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Despite numerous headwinds, the global economy should continue to grow with low inflation in 2020

Global overview

In several key developed economies, broad money growth has been accelerating for much of 2019. In the US, the commercial banks are effectively financing the large fiscal deficit, which in turn creates new money and has pushed the M3 broad money growth rate from under 3% year-on-year at the start of the year to 9.7% year-on-year as of November 2019. This is the highest rate of US broad money growth during this entire business cycle expansion. In the Eurozone, M3 broad money growth has accelerated more moderately since May 2018, from 3.4% to 5.7% year-on-year as of September 2019. This is still too low a rate of broad money growth for the Eurozone economy, although the increase in the rate of growth is positive news for the region. Brexit uncertainty has started to unwind, and M4x broad money growth has started to recover from the very low growth rates experienced in the first half of the year. The outlier among developed economies is Japan, where broad money growth (M2) has been slowing since 2017.

Unfortunately, the upturn of money growth in developed markets is not apparent in emerging economies. Global trade is often seen as the main headwind for emerging economies, particularly China, but we believe there are more severe domestic headwinds affecting the economies of China and India.

Figure 1
Consensus & Invesco forecasts for 2019 & 2020

(%)

Consensus economics	2019 Estimate		2020 Consensus forecast (Invesco forecast)			
	Real GDP	CPI inflation	Real GDP		CPI inflation	
US	2.3	1.8	1.8	(2.4)	2.0	(1.9)
Eurozone	1.1	1.2	1.0	(1.3)	1.2	(1.2)
UK	1.3	1.9	1.1	(1.5)	1.9	(1.7)
Japan	1.0	0.2	0.6	(1.0)	0.7	(0.6)
Australia	1.8	2.4	1.6	(2.1)	1.9	(2.0)
Canada	1.5	1.6	2.0	(2.2)	1.9	(1.8)
China	6.1	2.6	5.8	(5.8) ¹	2.7	(1.2)
India	5.8	3.5	6.7	(5.3) ¹	3.9	(3.8)

¹ These are our estimates of "official" real GDP; based on Invesco's activity indices we forecast lower actual growth rates.
Source: Consensus Economics, Survey Date: 11 November 2019.

United States

Despite widespread and misplaced anxieties about the risk of a recession in the US during the past year, the US economy continued to grow at a satisfactory pace of 2.1% p.a. in the third quarter of 2019. This was in conformity with our forecasts at the end of 2018. Many investors, commentators, central bankers and politicians, however, have been overly worried by continued low investment, slowing trade due to President Trump's tariff wars, and other geopolitical risks such as Brexit, and military conflicts and disruptions to oil supplies in the Middle East.

The reasons why these concerns are misplaced are that (1) the US business cycle upswing is still firmly intact, (2) US private sector balance sheets are still in good shape, (3) inflation remains low, and (4) monetary conditions have eased substantially during the past six months.

For 2020 I predict a continued upswing in US economic activity with another year of low inflation. In short, the US is still mid-cycle, not late cycle.

The basic point to grasp is that the business cycle upswing is the tide raising incomes, employment, expenditure and profits, while the geopolitical problems, trade wars, and similar concerns, while they may generate a certain amount of noise, are best regarded as merely waves on the surface of the tide. Like waves in the sea, although individual rogue waves may cause temporary disruptions, none is likely to upset the forward and upward momentum of the underlying tide.

For the year ahead, this implies a record eleventh and, from July 2020, twelfth year of economic expansion since 2009, the longest in recorded US financial history.

Taking these four contributors to the US business cycle upturn in order, the first point is the solidity and strength of the business cycle upswing. Since the business cycle is the underlying driver of asset prices, economic activity levels and employment, as well as inflation, it is vital to understand that a sustained upswing derives mainly from steady money growth and sound balance sheets. This is exactly the combination that US policy makers and the private sector have delivered over the past five years. So long as there is no destabilisation of this policy mix, there is no reason to fear a recession in the near term.

Second, since the global financial crisis of 2008-09, US private sector balance sheets in aggregate have deleveraged enormously, with debt declining from 296% of GDP in Q3 2008 to 226% in Q2 2019, a decline of 70 percentage points, putting the private sector debt-to-GDP ratio back to where it was in 2001 - a remarkable achievement. Mostly this deleveraging has occurred in the financial and household sectors, while there has been some modest leveraging up by the non-financial corporate sector. Nevertheless, some analysts and commentators continuously obsess about the level of student loans, about leveraged (i.e. senior secured) loans, and the volume of high yield and/or "covenant lite" bond issuance by the non-financial corporate sector. Yet the fact is that student loans amount to just US\$1.41 trillion, leveraged loans are US\$1.3 trillion, and high yield bond issuance has largely taken the place of bank loans.

These sums may seem large at first sight, but they are small compared with US\$46.3 trillion of total private sector debt. Moreover, the deleveraging by the financial and household sectors have far outweighed the moderate amount of leveraging up by the non-financial corporate sector to US\$15.5 trillion of debt, or 72% of GDP in Q3 2019, by the widest measure.

Third, inflation is low and should remain subdued through 2020. This means that the US Federal Reserve (Fed) will not be put in the position of being compelled to tighten monetary policy abruptly. On the contrary, the tendency has been for inflation to remain below target, and therefore the Fed has tended to keep monetary conditions accommodative, cutting interest rates three times between July and November 2019.

Finally, on the monetary front there has recently been a big change but very few people have noticed it. Since April 2019 US M2 growth has roughly doubled from around 4% p.a. to just below 8% p.a. (Figure 2). In my view this is the primary reason why Wall Street indices such as the S&P500 and the Dow Jones Industrial Average have regularly been hitting new highs.



United States (cont.)

The increase in money growth has been a kind of stealth acceleration because it has not depended on actions by the Fed, and it has not been a result of increased bank lending. On the contrary, bank lending growth is still stuck at around 4% growth. The broad money supply has been growing more rapidly because the banks have been buying more securities. When a bank makes a loan, it credits the deposit account of the borrower, adding to the money supply. Similarly, when a bank buys a bond or another security, it also credits the deposit account of the seller, again adding to the money supply.

The reason in turn why the banks have been buying securities is that there has been (1) a collision between the decline in banks' holdings of High Quality Liquid Assets (HQLA) - due largely to the US\$600 billion run-down of the Fed's balance sheet - and their need to meet growing Liquidity Coverage Ratio (LCR) requirements under Basel 3, and (2) the Treasury's switch in funding strategy.

During the fiscal year ended 30 September 2019 the US Treasury focused 75% of its gross issuance on Treasury-bills with maturities of under six months. For the banks this was like manna from heaven since T-bills qualify as HQLA. The result was large-scale purchases by the banks, swelling banks' deposits and leading to a surge in M2 growth from 2% annualised growth rate in May to over 12% annualised by early November. M3 has accelerated even more, rising to 9.7% year-on-year in November. Simultaneously, money market funds have grown by 25% during the past year while the repo market has also revived for the first time in a decade.

The reason why all this is important is that all previous episodes of faster M2 & M3 growth for a sustained period of six months or more have been accompanied by an upswing in asset prices (as we have been seeing on Wall Street) and followed by an acceleration of nominal spending on GDP (i.e. real GDP and later, inflation).

Eurozone

In many ways the problems of the euro-area are the opposite of those in the US. First, the business cycle expansion is only stutteringly under way. There has been a major setback in manufacturing over the past eighteen months, and in several regions of the euro-area unemployment is still too high.

Second, private sector balance sheets in the eurozone have not deleveraged adequately - especially in the financial sector - and the balance sheet adjustment or repair process has unfortunately been made more difficult by the decisions of successive EU/Eurozone authorities to reduce government debt and deficits first. The correct policy is to repair private sector balance sheets first, ensuring a healthy recovery of growth in the private sector, and then to repair government finances once tax revenues have returned to normal.

Third, inflation remains too low, well below the 2% target. While this reflects chronically weak demand (spending) in the eurozone as a result of inadequate monetary growth, on the positive side it means there is no need for the European Central Bank (ECB) to tighten credit or monetary conditions. However, under present policies there is little prospect of reaching a growth rate of domestic nominal spending that will enable employment and interest rates to return to a normal level. Meantime the combination of the ECB's negative interest rate policy (NIRP) and sluggish growth should continue to damage the long-term savings industry - savings deposits, life insurance contracts and pension funds - across the continent.

Eurozone (cont.)

Fourth, most of these phenomena are the result of the ECB and the euro-area central banks mistakenly relying on interest rates as their measure of the stance of monetary policy. Almost one hundred years ago the American economist Irving Fisher showed that interest rates follow inflation; they do not lead inflation. Inflation, in turn, is driven by monetary growth. Yet the ECB acts as if interest rates are the driver; this explains why it has pushed rates down into negative territory in the belief that if rates fall low enough, at some stage banks will start to lend and spending will return to normal. But banks in the euro-area remain risk-averse, lending is still anaemic, and the regulators are requiring banks to raise more capital (which will further slow lending and money growth). Sadly, in starting their analysis with interest rates the ECB policymakers are looking through the wrong end of the telescope.

To understand the problem with the ECB's strategy, consider the following. When money growth accelerates for a sustained period, interest rates fall. This is the first - but only a temporary - effect of easier money. However, as asset prices and incomes rise, the demand for credit strengthens and inflation expectations pick up, then interest rates rise. This is the second and more permanent effect of easy money. The first effect is to lower interest rates temporarily; the second and more permanent effect is to raise them.

Conversely, when money growth decelerates for a sustained period, interest rates initially rise. This is the first effect of tighter money, but as asset prices fall and income growth softens, the demand for credit weakens, and inflation expectations decline, then interest rates fall. This is the second and more permanent effect of tight money. The first effect is to raise interest rates temporarily; the second and more permanent effect is to lower them.

All this is in line with Irving Fisher's findings: interest rates follow inflation. The logical prescription, then, is to ensure adequate M3 growth (about 7% p.a.) to raise inflation, which in turn will restore interest rates to more normal levels.

If we consider the monetary history of the eurozone since 2005, the ECB first tightened monetary policy in 2006-08, raising interest rates. But then as M3 growth tumbled from 12.2% in December 2007 to 0% by December 2009, the eurozone economy slumped, and interest rates fell as the natural second stage effect of the tight monetary policy. Ever since then eurozone monetary growth has never recovered or re-accelerated enough to generate a fall in interest rates consistent of the first stage of easy money. In effect, the eurozone is still in the second stage of tight money (i.e. slow money growth), not the first stages of easy money. It is hardly surprising that a genuine, broad-based recovery in the euro-area has remained elusive.

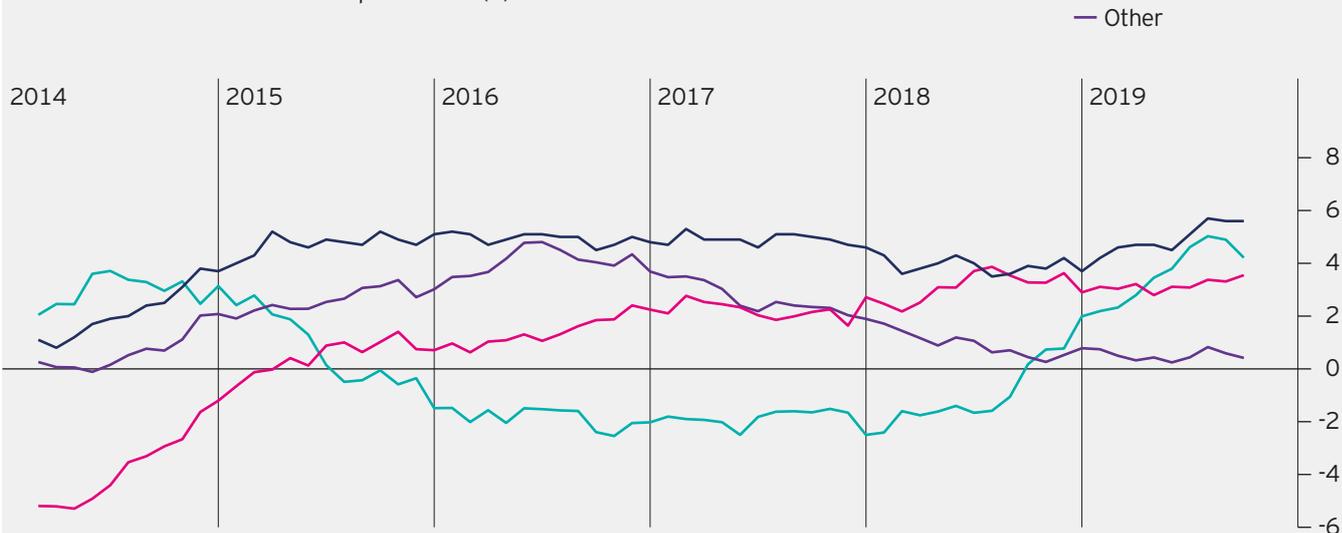
Recently, M3 broad money growth has picked-up somewhat, from 3.1% year-on-year in March 2018 to 5.8% year-on-year in October 2019, driven to a large degree by demand to use the Euro as a funding currency in carry trades. (Figure 3). The latest print of 5.8% however is still lower than the average annual growth rate of M3 in the ten years between 1998 and 2008, when growth averaged 7.5% year-on-year.

Our forecast is for real GDP growth to pick up marginally to 1.3% in 2020 and inflation to continue to undershoot the 2% target by a considerable margin, with consumer prices rising at just 1.2% in 2020.

Figure 3

Eurozone M3 growth has picked up modestly, based on net foreign assets not domestic lending

Eurozone: Contribution of counterparts to M3 (%)



Source: Refinitiv Datastream, as at 9 December 2019. M3 = credit to private sector + net external assets + others (net).

In response to growing evidence of a renewed economic downturn in the wake of the twice-delayed increase in the consumption tax (from 8% to 10%) on 1 October, the Japanese government of Prime Minister Shinzo Abe has announced a large stimulus programme amounting to 26 trillion yen (US\$240 billion) in gross terms to be spread over several years, of which 13.2 trillion are "fiscal" (i.e. incremental spending) measures. New central and local government spending will comprise 7.6 trillion and 1.8 trillion yen respectively, with the balance of 3.8 trillion yen having already been announced. The government claims this will boost real GDP by about 1.4 percentage points (e.g. from 0.6% to 2.0%).

To forecast what is in store for Japanese jobs and income in the year ahead it is important to assess whether this strategy can be successful in re-invigorating the Japanese economy.

On each of the last two occasions when Japan has increased the consumption tax (from 3% to 5% in 1997 and from 5% to 8% in 2014) the economy suffered a recession in the wake of the tax hike. Consequently, on this occasion, the government put in place numerous plans to counter the risk of a downturn. First, numerous food and beverage items were exempted from the tax increase. Second, a new 5%-point reward scheme was introduced for spending on retail products and services or at restaurants on condition that electronic payments were used, redeemable until June 2020. Unfortunately, the scheme suffered a chaotic start with three quarters of stores unable to implement the programme.

Despite all these measures, there was a surge in spending during September to take advantage of the old 8% consumption tax rate, with sales of necessities such as toilet paper, diapers, detergents and shampoos exceeding those in the same period of 2018 by two and a half times. It was a similar story with cases of alcoholic drinks. More costly durables such as electric bicycles saw sales jump 60% over the previous year. In reaction, sales since 1 October have slumped.

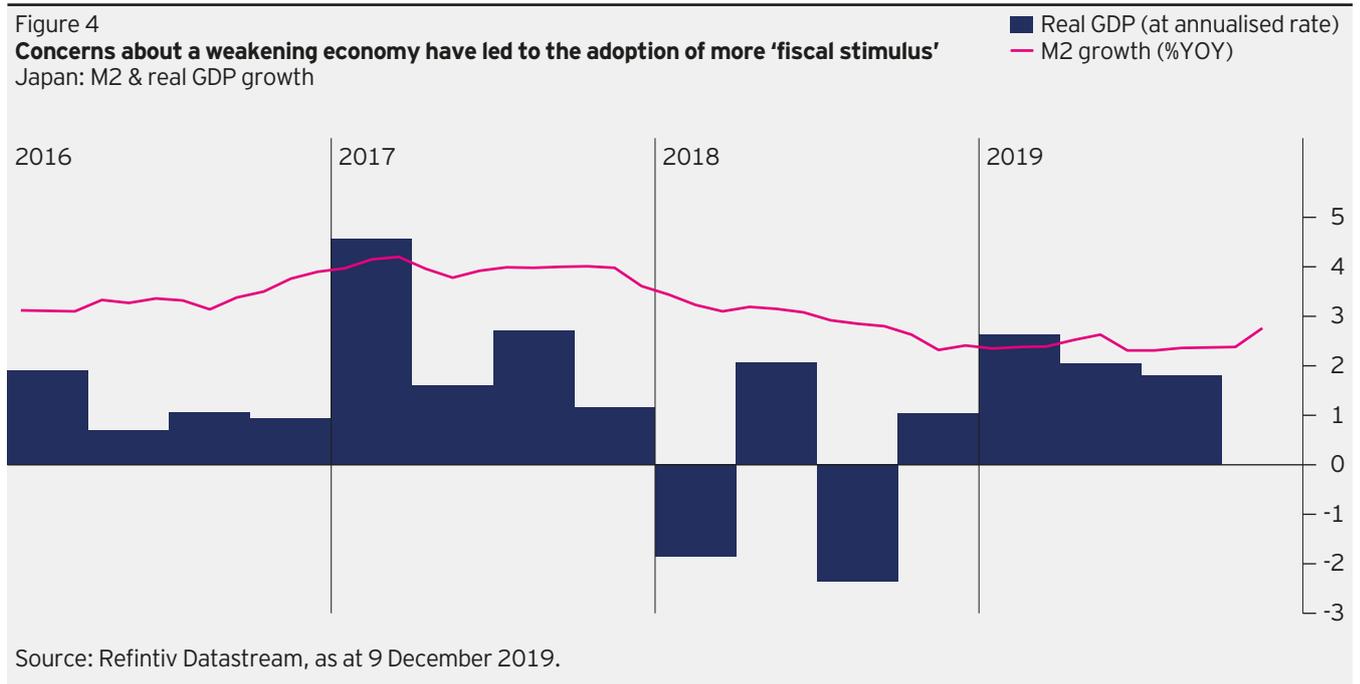
More fundamentally, it is highly doubtful if any fiscal stimulus programme can ever work unless it is accompanied by faster monetary growth. The reason is that there are only three ways to finance extra government spending: higher taxes, increased government borrowing and printing new money to finance the spending.

In the first two cases, funds are simply transferred from private sector consumption or investment to public sector consumption or investment with no increase in overall spending. Only if there is faster money growth will overall spending grow, in which case this is really a case of monetary expansion, not fiscal stimulus. It follows that unless Mr Abe's fiscal plan is accompanied by and/or directly financed by faster money growth in the banking system, it is highly likely to suffer the same fate as the twenty or more fiscal stimulus programmes over the past thirty years in Japan. Even after much bluster it is unlikely to change the trajectory of nominal GDP or nominal spending in Japan which is predominantly driven by broad money growth.

We therefore forecast a modest and short-term increase of real GDP growth to only 1.0%, with consumer price inflation remaining as low as 0.6% in 2020, driven by the monetary slowdown since 2017 (Figure 4).

Figure 4

Concerns about a weakening economy have led to the adoption of more 'fiscal stimulus'
Japan: M2 & real GDP growth



Source: Refintiv Datastream, as at 9 December 2019.

2019 was supposed to be the year that the UK exited from the European Union, with or without a withdrawal agreement. There have now been three extensions to that date of withdrawal from the EU, which now has been pushed back to the end of January 2020. Of course, this is contingent on the Conservative party winning a majority in the upcoming UK general election, which is due to be held on 12 December 2019. Latest opinion polls from YouGov point to a Conservative majority, although in recent weeks Labour have been closing the gap, which is now under 10 percentage points. The outcome of the UK general election became considerably less opaque as soon as the Brexit party declared that they would not stand in many constituencies, in a quasi-pact with the Conservative party to deliver some sort of Brexit. The latter still dominates the top issues concerning the UK electorate, with around 65% of pollsters affirming Brexit as the most important issue facing the country.

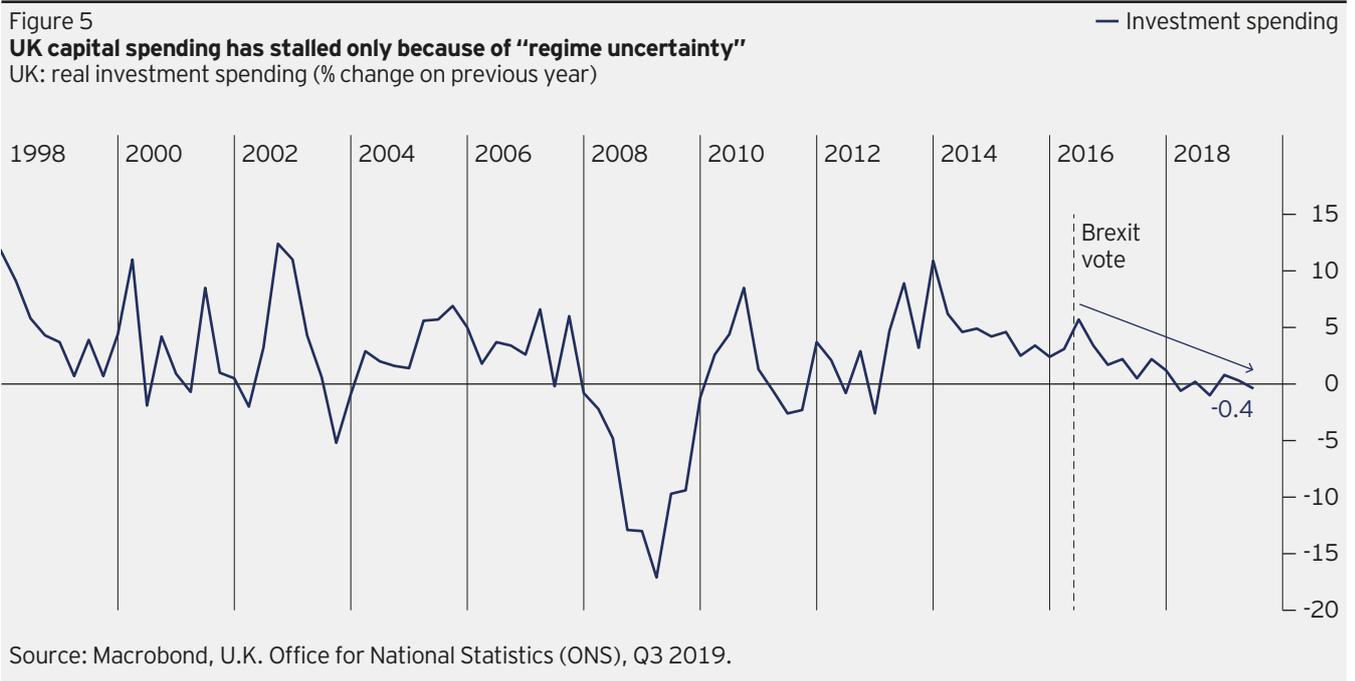
Despite the uncertainty that the vote to leave the EU has brought to the economy, economic activity has outperformed most predictions, driven by a healthy growth in consumer spending, reflecting trends seen in the US. Investment, on the other hand, has been in contractionary territory in recent quarters, as a lack of clarity on the future business environment hinders investment decisions by the private corporate sector. Until business leaders obtain a clear framework for the environment in which they will operate after the UK leaves the EU, their capital expenditure and hiring plans should remain at least partially on hold.

Lower investment growth has weighed on overall spending, with real GDP growth slowing from around 2% p.a. at the time of the referendum to 1% p.a. as of Q3 2019. If the Conservatives win a majority, and Boris Johnson's "oven-ready deal" passes quickly through the UK houses of parliament, investment spending growth should return to more normal rates, and with that, overall GDP growth.

Money and credit growth have continued to slow in 2019, as Brexit-related uncertainty capped bank lending to the real economy. The Bank of England's (BoE) main benchmark of broad money, M4x, or money held by households and businesses, has slowed from 7.4% year-on-year in August 2016 to slightly under 2% year-on-year in mid-2019. This slowing of broad money growth has naturally led to lower rates of inflation; core CPI has fallen from over 2½% year-on-year to around 1½% year-on-year.

At the BoE, this has led to disagreement about the future of monetary policy. In the 7 November 2019 meeting of the Monetary Policy Committee, two members, Jonathan Haskel and Michael Saunders, voted to cut Bank interest rate to 0.50%. If broad money growth continues to remain weak, future cuts in Bank rate may be necessary, however if Brexit-related uncertainty finally abates, it is probable that broad money growth will pick-up and return to more normal levels.

Assuming a Conservative majority in the House of Commons after 12 December, Brexit uncertainty should start to reduce, and real GDP growth should return to more normal rates. Inflation should remain lower than the BoE's 2% target and is likely to be below consensus for the first half of 2020. For 2020, we forecast real GDP growth of 1.5% and inflation at 1.7%.



China, India and other emerging market (EM) Economies

Growth in EM economies has slowed markedly over the past 18-months, from 7¼% p.a. to 3¼% p.a. Most of this weakness has been concentrated in EMEA (Europe, Middle East and Africa), and to a lesser extent in Latin America.

Portfolio flows from non-residents into EM economies remain bifurcated; non-resident equity flows have been falling consistently in the years following the global financial crisis and are currently very muted (especially outside of China), whereas non-resident debt flows remain robust, and have picked up throughout 2019 (especially outside of China and India). Clearly, trade disruptions are depressing economic activity, although there are domestic problems in two of the largest EM economies: China and India.

In contrast to the consensus which considers China's growth mainly at risk due to President Trump's tariffs on Chinese exports to the US, we believe the main reasons for China's economic slowdown are domestic. Between 2008 and 2016 China implemented a series of economic stimulus programmes, the most important being the huge initial increases in M2, credit and fiscal spending in 2008-10. One of the manifestations of the exuberant Chinese public spending policies was the emergence of a large shadow banking industry, amounting at its peak to 86% of GDP in 2016. The result was a leveraging up of the economy as private and public sector debt climbed from 117% of GDP in 2008 Q3 to just over 300% of GDP in 2019 (according to the Institute of International Finance).

In 2017 the authorities finally started to acknowledge the problem of excessive debt, shifting towards a broadly-based policy of de-leveraging. Since then, lending by the shadow banking industry has been abruptly curtailed, bank credit expansion has been reduced, and M2 growth has fallen to 8-9% year-on-year, the lowest growth rate for 40 years. Despite token cuts in interest rates and reductions in the reserve requirement ratio (RRR) for banks by the People's Bank of China (China's central bank), the monetary squeeze has remained in place. As in the Eurozone and Japan, interest rates are low, but money is tight.

Consequently, although pork prices have risen steeply due to an epidemic of African swine fever pushing up food prices by over 15½% and China's overall consumer price index to 3.8% in October, the producer price index (PPI) of wholesale goods traded by companies has been falling for the past four months, declining by 1.6% in October.

In effect, China has entered a period of deflation as it unwinds a decade of excessive credit growth and excess leverage. China's slowdown therefore is significantly more serious than appears in the official GDP statistics. Based on the Invesco index of economic activity in China, we estimate the economy was growing at just 5% in September, and will probably slow further, effectively creating a recession for an economy with a potential growth rate of around 6% p.a.

In India the story is broadly like that seen in China, although India's credit-fuelled expansion started earlier while the slowdown has been more spread out. Credit growth in the official banking sector in 2005/06 averaged over 31% and M3 peaked in 2007/08 at 23% p.a., however since then both have been on a prolonged slowing trajectory, decelerating to 9.8% as of 22 November. Since 2016 the non-performing loan ratios for the public sector banks have climbed inexorably to over 12% at the end of March 2019, and in the past two years there has been an intense squeeze on the non-bank financial companies which are very important for providing mortgages and loans for auto and motorbike purchases by individuals and small businesses across India. Reflecting the monetary and credit slowdown, our Invesco index of economic activity in India has slowed to 0.9% year-on-year for the three months ended September 2019, while consumer and investment spending have slowed, and inflation has declined to the 3-4% range.

In short, like the developed economies during the global financial crisis, both China and India are experiencing a credit crunch that is affecting both their formal and shadow banking systems. The consequence is a distinct slowdown of economic growth and inflation for both economies which should extend well into 2020 and probably beyond.

Figure 6

Indices of economic activity in China and India have slowed significantly



China, India and other emerging market (EM) Economies (cont.)

The slowdown of these two giants of the emerging world will inevitably affect the demand for commodities from other EM economies, the supply chains that they are linked to, and their demand for capital equipment and machinery from developed economies such as Japan and Germany. These developments are all independent of the trade and tariff disputes between the US and China, Europe or Latin America.

Turning to EM economies aside from China and India, there remain threats to certain economies, especially those which are the most exposed to global value chains and global trade in general. Invesco's Emerging Market Relative Risk model highlights two countries in particular: South Africa and Indonesia.

South Africa's economic woes are well known, as large fiscal and current account deficits have weighed on economic activity. Whilst broad money (M3) growth remains moderate at 7.3% yoy in October, inefficiencies will weigh on the real side of the economy and financing the current account deficit will remain challenging. Both problems will ensure that the recent economic weakness should continue into 2020.

In Indonesia, broad money (M2) growth has slowed from over 10% p.a. in 2017, to slightly over 6% p.a. in 2019. This has impacted nominal GDP, slowing from 10.1% in Q3 2018 to 5% in Q3 2019 Q3. Reflecting this, Indonesia's medium-term growth will likely disappoint to the down-side.

Most of the largest EM economies have experienced lower broad money growth in 2019 than in 2018, and far less than in 2017. Our forecast is for EM real GDP growth to fall from 4½% p.a. in 2018 to around 3½% p.a. in 2020.

Commodities

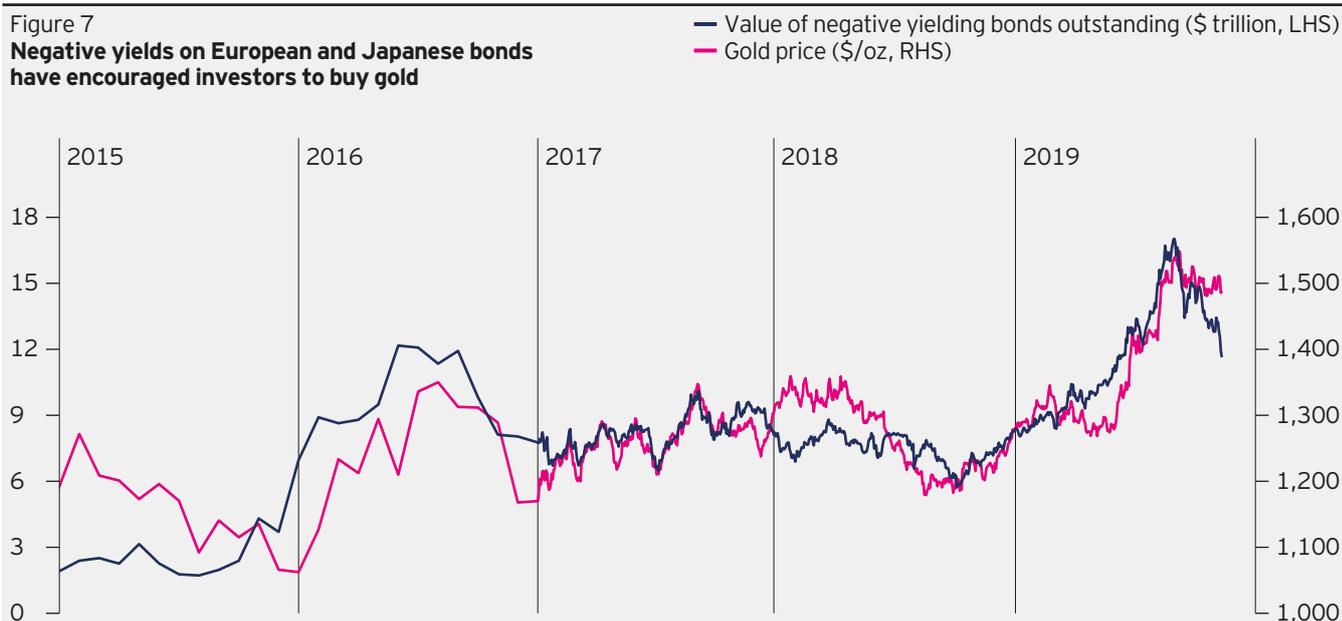
As money and credit growth have increased throughout 2019 in many developed economies, economic activity, as measured by nominal GDP should pick-up in 2020. However, in China and India, two markets which impact global commodity prices materially, money and credit growth continues to slow, putting the brake on economic activity. This implies little upside pressure for commodities such as metals and oil, where prices will continue to be dictated more from idiosyncratic factors on the supply-side. For example, on 14 September this year, drones attacked state-owned Saudi oil processing facilities in eastern Saudi Arabia. This caused a spike in oil prices of almost 15%, from US\$54.85 to US\$62.90; however, this was ephemeral as oil prices returned to normal levels within a few days. Broadly we would expect lower oil prices to persist through 2020 unless specific supply shortages arise again.

Perhaps surprisingly, the price of gold appreciated considerably in 2019. Gold has risen from US\$1,281/oz to US\$1,477/oz, a cumulative rise of around 15%. What is the cause of this price rise within an environment of generally below target inflation in most developed economies?

Clearly, global trade disruptions in the form of tariffs have led to investor anxiety, and other geopolitical concerns such as Brexit and the possibility of impeachment of President Trump have reinforced negative sentiment. However, in our opinion, the gold price appreciation has primarily been driven by the rise in the volume of negatively yielding debt, which topped US\$17 trillion in September 2019. There is a remarkable correlation between the gold price and the total stock of negatively yielding debt outstanding, as shown in Figure 7.

One rationale for the increase in gold prices is that as lenders have been forced to accept lower and lower returns, and eventually negative returns, they have increased their exposure to gold, an asset with zero nominal yield and no credit risk. As yields move higher in 2020 as an effect of a faster rate of money and credit growth in developed economies, gold is likely to underperform.

Figure 7
Negative yields on European and Japanese bonds have encouraged investors to buy gold



Source: Bloomberg, as at 9 December 2019.

Conclusion

The global economy in 2019 was subject to geopolitical tensions, trade wars and a prolonged downturn in the manufacturing sector, but because manufacturing in the developed economies generally accounts for only 15-20% of GDP while services account for 80-85% (although there are exceptions) the overall GDP of the developed economies continued to grow in most cases and did not suffer recessions. The fundamental reason for the continued expansions, however, was not the small size of manufacturing, but the fact that the forces underpinning the business cycle upswing - primarily monetary growth and the state of private sector balance sheets - remained more dominant than those other disturbances.

Geopolitical and other disturbances to the business cycle can, on rare occasions, be disruptive enough to precipitate a recession. However, unless monetary growth tightens for a sustained period, or unless private sector balance sheets become extremely over-leveraged - as they did in the US in 2008 - it is very unusual for the "tide" of the business cycle upswing to be overturned by the "waves" associated with such disturbances. In 2019 monetary tightness, extended balance sheets and macroeconomic imbalances played such a role. This analysis had underpinned our forecast of a continued expansion in 2019.

For 2020 we are once again forecasting another year of moderate expansion with low inflation for most developed economies. For reasons explained above some of the emerging economies such as China and India will continue to face headwinds, but, given that their potential real growth rates are significantly higher than developed economies at 5-7%, they too will not face absolute declines in growth in 2020. The year ahead, in short, should be one in which there will be much talk of an imminent recession or downturn, but we expect the outcome to be basically more of the same as we saw in 2019, not a year of recession.

John Greenwood and Adam Burton

9 December 2019.

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