

Country Code	Year	Ratio of Per-capita Income to US	Normalized Log Difference
USA	2011	1.00	0.00
UK	2011	0.75	-0.05
Germany	2011	0.65	-0.08
France	2011	0.60	-0.10
Japan	2011	0.55	-0.15
China	2011	0.45	-0.20
India	2011	0.35	-0.25
Brazil	2011	0.25	-0.30
Russia	2011	0.15	-0.35
South Africa	2011	0.10	-0.40
Spain	2011	0.70	-0.05
Italy	2011	0.68	-0.08
Canada	2011	0.85	-0.02
Australia	2011	0.90	-0.01
South Korea	2011	0.50	-0.12
Sweden	2011	0.62	-0.06
Norway	2011	0.68	-0.04
Denmark	2011	0.72	-0.03
Netherlands	2011	0.78	-0.02
Belgium	2011	0.82	-0.01
Austria	2011	0.88	0.00
Switzerland	2011	0.92	0.01
Portugal	2011	0.75	-0.05
Greece	2011	0.70	-0.08
Ireland	2011	0.80	-0.02
Luxembourg	2011	0.85	-0.01
Poland	2011	0.55	-0.15
Czech Republic	2011	0.50	-0.18
Slovakia	2011	0.45	-0.22
Slovenia	2011	0.40	-0.25
Hungary	2011	0.35	-0.28
Cyprus	2011	0.80	-0.02
Estonia	2011	0.45	-0.22
Latvia	2011	0.40	-0.25
Lithuania	2011	0.35	-0.28
Malta	2011	0.80	-0.02
Singapore	2011	0.95	0.02
Hong Kong	2011	0.90	0.01
Taiwan	2011	0.85	0.00
South Korea	2011	0.50	-0.12
Japan	2011	0.55	-0.15
China	2011	0.45	-0.20
India	2011	0.35	-0.25
Brazil	2011	0.25	-0.30
Russia	2011	0.15	-0.35
South Africa	2011	0.10	-0.40

Asymmetrical Quantitative Ease

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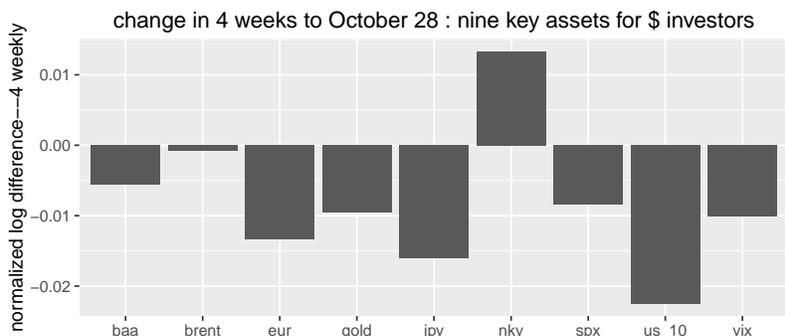
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- Market plumbing and asymmetrical QE
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US and other bond yields moved up sharply, as investors considered the possibility that inflation will respond to concerted policy efforts. The dollar rose all month against both the euro and the yen.

Oil prices dipped suddenly in the last week of the month. Getting Russo-Saudi-Iraqi cooperation, even in the self-interest of each, is hard. But it remains hard to believe the Saudis are not hurting at this point and so need a deal.

Equities fell and equity volatility jumped. Investors may be unnerved seeing both US bonds and equity sell off, which is unusual, but not surprising. All assets values may correct after inflation finally surfaces and we see the way to normal rates—finally.



Investor thoughts have moved from fear of excess public finance to fear of excess global deflation. Simply giving yourself more public goods is so easy a solution that it is obviously coming once suggested, and that realization may have been sinking in with investors. Market inflation expectations surged.

Markets remain jumpy. A sudden flash crash in

UK Sterling is one example, and there were others. Italian bonds sold off suddenly as the idea of spreading political malaise in Europe took hold.

Amid the furor, several prices reflecting a recovery in China are rising. Copper, iron ore, and coal prices are all up, and both the Chinese and Japanese equity markets are holding up, partly protected by weak currencies.

Market plumbing and asymmetrical QE.

Quantitative ease has become striking asymmetrical. Inspired by stand-alone national policy first in Japan, and then in the US, central bank buying of assets promised to force investors into taking riskier bets, hopefully funding investment spending. It was a long shot and has not worked out, mainly just driving up scarce asset values and enriching those who happened to own those assets.

Massive central bank asset buying can have a second effect: pushed far enough it will push down a currency's value. Extra cash is forced into the hands of local investors, forcing them to buy riskier local assets or *foreign* assets. Perhaps the most certain effect was to drive down the dollar up to 2011 when US quantitative ease overwhelmed all others.

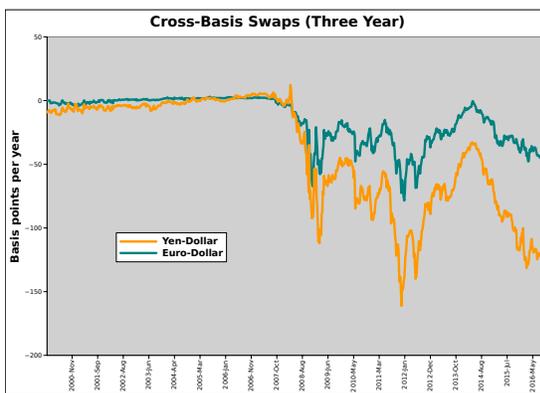
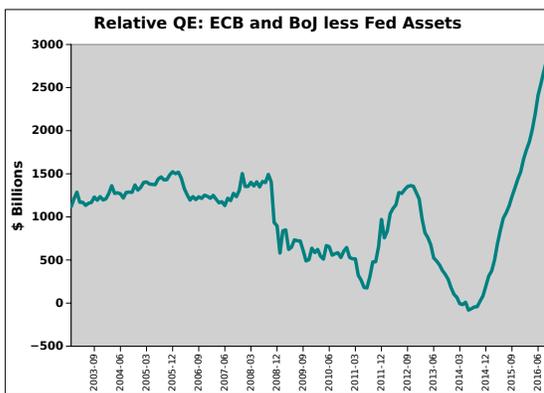
Now, however, Europe and Japan, where both have adopted forceful quantitative ease programs of their own. The shift to quantitative ease *outside* the US is striking and on a scale that may surprise. The net of US less EU plus Japanese central bank assets went from near zero in 2014 to nearly 3 trillion dollars today. A trillion here and a trillion there and we are talking about real money. See chart below.

Americans often buy foreign assets unhedged. Because American asset pools are so large, foreign assets are a relatively exotic animal for which the currency risk can be an attractive bonus. But for European and more so Japanese investors, the US

share in their portfolios is not a sporting matter, but a massive source of risk if not hedged. And so far, the bulk of foreign buying by European and Japanese investors seems to have been hedged.

The scale of these hedges are visible in many places. One is the additional cost of swapping floating rate Japanese and European funding for US, quoted as a negative swap spread. Banks that provide this hedge must fund themselves in the US market, driving up their costs and cutting the rate they can charge for funding in their home markets. Spreads have turned increasingly negative, matching or exceeding those of the crisis years of 2008 and 2011. But this time it is the costs of bank balance sheet growth that is doing it, probably not any panic on bank funding¹. See chart below.

Its always worth understanding the plumbing of our system as we learned in 2008. Here we have a major asymmetrical impact across countries of important scale. By forcing European and Japanese investors into buying massive US assets, these investors have been forced to hedge their risk. As their hedging costs rise far above any expected libor differences in US and Japanese markets, investors may eventually pause, which will push up US yields, or investors may go for open positions that could push the dollar up. At that point a disorderly dollar ascent is very possible. We are describing an old source of currency market instability, but now on a scale we have never seen before.



¹Borio, C., McCauley, R., McGuire, P. & Sushko, V. "Covered interest parity lost: understanding the cross-currency basis" in BIS Quarterly Review, September 2016

Inventory pop and elections finally come to the US. Going into the election in eight days, the last economic news voters got was of a jump in GDP. Nearly 3% growth in the third quarter was a pop that should have been expected around mid-year. A long period of accelerating over-building of inventory in 2014 was followed by decelerating inventory build, turning into an outright reduction in 2Q 2015. Often an inventory reduction on this scale triggers a recession. But not this time, because consumers enjoy solid real income gains, and we seem to have regained the ability to export.

But it was not a massive jump in GDP, as I once expected. Underlying spending growth is muted possibly near 2.5%, held back particularly by flat business investment and a slow start to the next housing cycle. As well, we know that car buying has been at least partly boosted by one-time replace-

EU: keeping up with QE. European growth seems to be tracking for recovery. GDP is growing fine through 3Q, Retail sales are up as workers get back their jobs and wages gains remain greater than inflation. With a great stock of unemployed, this healing process could run on for years. Inflation is turning up, ever so slightly, as sharp oil price drops fall out of yearly comparisons. But core inflation is barely turning up, which gives the ECB continued reason to err on the side of ease.

As well, worries remain about the deeper political glue holding the Eurozone together. The UK's proposals to leave, and upcoming votes in France and Germany that could produce fresh populist shocks to the European experiment are all ahead. Not to speak of weak banks in Italy and Germany. So Europe desperately needs even better economic news. As ECB President Draghi put it: super-low rates offer politicians the opportunity for structural change *and* a judicious move to fiscal ease. In fact, EU-wide fiscal deficits have fallen to around 1.5% of GDP as employment and taxes come back. There is clearly room to spend some of that to reinforce the expansion and these politicians are just the ones to do it.

ment needs deferred during 2008-9, and could well fall back. Finally, the unusually strong gains in net exports last quarter are almost certainly going to be given back as long as US growth outpaces that of our neighbors. But, against that, public spending is very likely to pick up under a new president.

So we are back again to waiting for a slow underlying recovery to ignite price pressures. Secular stagnationists say a new recession is possible, but we shall see if demographics and debt overhangs dominate an emerging public policy. After the election, a significant fiscal expansion is brewing, following years of obstructionism by extreme members of Congress. With such strong opposing forces—structural versus policy—at work, unstable expectations around inflation outcomes, and interest rate normalization, are bound stay with us.

Cooperation in Europe remains a challenge. The backward Wallonia region managed to hold up a multi-year CETA trade agreement with Canada, crippling the idea of a European entity that can function to negotiate international agreements. Ultimately the trade deal was patched up. But we have yet to see how Prime Minister May is going to be similarly dissuaded from what looks like a very disruptive Brexit on which she appears to be set. Given European history, we have to assume she will compromise, like Wallonia, to avoid the full economic shock otherwise pending, once she understands it, and for which a deep sterling decline can only partly compensate.

Lastly, the ECB's QE overdrive policy, like that of the Bank of Japan discussed above, has led to specific side effects. One of these is a looming shortage of government securities to be bought up. Another is the way US corporations have offered European investors securities in euros. Effectively corporate treasurers have partly replaced weak banks in helping investors adjust to the disappearing government debt. Only in this case the result shows up partly in bond spreads as well as the basis swap.

China grapples with bad debts. Activity is doing well, on the back of a suddenly renewed housing boom. Corporate earnings are up, industrial production, freight, car sales, and manufacturing diffusion indices are all up in a way that points to *more* than the officially reported 6.7% yearly growth in the third quarter. It must be some relief to have exited from what looked like a very rocky time in late 2005, a period of much slower growth than official numbers admit.

Once the worst of an economic correction is over, it becomes time to acknowledge credit losses in an orderly way. It will not be easy in a system that has a limited historic bankruptcy record and incomplete balance sheet statements. Not deterred, officials are proposing to jump start the process by swapping failed company debt for equity. That equity is to be held by asset management companies who in turn fund themselves with bonds. But who gets the swap, for how much, and who gets a haircut? Presumably this will be a semi-administrative

decision, with losses assigned to the original state bank lenders.

With that kind of credit loss hovering over the system, a surge in additional bank credit in September was unwelcome. Apparently, aspiring apartment owners are again panicking about missing out on new homes as prices surged 20%-30% in the large coastal cities. Buyers are now borrowing heavily, something that was not the case a few years ago, creating a new fragility. Officials reacted swiftly by sharply cutting loan to value ratios, in some cases to 50%.

Again, this is an over-financed economy, as shown by how funds wash back and forth restlessly between different speculative surges. Maybe a little of this froth is going to usefully finance the next generation of technology and innovation companies, but at what cost? I may not be the only one who takes a dim view of the process, and its experimental character, as we see capital flight developing again as the CNY hits new lows.

Bond buying investors did indeed begin to worry about a new-found determination by policy makers to get back to inflation. Super-low rates and massive bond buying are part of the effort, but so, too, will be fiscal ease. Together they have more than a chance of working.

Inflation is brewing, first in the minds of policy makers and soon, in commodity and other prices. As I have argued, once we pull out of deflation, that will require a fundamental adjustment in asset values now set for a world of zero discount factors and ever higher asset values. On reviewing the massive asymmetrical quantitative ease now in place, a factor I had not fully considered before, I have to conclude that one aspect of upcoming volatility could fall on sudden and extreme currency moves.

For example, one possible outcome could be a post-electoral push for US public spending to heal the wounded factions in our country. As GDP and wages begin to ratchet up, rate hikes become more likely, even if the Fed remains determined to hold back for a time. Bonds will sell off and the dollar will rise, to the sudden discomfort of equity investors. And that is how we get the equity correction I have been waiting for.