



Cross-asset implications of secular US dollar strength

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INTRODUCTION

Since the end of the Bretton Woods exchange rate regime in 1973, the US dollar has undergone protracted periods of appreciation and depreciation on foreign exchange markets. Such periods have been associated with a wide dispersion in the returns of various asset classes at both global and national levels.

Crucial to the performance of various asset classes are the factors that drive the dollar up or down. To take two examples: during the Volcker monetary squeeze (1979-1982), bonds, equities and commodities all generated negative returns. And the periods of heightened risk-on or risk-off since the 2007-8 financial crisis saw dollar depreciation (risk-on) and appreciation (risk-off) as well as significantly different return characteristics for assets depending on the prevailing risk environment.

The dollar trade-weighted index shows periods of broad dollar strength and weakness, but this index masks the considerable variations in the performance of various currencies against the dollar over these same periods. While some commentators have attempted to identify patterns of regularity in the US dollar's value, the reality is that there is considerable variation in the length of time and by how much the dollar remains strong or weak. During the Volcker monetary squeeze, the German deutsche mark, Swiss franc and Japanese yen all fell against the dollar. In contrast, the British pound sterling rose against the dollar until the spring of 1981, when the UK authorities began adopting a looser monetary policy than that of the US.

Our framework for analysing currencies focuses on valuation, monetary policy and market positioning. Among these factors, real exchange rates usually act as long-term anchors for exchange rate valuation, while monetary policy responses and market positioning are stronger determinants of exchange rates over the medium and shorter term. Indeed, the transmission mechanism for correcting large misalignments in real exchange rates is normally via changes in monetary policy as a result of the exchange rate influencing the output and inflation variables



that help define how central banks will react. So the dominant factor in dollar movements over the medium term has tended to be the relative monetary stance of the US Federal Reserve (the Fed) versus those of other central banks.

We are now entering an environment where the US is likely to pursue a relatively tight monetary stance compared with that of many other countries. In that context, we believe the main driver for the US dollar across a variety of scenarios will be the theme of divergent monetary policy. While there are many scenarios that could be used to model an environment of protracted dollar strength and its impact on various asset classes, we focus here on three scenarios that are all underpinned by divergent monetary policy for modelling such an impact over the next one to two years. Scenarios 1 and 2 have relatively high probabilities of occurring whilst the third scenario is more extreme (“fat-tailed” with a low probability but very high impact). The probabilities for all three scenarios do not total 100 as, while we focus on two very likely scenarios and one that is extreme, we recognise other scenarios could also occur. Our focus is thus on the broad impact of US dollar strength on the salient asset classes.

SCENARIOS FOR US DOLLAR STRENGTH

Scenario (1) Improving growth and asset performance in line with macro drivers (40% probability)

Here, we make the following assumptions:

- The Fed gradually accelerates the winding down of its very accommodative policy and begins to raise rates from mid/late 2015 onwards. The US economy grows around trend (we assume 3%) and inflation drifts back to target.
- The Bank of Japan (BoJ) and European Central Bank (ECB) maintain their relatively accommodative policy stances versus that of the Fed. The very loose monetary policy in Europe and Japan underpins a recovery in economic growth in both regions.
- Chinese growth stabilises around the authorities’ target of 7.0%-7.25% and China continues to rebalance its economy towards higher domestic consumption.
- Other developing economies moderately tighten their monetary policy to contain inflationary pressures arising from the depreciation of their currencies against the dollar.
- The eurozone and Japan tolerate the continued depreciation of the euro and yen against the dollar. Oil prices stabilise and trade back to around USD 85-100 range over the next few years.

In this scenario, the further divergence in monetary policy stances between the US, the eurozone and Japan is the result of the Fed tightening monetary policy while the BOJ and ECB are on hold.

Table One-GDP and inflation projections under scenario 1

	2015	2015	2016	2016
	GDP	Inflation	GDP	Inflation
US	2.8%	1.8%	3.0%	2.1%
Eurozone	0.9%	0.4%	1.2%	1.1%
Japan	0.7%	1.9%	0.9%	2.1%
China	7.0%	2.4%	7.25%	2.5%

Source: BNPP IP Multi Asset Solutions and year averages



Scenario (2) Aggressive divergence in monetary policy with an intensification of deflationary pressures outside the US (30% probability)

In this scenario, we assume:

- The Fed gradually withdraws from its highly accommodative policy and begins to raise rates from mid/late 2015 onwards.
- The positive impulse from weaker commodity prices boosts US economic growth to above trend but headline inflation remains marginally below target.
- The BOJ and ECB ease policy further relative to the Fed to prevent weaker commodity prices amplifying deflationary pressures.
- Monetary policy in the eurozone and Japan underpins a continued gradual recovery in both regions, while weaker commodity prices boost consumption.
- In China, annual GDP growth is slightly softer growth at around 6.75%-7.0% per annum as progress continues towards a rebalancing of the economy.
- Monetary policy responses vary in other developing economies depending on whether they are largely commodity importers or exporters.
- The eurozone and Japan remain relaxed about the continued depreciation of their currencies against the dollar.
- Oil prices stabilise around USD 70-80 per barrel.

Here, there is greater divergence in monetary policy due to the US tightening harder and the eurozone and Japan easing further, so the dollar would be relatively stronger than in Scenario 1.

Table Two – GDP and inflation projections under Scenario 2

	2015	2015	2016	2016
	GDP	Inflation	GDP	Inflation
US	3.1%	1.6%	3.3%	1.8%
Eurozone	1.1%	0.0%	1.4%	0.9%
Japan	0.9%	1.6%	1.1%	1.8%
China	6.75%	2.0%	6.8%	1.9%

Source: BNPP IP Multi Asset Solutions and year averages

Scenario (3) Chinese hard landing (7.5% probability):

Here, we see an environment where China GDP growth slows sharply to around 3.5%-4.5% and risk aversion dominates. For this scenario, we also assume:

- The Fed abandons its tightening programme and partially reverses policy.
- The ECB and BOJ both undertake further aggressive policy easing as the economies of both the eurozone and Japan are more exposed to China.
- The US dollar benefits both from risk aversion and its relative monetary policy stance.
- Whilst the yen would benefit from risk aversion in this scenario, we would expect it to be weaker relative to the dollar given its greater economic exposure to China.
- The euro would be weaker against both the dollar and the yen.



In such an environment, the Chinese authorities would ease monetary policy aggressively and widen the trading bands of the renminbi significantly; it may even choose to go for a free float. The knock-on effect of this would be significant safe haven capital flows into the US dollar. Commodity prices would drop much further and oil prices would stabilise at around USD 50-55.

ASSET CLASS IMPLICATIONS OF SECULAR US DOLLAR STRENGTH

Equity markets

We compare valuations between equity markets using Cyclically Adjusted Price Earnings (CAPE) ratios. This measure looks at the current market ratio against its historical average (see Table Four).

Table Four: Average and current Shiller CAPE ratios of major equity markets

	US	Europe	France	Germany	UK
CAPE (current)*	23.5	16.7	13.6	15.6	12.3
CAPE (historical average)	20.2	18.2	21.8	20.6	15.2
	Japan	Emerging (global)	China	South Korea	Taiwan
CAPE (current)*	23.6	14.4	14.7	13.9	14.8
CAPE(historical average)	43.1	17.8	21.2	24.7	11.8

Source: DataStream using MSCI data. Current data as at end of October 2014. Historical average reflects the full available history for each individual equity market.

Our analysis included examining the sensitivity of the earnings of a number of equity markets to the strength of the US dollar. We used quarterly data for the USD trade-weighted index and earnings, and lagged the earnings series by one quarter. Thus we compared first quarter dollar movements with second quarter changes in earnings. The results are shown in the beta changes in the first row of Table Five. Another way we measured the sensitivities of earnings to dollar movements was to compare the trend by measuring the r-square of the levels of the series. The problem here is that volatilities between earnings across different markets can vary widely and some series can trend, which again can bias results. Our third approach was to normalise the data by adjusting for volatility and trends; the results are in row 3 of Table Five.

Table Five: Earnings sensitivities versus the US dollar

	US	Europe	France	Germany	UK	Japan	China	South Korea	Taiwan
Beta changes	-0.35	-0.05	-0.25	-0.16	-0.31	-0.64	-0.41	-0.98	-0.47
RSQ-Level	48%	43%	45%	38%	51%	14%	50%	65%	58%
Normalised beta changes	-0.19	-0.03	-0.04	-0.03	-0.18	-0.08	-0.12	-0.10	-0.05

Source: end October 2014 BNP Paribas Investment Partners



The results of our analysis show a strong inverse relationship between dollar movements and changes in US, UK, China, South Korean and Taiwanese earnings. The impact for Europe is very marginal. While this result is relatively intuitive for the US equity market as a stronger dollar means foreign earnings of US corporates are reduced when converted into US dollars, counter-intuitively, it also suggests dollar strength weakens earnings for most other equity markets.

Table Six shows the relative impact of a strong dollar across our three scenarios. It seeks to capture the degree of translation effect of a stronger dollar on earnings in the major equity markets.

Table Six: Relative impact of a strong US dollar on equities across our three scenarios

	Scenario 1	Scenario 2	Scenario3
US	Negative	Negative	Strong negative
Europe	Positive	Positive	Strong negative
France	Strong positive	Strong positive	Strong negative
Germany	Positive	Strong positive	Strong negative
UK	Neutral	Neutral	Strong negative
Japan	Neutral	Neutral	Strong negative
Emerging (global)	Positive	Positive	Strong negative
China	Neutral	Neutral	Strong negative
South Korea	Neutral	Neutral	Strong negative
Taiwan	Negative	Negative	Strong negative

Source: BNPP IP Multi Asset Solutions

To explain these relative impacts:

US:

- As a stronger dollar hits US corporate earnings and given the high CAPE ratio of the market, we would argue that a strong dollar is likely to worsen the relative performance of the US equity market.
- The combination of a weaker dollar and a gradual tightening of monetary policy (scenarios 1 and 2) would damage the relative performance of US equities, though it is possible that in absolute terms the market could move higher.
- Under scenario 3, the combination of extreme risk aversion and a stronger dollar would hit the US equity market hard in absolute terms. In relative terms, we have scored the US a strong negative, the fact the other equity markets perform relatively better under scenarios 1 and 2 suggests that the relative change in the degree of US underperformance in scenario 3 would be less than the deterioration in the performance of other equity markets under this scenario.

Europe:

- Although the evidence shows that the impact of dollar strength on European equity earnings is low, our scenarios 1 and 2, where the ECB continues or accelerates its accommodative monetary policy, are likely to be favourable to the relative performance of European equities – particularly versus the US market, where the impact of a strong dollar is negative for earnings. Additionally, the lower valuation of European equities in terms of their current versus mean CAPE ratio is supportive of European equities outperforming US equities. UK:



- Although the UK is relatively cheap compared to its historical average, the evidence in terms of the negative value (Table Five) and magnitude of the relationship between earnings there and the dollar somewhat counter-intuitively suggest that UK earnings fall when the dollar is strong; we have thus ranked the UK as neutral under scenarios 1 and 2.
- Another factor that could act as a drag on the UK and may be partially factored into its current valuation is the risk of a centre-left government with a perceived anti-business agenda being elected in May 2015.

China, South Korea, Taiwan, Japan:

- Despite China and South Korea valuations being very cheap compared to their historical average, we ranked China and South Korea as neutral under scenarios 1 and 2. This is again because the negative value (Table Five) and the magnitude of the relationship between earnings and the dollar suggest earnings would be hit in these countries when the dollar is strong. This is less counter-intuitive than in the UK case, given that these countries operate quasi floating or crawling peg-type exchange regimes versus the US dollar.
- Similarly, we ranked Taiwan as a negative under scenario 1 and 2 because it is expensive against its historical average. Also, the relationship between the dollar and Taiwan earnings is negative, which, under its quasi floating exchange regime, should adversely affect corporate earnings.
- The evidence for Japan suggests that dollar movements do not significantly impact the average earnings of large Japanese companies, particularly when normalised. We see this as likely being a function of hedging activity and the tendency for large Japanese corporates (particularly car companies) to operate plants in the US that operate as a de-facto hedge to currency movements.

Finally, given the deterioration in the global environment under scenario 3, all equity markets would perform poorly as risk assets would be hit hard. Any relative difference in performance of the non-US equity markets should be assessed in terms of the shift in valuations of markets under scenario 1 and 2 to scenario 3.

Fixed income markets

While we have seen that divergent monetary policy is a factor contributing to dollar strength under all three scenarios, the effect of such divergence is more pronounced under scenarios 1 and 2. Under scenario 3, risk aversion is more dominant.

As tighter US monetary policy is foreseen under both scenarios 1 and 2, it is reasonable to assume that this will negatively impact US debt markets. Under scenario 1, both the ECB and BoJ maintain an aggressively accommodative policy stance, while under scenario 2 they both ease further to prevent commodity price deflation being taken into account in the price-setting reaction of economic agents.

Under scenarios 1 and 2, it is reasonable to expect US debt markets to underperform those in the eurozone and Japan in local currency terms; in the face of tightening by the Fed, eurozone and Japanese debt markets are likely to yield flat or marginally negative absolute returns under scenario 1 over the two years (2015/16), while the US will likely yield negative absolute returns.

Under scenario 2, with the ECB and BOJ easing further, we would expect these debt markets to generate either marginally positive or flat absolute returns with negative absolute returns for the US over the two-year period.



Given the role of risk aversion in underpinning US dollar strength under scenario 3, it would be reasonable to assume that US Treasuries and Japanese and German government debt would all deliver positive returns in local currency terms. However, given relatively higher nominal US yields, US Treasuries would probably outperform both Japan and Germany in local currency terms under scenario 3.

In terms of credit spreads we would expect both high-quality and high-yield bonds in the US to be stable under scenarios 1 and 2 (excluding the impact on energy companies in the US high yield universe which constitute between 15-17% of various indices as this sub sector would be negatively impacted under scenario 2). In Europe as with peripherals, investment and high-yield bond spreads would probably be stable under these scenarios and could tighten further under scenario 2. However, under scenario 3, credit spreads for high-quality bonds would move out sharply while high yields would blow out dramatically across the US, European and Japanese markets.

As UK money markets have priced out any tightening of policy till late 2015/early 2016 and even then only a modest tightening, the gilt market is likely to underperform the US, Japanese and German bond markets under scenario 1 and 2, largely because investors are likely to demand a political risk premium to hold gilts due to the likelihood of a centre-left government winning the UK general election in May 2015. Under scenario 3, the gilt market is likely to give local currency returns comparable to those in Germany and Japan, but to underperform the US. The UK curve is likely to remain positive across all three scenarios, but undergo a modest bull flattening in scenario 3.

Commodity markets

The relationship between the US dollar and commodities is unstable, with dollar movements being a key driver. Historically, financial market folklore has tended to argue that periods of dollar strength are associated with weaker commodity prices and vice versa. The rationale for this is based on periods of dollar strength being related to tighter US monetary policy and dollar weakness been associated with periods of easier US monetary policy and general reflation.

However, the transmission mechanism from US monetary policy to commodities has undergone considerable structural change over the last 15 years with the rise of China within the world economy to become a major influencer of commodity prices. This structural change has accelerated in the last five years as Beijing has sought greater policy autonomy via greater currency flexibility. The slowdown in the Chinese economy over the last 24 months has already dampened the demand for a wide range of commodities. This, combined with the bigger supply base resulting from the investment boom in commodity production over the mid-2000s, resulted in a marked weakening in commodity prices – even before a sustained rise in the dollar as a result of Fed tightening.

Under scenario 1, we assume China stabilises which, with stabilisation in Europe and Japan and some supply retrenchment, underpins a general recovery in commodity prices of between 10%-20%. Under scenario 2, Fed tightening combined with considerable over-supply and a modest Chinese slowdown leads to a further sustained weakness in commodity prices by some 10%-15%. Clearly, under a hard landing for the Chinese economy as per scenario 3, commodity prices would fall more dramatically (30%-40%).

Currency markets

Periods of US dollar strength have traditionally been associated with dollar-bloc strength (Australian, Canadian and New Zealand dollars). However, these currencies all benefited from China's integration into the world economy and the rise in commodity prices up to 2013, rising



even to the point of overvaluation in the Australian and New Zealand dollars. Now though, the fall in commodity prices and worsened terms of trade suggest these currencies will weaken. Indeed the rise of China and the severe misalignment of the Australian and New Zealand dollars are leading to a breakdown in the US dollar bloc. With the Mexican economy integrating more fully with those of the US and Canada as a result of the North American Free trade Agreement (NAFTA), the Canadian and Mexican currencies are more likely than those of Australia and New Zealand to trade in line with the US dollar over the next two years.

We expect the yen, euro and pound all to weaken against the dollar over this period. In contrast, some Asian currencies such as the renminbi, South Korean won and Taiwan new dollar have seen significant real appreciation of their currencies against the US dollar, largely via higher inflation (versus the USD) rather than nominal appreciation. Even under scenarios 1 and 2, there is a material risk that the South Korean and Taiwanese authorities may choose to weaken their currencies against the US dollar via greater flexibility in their exchange rate regimes.

CONCLUSION

This note focuses on the most salient top-down asset class implications of a strong US dollar under three different scenarios, two of which in our view have a high probability of occurring, the third being more extreme (“fat-tailed”).

In scenarios 1 and 2 which foresee tighter US monetary policy, there is a clear signal that US equities are likely to underperform European equities and to a lesser degree a number of emerging equity markets. Similarly, US debt markets are likely to underperform the Japanese and European debt markets. However, under scenario 3 both the US government bond and equity markets would outperform foreign markets, though the US equity market would perform poorly in absolute terms while the bond market would generate good absolute returns.

To some extent we are confronted with a new paradigm regarding commodities and their relationship with the US dollar due to China’s integration into the world economy over the last 15 years. A more aggressive tightening of US monetary policy in absolute terms than we envisage under scenario 1 and 2 would be more damaging to commodity prices than we currently model. Commodities perform very poorly under scenario 3.

In terms of currencies, a period of US dollar strength is unlikely to be accompanied by strong Australian and New Zealand dollars as the composition of the US dollar bloc has undergone a structural change with the advent of NAFTA and China’s integration into the world economy. Additionally, some Asian countries such as South Korea and Taiwan are likely to change their foreign exchange rate regimes and break with the US dollar as it appreciates over the next two years. China is likely to drastically modify its exchange regime under scenario 3 via significantly wider renminbi bands and it could choose to abandon the peg altogether.

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