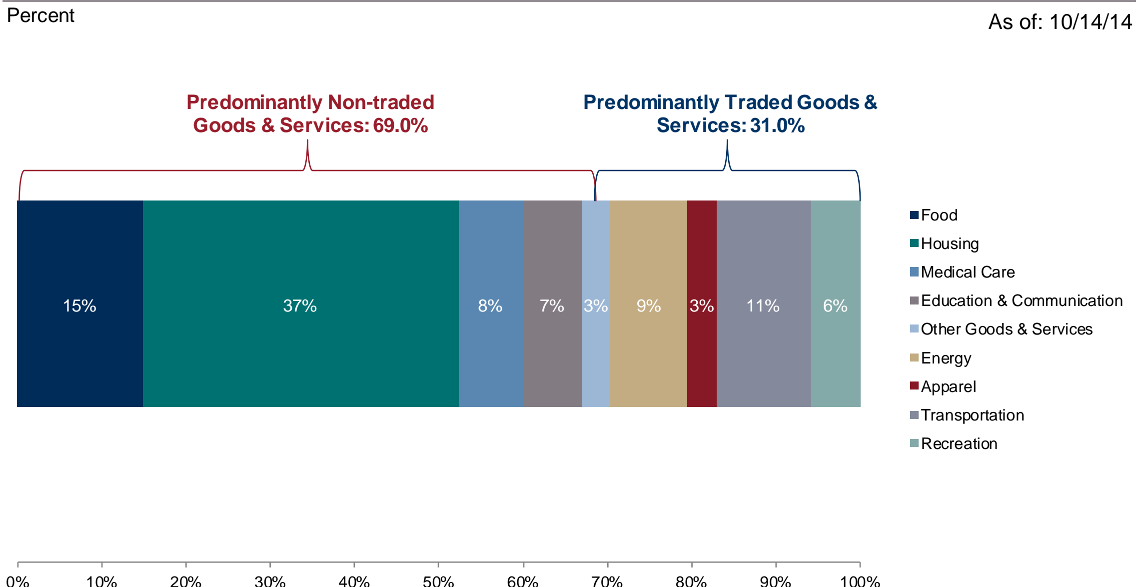


Figure 15: Traded Goods Constitute Only a Third of US CPI

Let us first look at the traded side of the equation. Given the strengthening dollar, it is not surprising to see that import prices are falling. Figure 16 below shows the import price index for goods being imported from Japan and China. We are essentially

"importing" deflation from some of our trading partners, so that the 1/3 of the CPI in the traded goods category has a negative impact on inflation. If, as we suspect, US dollar strength is sustained for several years, this segment of the CPI will struggle to generate any inflation for the foreseeable future.

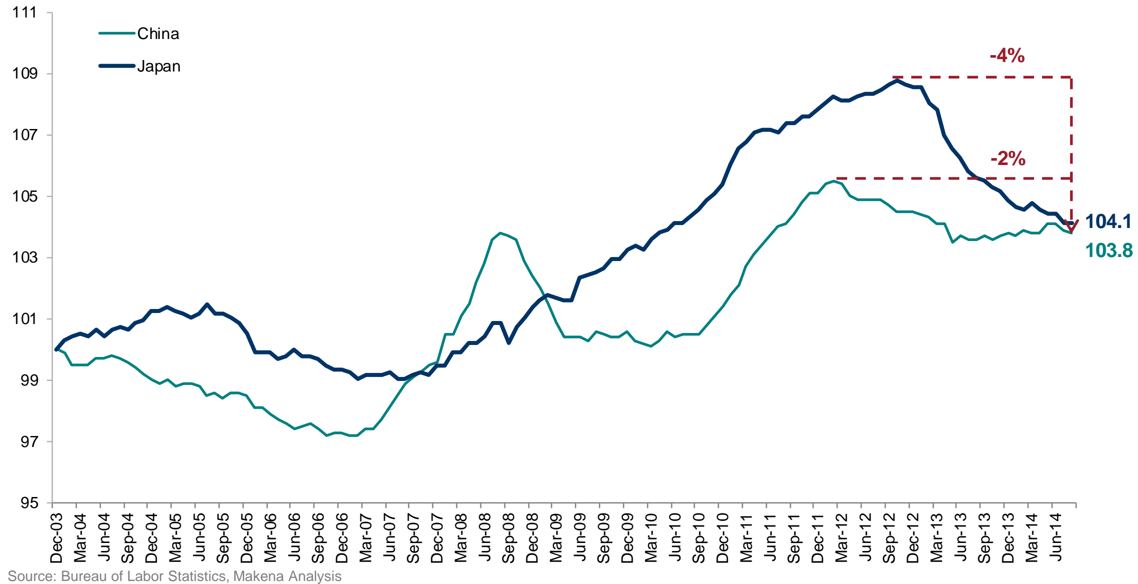


Figure 16: US is Importing Deflation Once Again

Therefore, the Fed will need to generate non-traded goods inflation in the 2/3 of the CPI that is driven by wages. Simple algebra, assuming zero inflation from traded goods and a 2% inflation target means that the non –traded services segment of CPI will need to be generating 3% inflation.[6] Said differently, if the Fed is to succeed in generating a target inflation of 2%, it will in effect need to get wage inflation to at least 3%. That is no small task as we show next.

Figure 17 below shows that there is still considerable slack in the labor market, especially so in the part-time segment – these are workers who wish they could work full time, and represent a "reservoir" of labor supply that will prevent inflation pressures on wages for the foreseeable future.

[6] (2/3)*3% + 0% = 2%

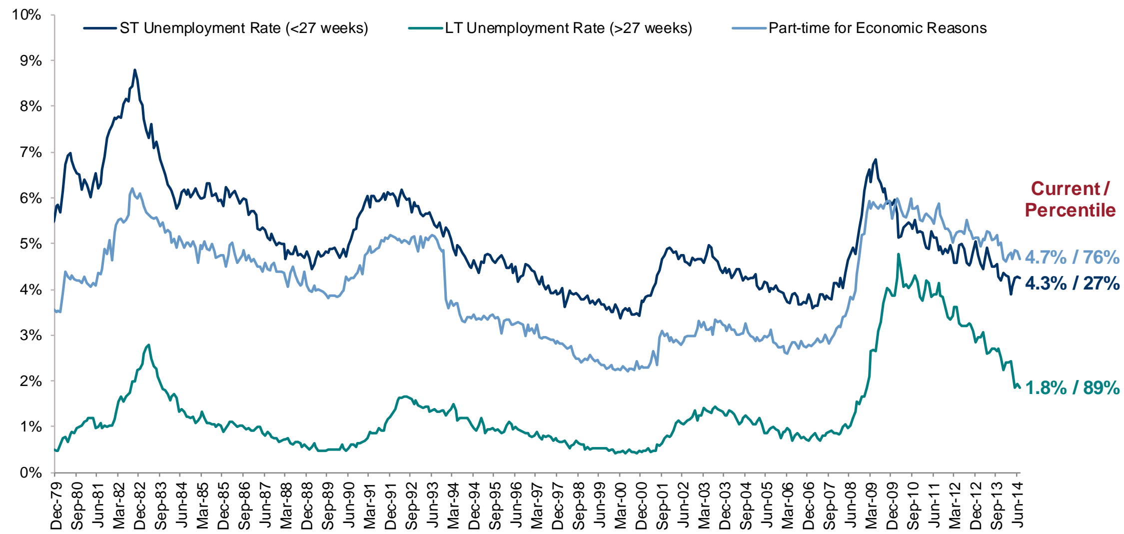


Figure 17: Broader Measures of Unemployment Reveal Still Considerable Slack

The Fed's Best Kept Secret

As a result, the Fed has been communicating unequivocally its desire to generate wage inflation in the economy. Figure 18 below shows data from Fed forecasts suggesting they intend to keep stimulating the economy through 2017 if needed, in order to drive unemployment below the so-called NAIRU.[7] The NAIRU represents the unemployment level below which wage inflation starts accelerating.

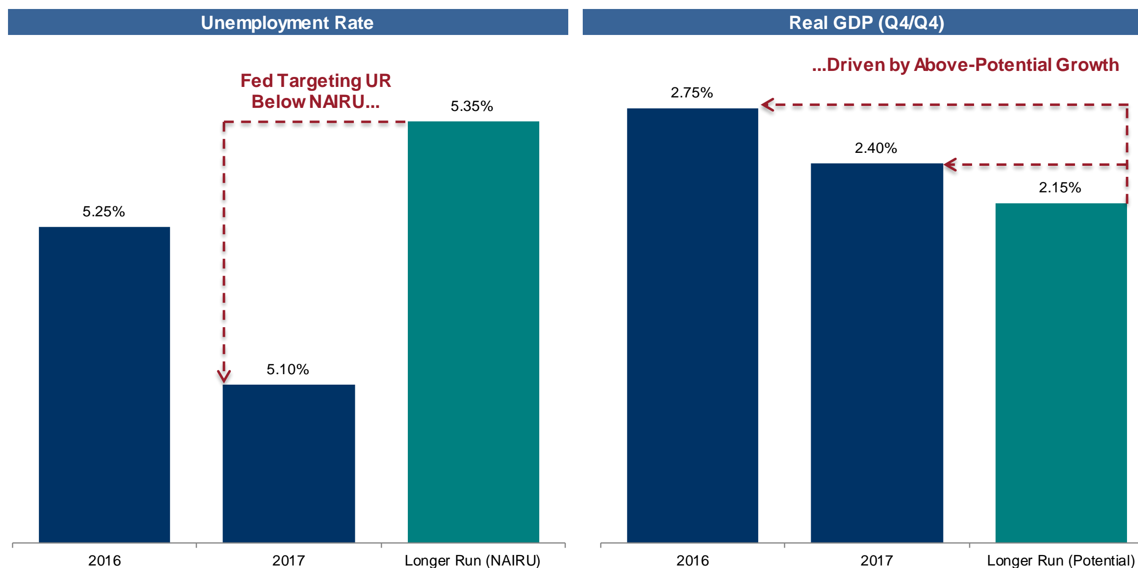


Figure 18: Fed Intends to Drive Unemployment below NAIRU to Achieve Inflation Target

Summarizing, the Fed has a tremendous task ahead of itself: to generate significant inflation in the domestic services sectors by goosing wages in order to offset deflationary forces coming from abroad. The challenge is particularly difficult given the situation in the labor market where significant slack still exists. Indeed, forward looking inflation expectations indicate that

[7] Non-Accelerating Inflation Rate of Unemployment

markets do not think that the Fed is up to the task. However, central banks have shown globally that they are not afraid to make bold policy choices to achieve their goals. It may be too early to write off the Fed.

Investment Strategy

Summarizing our findings above, we find that the following potential investment theses could be interesting:

i. *Continued overweight to US dollar in currency portfolios*
As described in detail in the commentary above, fundamentals are aligning for a substantial period of US dollar strength

ii. *US small and medium enterprise (including Private Equity) vs. large-caps*
With a strong dollar and therefore weaker commodity prices, the US consumer will have newfound disposable income to spend, favoring more domestically-oriented companies

iii. *Competitive EM over commodity EM (across asset classes)*
While weaker commodity prices hurt commodity exporting nations, it also benefits manufactured goods producing nations through lower input costs. The stronger dollar and increased disposable income available to the US consumer should also benefit manufactured goods producing nations

iv. *Long Europe exporters vs. Europe domestic-oriented (e.g. services and retailers)*
Between lower commodity prices and lower wages thanks to internal deflation across most of Europe, European exporters should see margins improve. The weaker Euro will also bolster exporters. Meanwhile, domestically-oriented companies will struggle to sell into households with very weak income and income growth outlooks

v. *Long US services / non-traded goods companies vs. US exporters*
The flip side of a strong dollar is that export-led US companies will likely see earnings and earnings growth hampered from overseas operations

vi. *Long EM reformers vs. laggards (across asset classes)*
Some countries have embraced reforms since the last few crises, embracing flexible exchange rates, minimizing interventions in their domestic economies, and in general fostering an environment where private industry can thrive. Those countries should be able to navigate volatility driven by exchange rate and the Fed's moves more successfully than the laggards who have not reformed

The Partners of Makena Capital Management

Analysis by

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