

Annual economic outlook for 2017



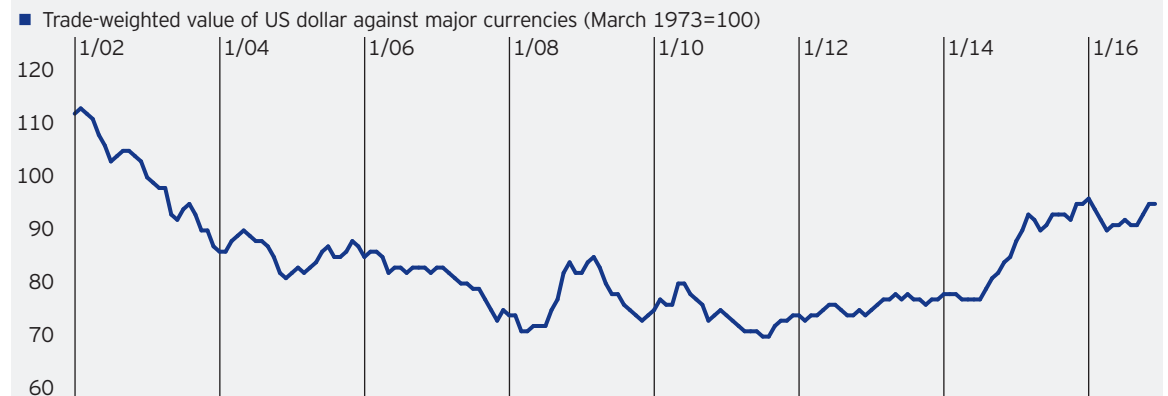
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Summary

- Under Donald Trump's leadership, US gross domestic product (GDP) is widely expected to accelerate. However, I expect only a modest upswing to 2.4% in 2017 and 2.6% in 2018, not a growth rate of 3.5% to 4.0%, as promised in his election campaign.
- Moreover, most of the incremental growth in 2017 will come not from fiscal stimulus, tax cuts or infrastructure spending, but from the strengthening business cycle upswing which Mr. Trump has had the good fortune to inherit.
- US consumer price index (CPI) inflation may rise moderately, but will not be much affected by the fiscal deficit. Unless money and credit growth accelerate, inflation will remain broadly unchanged at around 2%. In October, core personal consumption expenditure (PCE) was 1.7%; core CPI was 2.2% year-on-year.
- Following the 0.25% hike in the US federal funds range in December, I expect the US Federal Reserve (Fed) will raise interest rates two or three times in the year ahead, taking the target range to 1.00% to 1.25% by year end 2017.
- In the Euro-area, the outlook remains subdued in the short term, and still far from robust in the long term. Recently extended to December 2017, at a reduced rate of €60 billion per month from April 2017, the European Central Bank's (ECB) flawed quantitative easing (QE) strategy continues to fail to gain traction.
- As a consequence, the arguments for fiscal easing in Europe are becoming fashionable, but European Commission (EC) rules do not offer much scope for change, least of all fiscal expansion backed by monetary acceleration.
- Meantime, the Italian referendum result shows that political pressures for fundamental changes to the European Union (EU) are gaining ground.
- I expect eurozone real GDP to slow to around 1.2% in 2017, while inflation will continue to fall well short of the target of "close to but below 2%."
- The continued Brexit fallout will slow Britain's real GDP growth, particularly foreign direct investment (FDI) in the UK. Meantime, the Bank of England's (BoE) credit promotion policies implemented in August risk adding domestically generated inflation to imported inflation from weak sterling.
- I expect UK real GDP growth to be 1.5% and consumer price inflation to rise gradually toward 3% during 2017.
- In Japan the three-pronged program of Prime Minister Shinzo Abe has failed to reignite growth, while the Bank of Japan's (BoJ) quantitative and qualitative easing (QQE) program has failed to raise the underlying growth rate of broad money (M2).
- Consequently I expect Japan's economic growth rate will remain around 1%, and the economy will continue to hover on the edge of deflation.
- Among the emerging economies, there is also a divergence between commodity producers and manufacturers, with the former suffering from weak terms of trade, but the latter still awaiting a fully-fledged upturn in the developed economies that are the major buyers of their products.
- A number of emerging market (EM) economies have increased their debt levels substantially over the past eight years, requiring domestic or external debt workouts and delaying the process of recovery.

- China is a particular enigma. On the one hand, the authorities have permitted a very rapid growth of credit directed to the government and financial sectors, but on the other hand, overcapacity in basic industries such as coal and steel, and rising non-performing loans in the state-owned sectors, are constraining the growth of new investment.
- The result for China has been a series of mini-bubbles in equities (in 2014 and 2015), in the bond market, in parts of the Chinese real estate market, and most recently, in various commodity markets (e.g., soybeans, coking coal, iron ore and steel).
- On the external side, China is grappling with growing capital outflows that now outweigh the current account surplus. The overall payments deficit has forced the Chinese authorities to allow a degree of yuan depreciation, combined with intervention in the foreign exchange market (resulting in a decline in foreign exchange reserves) and the enforcement of tighter controls on capital outflows.

Figure 1 – US dollar likely to appreciate further



Source: Macrobond, data as of Dec. 12, 2016

- In spite of these short- to medium-term setbacks in the recovery process, my long-standing view has been that the current global business cycle expansion will be an extended one. The main reason is that subpar growth and low inflation would avoid the need for the kind of tightening policies that would bring an early end to the expansion.
- It is also the case that recessions or growth weakness in the EM economies are unlikely to derail the modest-paced recovery in the developed economies. While some companies or sectors cannot avoid being affected by the problems of the EM, the transmission of key fundamental forces – like monetary policy and balance sheet repair – still goes primarily from developed markets to EM, not vice versa.
- In addition, although the recovery in the US is already seven and a half years old, it is only now starting to take on the typical characteristics of a normal recovery; banks have been providing credit instead of the Fed, and businesses and households are in good financial shape and can resume normal spending momentum.

| Consensus economics | 2016 estimate | | 2017 consensus forecast (Invesco forecast) | |
|---------------------|---------------|-------------------|---|---------------|
| | Real GDP (%) | CPI inflation (%) | Real GDP | CPI inflation |
| US | 1.6 | 1.3 | 2.3% (2.4%) | 2.4% (1.6%) |
| Eurozone | 1.6 | 0.2 | 1.4% (1.2%) | 1.3% (1.1%) |
| UK | 2.0 | 0.7 | 1.3% (1.5%) | 2.5% (2.7%) |
| Japan | 0.7 | -0.2 | 1.0% (1.0%) | 0.5% (0.5%) |
| Australia | 2.9 | 1.3 | 2.7% (3.0%) | 2.1% (1.8%) |
| Canada | 1.3 | 1.5 | 1.9% (1.9%) | 2.0% (2.0%) |
| China | 6.7 | 2.0 | 6.4% (6.4%) | 2.1% (2.3%) |
| India | 7.0 | 4.9 | 7.5% (7.1%) | 5.0% (4.8%) |

Source: Consensus Economics, survey date: Dec. 5, 2016.

Introduction

Over the past several years, both the developed and emerging worlds have been responding to the long shadow of the great recession of 2008 and 2009, but the cycles in each area have diverged.

The recovery of the developed economies has been hampered by two factors: the slow process of balance sheet repair, especially among the banks, and the differing consequences of the implementation of two brands of QE. These factors have combined to create subpar growth, an agonizingly slow return to full employment, low wage growth and fractious electorates.

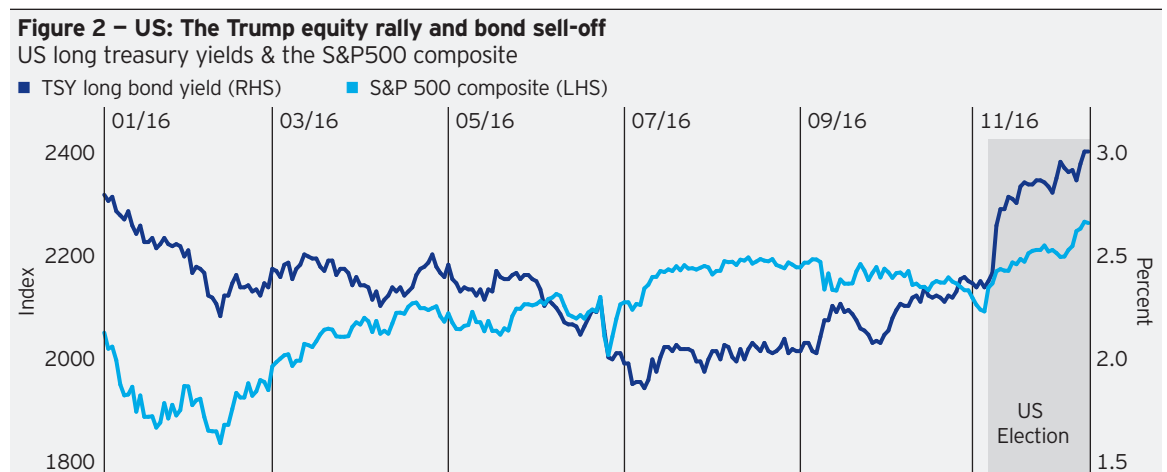
By contrast, the emerging economies implemented strong stimulus programs between 2008 and 2010. These proved so successful that some economies, including China, Brazil and Russia, had to reverse course and slam on the brakes between 2011 and 2013. As a result, between 2014 and 2016, they too experienced economic slowdowns, recessions, currency weakness and the pain of debt workouts.

For both developed and emerging economies, the outlook for 2017 will be closely related to how these differing problems are addressed.

United States

In the US, Donald Trump will assume the presidency on Jan. 20, 2017, with Republican control of both houses of Congress. He has proposed a range of fiscal stimulus measures, including personal and corporate income tax cuts and a novel form of infrastructure spending that relies primarily on leveraged private sector financing. The new administration, along with House Speaker Paul Ryan and Ways and Means Chairman Kevin Brady, also appears to be considering a switch to a destination-based tax system under which the tax jurisdiction will be based on where the goods are sold or where the services are performed, not where they are produced. This could incentivize a substantial shift to onshore US manufacturing in preference to the current tax regime which has allowed (some would say encouraged) offshoring of jobs and production.

These plans are also designed to boost growth and encourage the repatriation of capital held abroad. In addition, Mr. Trump plans to reform the Affordable Care Act (ending the incentive to employ workers for only 29 hours per week), lift the restrictions on energy production (liberating shale, oil, natural gas and clean coal), allow more oil and gas pipelines to be constructed and revise the Dodd-Frank Act on banking regulation. Astonishingly, he aims to achieve a growth rate of "at least 3.5% and as high as 4%."



Although there would be some savings from reduced regulatory burdens and the cancellation of US contributions to UN climate change schemes, the US federal fiscal deficit seems likely to widen – as it did under President Ronald Reagan. Beyond harvesting such direct cost savings, fiscal deficits can only be financed from three sources: by taxation, by borrowing or by the creation of new money and credit (as in the case of China’s fiscal stimulus of 2008 to 2010). Since taxation is by definition excluded, and the Fed will surely not cooperate in the unwarranted printing of money (I am assuming that the Fed, after raising rates in December, will probably raise them two or three times more in 2017), borrowing becomes the only means of financing these deficits. Not surprisingly, since the presidential election on Nov. 8, bond yields have risen, inflation expectations are increasing and the dollar has strengthened.

Abroad, Mr. Trump has said he will renegotiate the North American Free Trade Agreement (NAFTA), withdraw from the Trans-Pacific Partnership (TPP) and impose substantial tariffs on “currency manipulators” to stop the inflow of illegally subsidized steel and other key industrial materials at below-market prices. If the Trump administration was planning to switch to genuinely free trade from these broad, managed trade agreements, there would be clear benefits, but on the contrary, he appears to be embracing a model of even greater managed trade. For example, he plans to discourage specific US companies from offshoring jobs, a policy he demonstrated on Dec. 1 on a visit to the Carrier air-conditioning unit of United Technologies in Indiana. More broadly, he aims to restore employment in manufacturing, mining, logging, steel, aluminium and other heavy industries. Aside from running counter to the fundamental laws of comparative advantage, one problem with this strategy is that it fails to take into account, in the words of the 19th century French economist Frederic Bastiat, “what is seen and what is not seen” – namely the gains in terms of the few, visible jobs allegedly saved versus the small but widespread and invisible losses suffered by consumers or businesses who no longer benefit from cheaper imports. If this brand of job-oriented managed trade is applied across the board – without the tax changes mentioned above – the Trump administration will rapidly become mired in a mass of company-specific deals with very dubious overall economic benefits.

Mr. Trump’s program is aimed at rebuilding the core strengths of the American economy by giving a strong boost to US businesses and households. However, there is also a risk that his brand of “caudillo capitalist” micro-management or intervention in the decisions of individual firms could offset the potential macro-economic gains – lower taxes, infrastructure spending, fewer regulations and faster growth. In light of Mr. Trump’s hugely favorable economic inheritance – banks and households whose balance sheets are largely repaired, low inflation and a strengthening business expansion – it would be a pity if the micro was to dominate the macro.

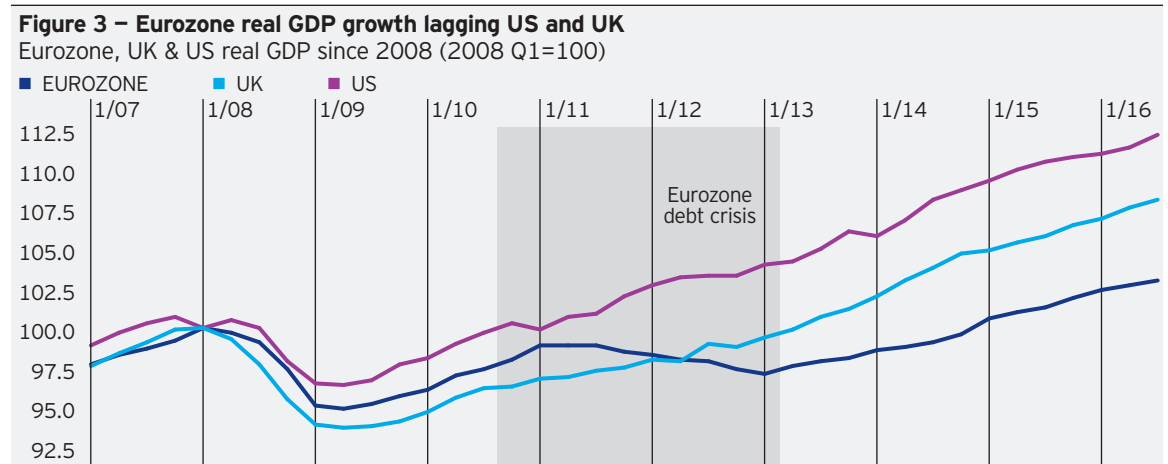
I expect real GDP growth to improve to 2.4% in 2017 and 2.6% in 2018, and I expect CPI inflation to reach 2.1% in 2017.

The eurozone

In Europe the outlook is much less favorable. The slow progress of bank resolution, the weakness of the ECB’s QE program and the consequent descent into negative interest rates are among the headwinds holding back economic recovery. Unemployment across the continent has only recently fallen below double-digit levels since September, and income growth remains anemic. As a result, disruptive populist and xenophobic political movements have mushroomed on the left and on the right, rejecting austerity and demanding greater local response. But with monetary policy controlled by the ECB in Frankfurt, the devaluation option eliminated and fiscal rules set by the EC in Brussels, there is very little scope for national government action.

Already in the referendum of Dec. 4, the Italian electorate has decisively rejected the proposals of PM Matteo Renzi for constitutional reform, leaving a political vacuum to be filled by yet another unelected administration. With conventional center-right or center-left governments in Holland, France and Germany facing elections over the next year, the risk of further disruptive political challenges is significant. At some stage, one or more of these discontented electorates could overwhelm the governing elite, posing an existential threat to the established order – at the national level, at the European level to the EU or even to the eurozone.

Taking a longer view of the current state of Europe, it has to be acknowledged that, in the aftermath of the crisis of 2008-2009, far too little was done to address the core problems. After such a crisis, there are two main sets of policies that the authorities need to implement: balance sheet repair in the key sectors, and the injection of liquidity into the financial system. In Europe these orthodox solutions were generally ignored while bureaucrats in Brussels devised simplistic and misdirected schemes, such as penalties for private equity firms, restrictions on bankers' bonuses and the imposition of a financial transactions tax. Meantime, the US, for example, proceeded to deal with the fundamental issues, recapitalizing its top 200 banks and embarking on large-scale QE programs to inject liquidity into the economy. The result is that even today, major German and Italian banks are struggling to meet minimum capital adequacy ratios, while the failure to inject adequate liquidity (either by the ECB's long-term refinancing operation schemes or by the QE plan started in March 2015) has meant that nominal spending across the eurozone is too slow for the banks to repair their balance sheets through organic growth, and too weak for government revenues to rise sufficiently to close persistent budget deficits.



Source: Macrobond, data as of Dec. 12, 2016

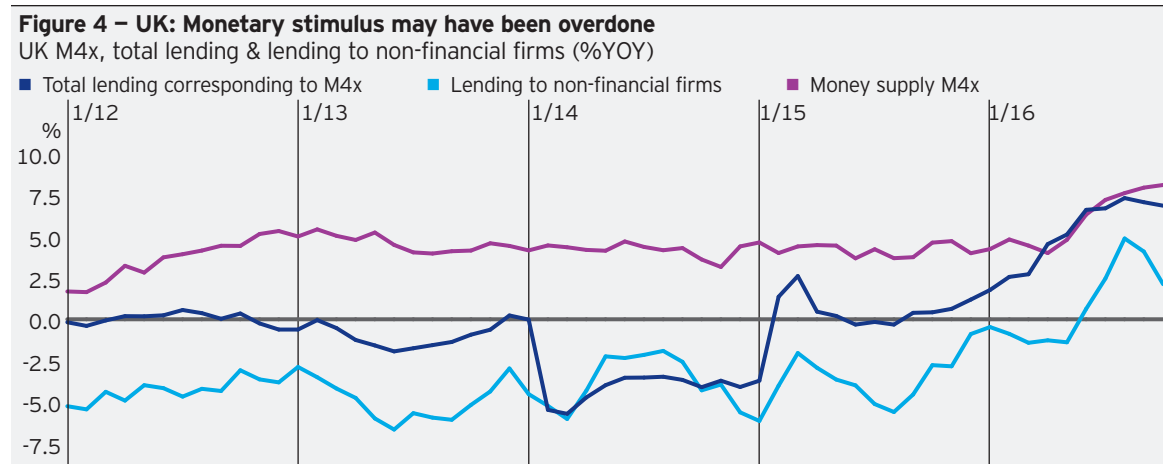
Zooming in to a more recent economic snapshot of the eurozone, real GDP for the single currency area as a whole expanded 0.3% quarter-on-quarter (1.7% year-on-year) in Q3 2016, but quarter-on-quarter growth in Germany and France was only 0.2%, although Italy showed an improved 0.3% increase. Despite much better growth figures in Spain (3.2% year-on-year) and Ireland (6.9% year-on-year) for the third quarter, these economies are not large enough to shift growth in the Euro-area as a whole to a higher trajectory. Consequently, in an effort to boost growth but also to raise the inflation rate for consumer prices from November's 0.5% year-on-year growth toward the target of just under 2%, the ECB decided to extend its Asset Purchase Plan (APP) or QE by €60 billion per month (down from €80 billion) from April until at least December 2017. However, M3 growth slowed in October to 4.4%, emphasising again the design flaws in the ECB's APP.

The consensus forecast for eurozone real GDP growth in 2017 is 1.4%, but my forecast is for just 1.2% in view of all the political hurdles ahead. On the inflation front, I expect inadequate M3 growth to continue, keeping inflation down to 1.1% (due largely to the weaker value of the euro), but falling far short of the ECB's target of "close to but below 2%."

United Kingdom

Compared with the eurozone, the British economy has been doing relatively well, thanks to gradual balance sheet repair in the household and banking sectors, assisted by two series of injections money (QE) by the BoE in 2009-2010 and 2011-2012. Real GDP growth has averaged 2.3% since 2013, and unlike the eurozone or Japan, deflation has not been an issue. However, the Brexit vote in June threatened the UK with the loss of tariff-free access to the EU market, declines in FDI and a potentially major blow to London's status as the financial capital of Europe. So far the brunt of the fallout has been reflected in the 14% decline in the trade-weighted index of sterling, but when the formal negotiations with the EU begin after March 2017, the currency could easily fall further. Such falls would raise imported prices further, which would be passed through to the consumer prices, undermining the real purchasing power of wages. Since UK consumer spending comprises 65% of GDP, the reduction in economic growth would be significant.

To counter these threats, the BoE introduced a package of measures in August to ease monetary conditions. However, it is now clear that the decisions taken by the Monetary Policy Committee (MPC) in August – to cut the base interest rate to 0.25%, to add £60 billion of asset purchases (additional QE) and to introduce a new Term Funding Scheme – were unwarranted. Since April, money (M4x) and credit growth have accelerated sharply to 7-8%, roughly doubling their growth rates, and consumer spending, supported by strong tourist figures, has been far more resilient than most pre-Brexit forecasts had expected. As a result, third-quarter real GDP increased by 0.5% quarter-on-quarter and 2.3% year-on-year, led by increases during the quarter of 0.7% in consumption and retail spending, and 0.9% in business investment. Moreover, the International Monetary Fund announced on Oct. 4 that they expected the UK to have the fastest growth of all G7 economies in 2016, a judgment that was supported by the release of another strong Purchasing Managers' Index figure for the huge UK service sector of 55.2 in November – the highest level since January.



Source: Macrobond, data as of Dec. 12, 2016

Given the steep falls in sterling since the Brexit vote, there is a clear danger that if current rapid rates of money and credit growth are allowed to continue, domestically generated inflation will exacerbate imported inflation in 2017 and 2018. In view of all the uncertainties after the Brexit vote, the right approach for the MPC would have been to authorize a QE program but to delay implementation, leaving the scale and timing of purchases contingent upon the flow of data. That remains the correct action to have taken because it may yet be the case in 2017 that investment spending falls and the real growth of consumer spending weakens abruptly as consumer prices rise ahead of wages, in which case some additional stimulus may be needed.

Nevertheless, as far as 2016 is concerned, money and credit growth have been accelerating since April, implying excessive expansion over at least six months. Fortunately, the die is not yet cast, and the situation could still be brought back under control, but every month that passes will enhance the risks of higher-than-target inflation in the year ahead. It is interesting to consider why, in the face of all the uncertainties of the past six months, British banks have suddenly sprung back to life, expanding lending and causing the deposit component of M4x to accelerate so quickly.

The answer is that banks have largely completed their balance sheet repair work, which means that they are no longer so constrained by capital requirements or by their dependence on interbank funding. The stress test results announced by the BoE on Nov. 30 showed that while “some capital inadequacies were revealed for three banks (The Royal Bank of Scotland Group, Barclays and Standard Chartered), these banks now have plans in place to build further resilience. The Financial Policy Committee (FPC) judged that, as a consequence of the stress test, the banking system is in aggregate capitalized to support the real economy in a severe, broad and synchronized stress scenario.”

With respect to funding sources, it should be recalled that at the peak of the crisis in 2008, British banks were in the incredible position of funding no less than £756 billion of lending, equal to 50% of GDP, from interbank, capital market or other non-deposit sources. (As an aside, permitting this to happen, alongside allowing bank capital levels to fall so low, constitutes a serious indictment of UK regulators and their methodology at the time. The evaporation of these non-deposit sources in the aftermath of the Lehman Brothers bankruptcy was the direct cause of the capital market freeze that did so much to intensify the recession.) However, since the start of 2016, UK banks have at last moved to a position where they have run down those interbank borrowings and are no longer dependent on interbank or non-deposit sources of funds for lending. These two factors explain the sudden return of “animal spirits” among the banks during 2016. It is now incumbent upon the MPC and the FPC to get things back under control.

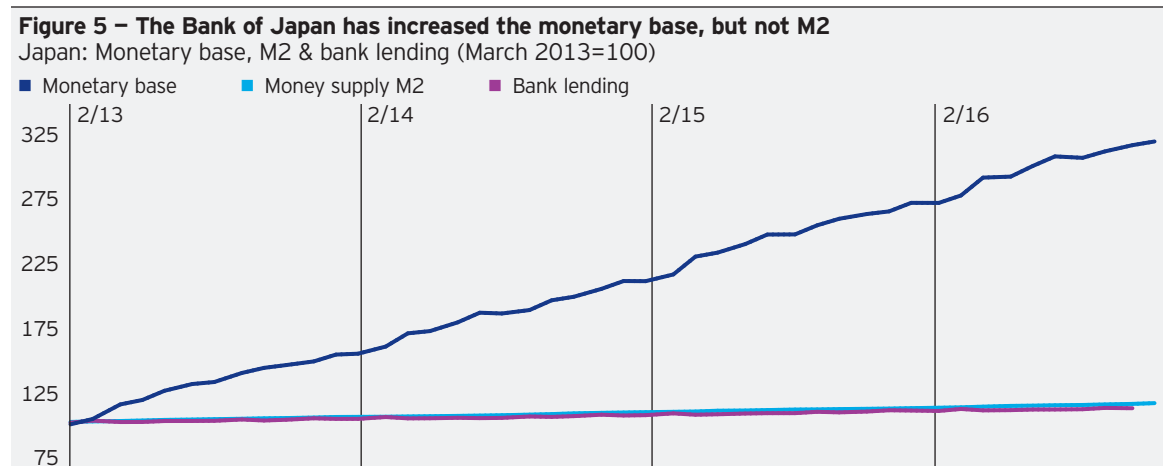
During the Brexit negotiations, it is highly likely that there will be considerable volatility in sterling and in the UK financial markets. As in Hong Kong in 1981-1983 during the Sino-British negotiations over the future of Hong Kong after 1997, the currency will take the brunt of the impact. Even so, despite all the uncertainties of the Brexit negotiations ahead, I expect 1.5% growth and 2.7% CPI inflation in 2017.

Japan

In Japan, as in the eurozone, balance sheet repair among the banks and structural reforms have lagged, while the impact of QQE by the BoJ has been much less than anticipated. The BoJ announced at the end of September that it was imposing a 0% cap on 10-year Japanese government bonds (JGB) yields, although it insisted that it would continue to buy JGBs at approximately the same 80 trillion yen p.a. rate and committed itself to “inflation overshooting.” However, changing inflation expectations alone is not enough. The fundamental problem is that the BoJ, like the ECB, buys most of its securities from banks instead of from non-banks, and the result is that while the monetary base has more than trebled since the start of QQE in March 2013, there has been almost no change in the rate of growth of broad money (M2). Since total spending is related to the quantity of money held by firms and households (or M2) and not to the monetary base, it is no surprise that growth has been weak, and deflation has been a persistent problem.

More broadly, the economic policies of PM Abe, known as “Abenomics,” which include structural reforms and fiscal expansion in addition to monetary easing, have not lived up to their promise, leaving the prospects for 2017 little better than for 2016.

Although real GDP growth jumped in the third quarter by 0.3%, taking the year-on-year growth rate to 1.0%, this was mainly due to external demand, with private consumption rising just 0.2% and business investment falling. Despite very low unemployment of just 3.0% and a tight labor market reflected in the 1.40 ratio of jobs-to-applicants, wage growth remains sluggish, prompting the PM to urge companies to match their 2016 wage increases next year. Notwithstanding the PM’s intervention, consensus expectations for total cash earnings growth in 2016 are just 0.6% and 0.7% in 2017.

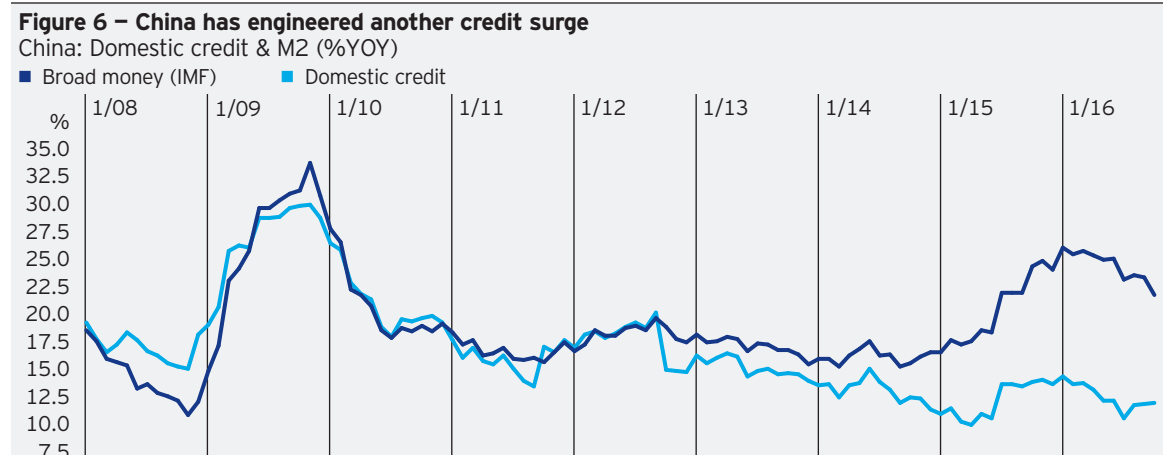


Source: Macrobond, data as of Dec. 12, 2016

On the inflation front, the headline CPI had been declining for six successive months until October, when the figure finally switched to +0.1% year-on-year. The so-called “core-core” CPI index, which excludes fresh food and energy, has slowed steadily during the year from 0.6% in January to 0.3% in October. I expect 1.0% real GDP growth and 0.5% consumer price inflation in 2017.

China and the emerging economies

Among the EM, excess credit creation and over-leveraging between 2008 and 2010 required a corrective process from 2013 to 2015, especially in Brazil, Russia, India and China. In 2016, that phase appears to have reached an end, as evidenced by the bottoming-out and start of a modest upswing in commodity prices in the first half of the year, together with renewed capital inflows into EM economies. However, China is a major exception, having embarked on another episode of credit expansion from the start of 2014. In the property market, as in other markets, the Chinese authorities have tried to cool any overheating with “prudential” controls, such as increasing down-payment requirements, slowing down the issuance of selling permits for property projects and sharply reducing the quota for property developers to issue domestic corporate bonds - instead of limiting the growth of credit itself. Since China is by far the largest EM, and the biggest buyer of commodities on world markets, the renewed surge in credit growth could yet cause another episode of inflation for China, as well as affect commodity prices globally. This would not only derail China's adjustment to a more consumption-led growth model, but it would also have serious knock-on effects on other emerging markets, especially commodity producers and China's neighboring East Asian economies.



Source: Macrobond, data as of Dec. 12, 2016

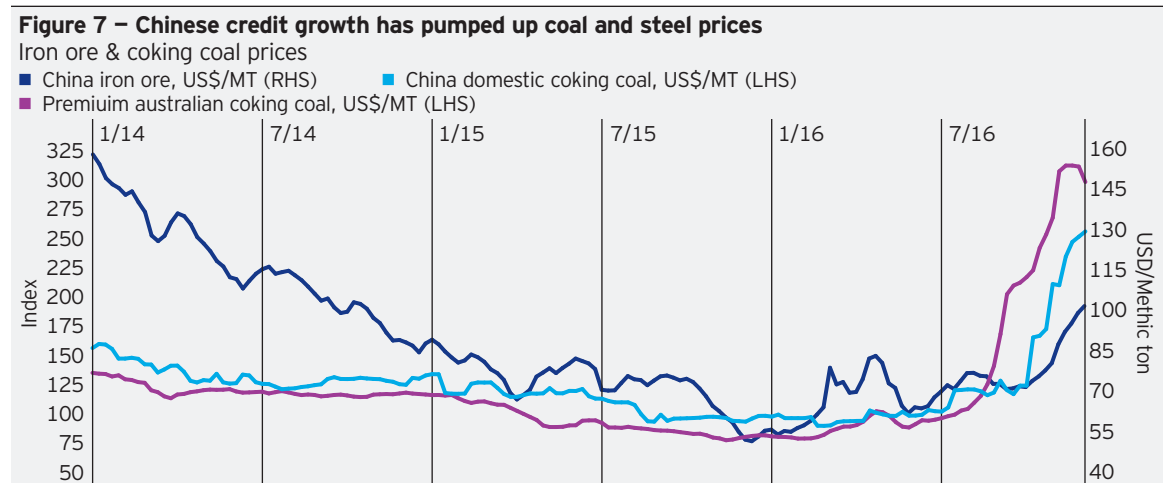
So far, the excess credit growth in China appears to have been largely contained within the financial and government sectors, but there are worrying signs that the credit explosion is starting to leak out into the broader economy. First, there have been a series of mini-bubbles in equities (2014-2015), housing and commodities (e.g., in soybean meal, PVC, iron ore, coking coal and steel futures). Second, the large, industrial, state-owned enterprises have seen a notable uptick in growth and profits. Finally, producer prices, which had been falling for four consecutive years, started rising again in October. The sooner the Chinese authorities address these issues, the less damage the economy and employment will incur, but further delays will exacerbate the adjustment when it finally occurs. Exactly how the Chinese authorities deal with the problem in 2017 (either by restricting credit and raising interest rates, so as to transmit the required adjustments, or by repression and direct controls) is one of the big unknowns for next year.

Commodities

I have been bearish on the outlook for commodity prices over the past three years, but the recovery of oil and metal prices in the first half of 2016 began to suggest that the bear phase might be coming to an end. Supply-side factors may sometimes influence individual markets, but they seldom affect commodity prices across the board. By far the most important driver of the outlook for commodities is the state of aggregate, or global, demand. In my view, total spending by developed economies will remain mostly subdued, although Mr. Trump's infrastructure spending plans have recently given a modest boost to sentiment. However, demand from EM remains critical, and in this segment of the market, China remains the biggest single influence.

China's efforts to maintain growth in the economy have led to another burst of credit injection since early 2014. The resulting increase in demand has led to increased optimism about the fortunes of the commodity sector, which has been reflected in the continued series of mini-bubbles across several commodity markets. The Chinese authorities believe speculation is behind these price rises. For example, domestic coking coal prices in China have more than doubled since August. The background is that since prices peaked in 2011, coking coal producers have steadily cut capacity, but this year has seen higher than predicted steel production in China, for which coking coal is a key input, and there have also been restrictions by Chinese authorities on the number of days that domestic coal can be produced.

Among the metals, copper had been the laggard until September, failing to bounce in-line with other metals. However, since October the price of copper has risen 24%. The three main explanations for this upturn in the copper price are: an increase in Chinese demand, the increase in production of electrical cars (which need four times the amount of copper wiring as a conventional car) and the expectation of increased infrastructure spending in the US. Some analysts are forecasting deficits of up to 400,000 tons in 2017 if Chinese demand holds up and authorities in Beijing continue to pump credit into the economy ahead of the 19th National Congress of the Communist Party in the autumn.



Source: Macrobond, data as of Dec. 12, 2016

To counter the growing speculative fever, Chinese regulators implemented a range of measures affecting coking coal, iron ore and steel traded on public exchanges to dissuade speculators. These have included raising trading margins, hiking transaction fees and imposing trading limits. Thus the Dalian Commodity Exchange raised the trading margin for coking coal and coke contracts three times in the space of a week in November. But the underlying problem in China is that domestic demand is being pumped up at a time of excess capacity in basic industries. It will not be too long before the authorities are forced to choose between generalized inflation and allowing a few firms to go out of business.

Turning to the oil market, for the first time in 15 years, OPEC finally agreed on Nov. 30 to cut production. Given the Saudis' previous policy of trying to drive the US shale industry out of the market by maintaining low prices, this can be interpreted as an admission of defeat. The agreement sets a production limit of 32.5 million barrels per day for an initial six-month period, a cut of 1.2 million barrels below October's output level. However, there is good reason to doubt the ultimate success of this agreement. Firstly, although Dec. 10 saw 11 non-OPEC countries agree to cut production by 580,000 barrels per day, this group has a long history of non-cooperation with OPEC targets. Secondly, Nigeria and Libya are exempt from the production curb, owing to the fact that there are armed conflicts in both countries. Thirdly, OPEC has allowed Iran to use a different baseline period for their production cuts to compensate them for the impact of Western sanctions over the past few years.

However, even if this compromise production cut agreement manages to hold, the oil market's structure has been fundamentally changed by the emergence of shale oil and other alternative oil sources. Some shale oil producers now claim to be profitable at US\$40 per barrel. The US rig count has started to rise again, ending a decline in the count since 2014. In 2016 it increased by 37% to 588 rigs. US oil output has also reversed its recent trend of decline and has since ticked up. All this shows there is at least one very large player in the market that will not play by OPEC's rules.

The reality is that OPEC is running into the fundamental problem that faces all cartels – how to sustain artificially high prices. Maintaining prices that are too high will always attract new entrants into the market, encourage the development of new technologies to extract the resource or lead to the development of cheaper substitutes. Ultimately this increases supply and lowers the price, thus defeating the cartel – and this is exactly what has happened in the oil market.

Conclusion

In the financial markets, there is a widespread misunderstanding about the stance of monetary policy. Most economists and analysts tend to judge monetary policy by the level or direction of interest rate changes. However, interest rates are not a good measure of the stance of monetary policy. If monetary policy (i.e., monetary growth) is eased, interest rates will fall initially, but later, after the economy recovers and inflation rises, rates will rise. The longer-term and more important effect (the “Fisher effect”) of easy money is higher interest rates, not lower rates.

Conversely, if monetary policy is tightened, interest rates will rise initially, but then after the economy has slowed and inflation has fallen, interest rates will fall. So the longer-term and more important effect of tightening monetary policy is lower rates, not higher rates. That is why interest rates today are highest in countries like Egypt and Venezuela, and why interest rates are lowest in countries like Japan and the eurozone.

It follows that what is needed to avoid deflation is faster growth of the quantity of money. It is not enough simply to lower interest rates to zero or negative levels, as the ECB and the BoJ have done. The reason is that by merely following market rates downward, central banks are essentially remaining passive, failing to provide the monetary expansion that an economy needs to grow. The low interest rates in the eurozone and in Japan are the result of the second phase of a prolonged period of tight money policy (that is, slow money growth), not the first signs of easier (that is, faster) money growth. It is hardly surprising that in these circumstances, Japan and the Euro-area have been confronted with deflation and negative bond yields.

With the Fed in the US having moved to raise interest rates (to normalize but not tighten monetary policy), once in December 2015 and again in December 2016, the critical issue will be whether money and credit growth can be sustained at 6-8% p.a. (as it was in 2016). If the commercial banks are able to maintain these money and credit growth rates, then even if bond and equity markets are temporarily jolted by further rate hikes, the economy will, in my view, be able to shrug off the interest rate normalization, expanding for several more years before the business cycle hits a peak.

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