

The marketing document is exclusively for use by Professional Clients and Financial Advisers in Continental Europe (as defined in the important information), Qualified Investors in Switzerland, Turkey and Russia and Professional Clients in Dubai, Ireland, the Isle of Man, Jersey and Guernsey, Malta and the UK. It is not for consumer use.



**John Greenwood**  
Chief Economist, Invesco

### Key themes

In this issue I have changed the usual format to address a number of key topics rather than discuss recent macro-economic developments and the immediate prospects on a country by country basis.

### Globally low inflation

Probably the most important theme that I have identified and successfully predicted over the past decade has been the continuing low rate of inflation in most developed and many emerging economies. Numerous forecasters have claimed that inflation would at some stage pick up, either as a result of large fiscal deficits and high government debt or due to labour markets tightening. Such forecasts have often been accompanied by predictions that the business cycle expansion, especially in the US, was approaching an end, recession was imminent, and that elevated asset prices would therefore be vulnerable to significant declines. Yet these predictions or expectations have largely been disappointed, posing a conundrum for the forecasting community. Across the US, the Eurozone, Japan, the UK, Canada and many other OECD economies, inflation has remained at or below 2% despite a prolonged business expansion and low levels of unemployment.

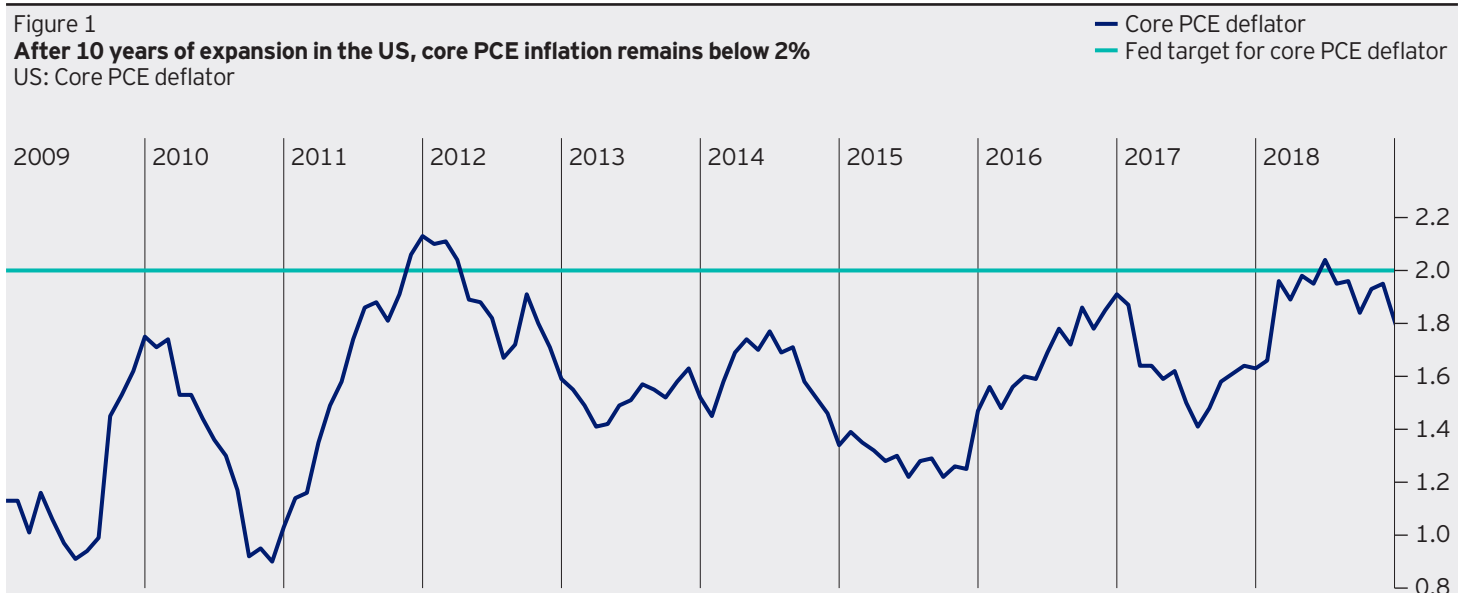
Where have the forecasters gone wrong? Why has inflation remained so subdued?

The fundamental error that forecasters are making is that they use inflation-forecasting models that rely on a "reduced form" analysis of inflation - that is, a proximate analysis of the causes of inflation. For example, large fiscal deficits by governments have in the past sometimes been associated with rising rates of nominal spending growth and inflation. In this case, forecasters would take a short cut - using a reduced form equation -perhaps forecasting inflation as directly related to the increase in the fiscal deficit after a period of several quarters.

Alternatively, tight labour markets and low unemployment were associated in the 1950s, 1960s and 1970s with wage increases and subsequently price increases. Here the reduced form analysis takes the form of the well-known "Phillips curve", the idea that as unemployment falls wages (and prices) invariably start to rise. Inflation is modelled as inversely related to the unemployment rate.

The problem is that whereas these models may have worked in the past they are not working currently. The flaw in both these short-cut approaches is that forecasters are ignoring the true origins of inflation, namely excess growth of broad money<sup>1</sup> and its normal counterpart, bank credit. In the past decade there has been essentially no excess growth of broad money and credit in the developed economies and therefore no significant or sustained increase in inflation. However, because the pre-conditions for inflation in forecasters' reduced form models - high fiscal deficits, or low unemployment - have emerged, the models and the modellers have continued to expect inflation sooner or later.

Figure 1  
**After 10 years of expansion in the US, core PCE inflation remains below 2%**  
US: Core PCE deflator



Source: Refinitiv as at 10 April 2019.

These broad statements are applicable to the US, the Eurozone, Japan and even the UK. In each case large-scale government borrowing in the wake of the GFC has replaced private sector borrowing, allowing varying degrees of deleveraging in the private sector, in turn enabling money growth to stay low and therefore inflation to remain subdued.

Similarly, a prolonged period of moderate economic growth has enabled employment levels to rise and unemployment rates to fall. But low unemployment does not necessarily imply overheating. It is perfectly feasible for an economy to grow at or close to its potential growth rates without inflation rising much - achieving a kind of steady state condition - provided that broad money growth remains consistent with low inflation.

For an early example of this phenomenon consider Japan in the period 1975-85 when M2 averaged 10% p.a., real GDP grew at 4% p.a., velocity declined steadily at 2% p.a. and inflation averaged 4% p.a. (considered a relatively low inflation rate in those days). It was only the currency agreements of the Plaza (1985) and the Louvre (1987) which derailed the Japanese economy and led to the disastrous asset bubble of 1985-89.

In short, provided that broad money growth across the developed world remains low and stable it should be entirely possible for the current business cycle expansion to continue for several more years with low inflation. Higher inflation, rising interest rates and a collapse of asset values is not inevitable - at any rate within the next two or three years.

<sup>1</sup> NB "Money" here does not refer to the monetary base or the balance sheet of central banks, which were greatly expanded by QE. It refers to the broad quantity of money held by households and non-bank companies which, despite large-scale asset purchases by central banks (QE), did not grow rapidly.

Figure 2  
Consensus & Invesco forecasts for 2019

(%)

Consensus Economics	2018 Actual		2019 Consensus forecasts (Invesco forecast)			
	Real GDP	CPI inflation	Real GDP		CPI inflation	
US	2.9	2.4	2.4	(2.6)	1.8	(1.8)
Eurozone	1.8	1.7	1.2	(1.4)	1.3	(1.5)
UK	1.4	2.4	1.3	(1.3)	2.0	(1.9)
Japan	0.8	1.0	0.7	(0.9)	0.7	(0.5)
Australia	2.8	1.9	2.3	(1.9)	1.8	(1.6)
Canada	1.8	2.3	1.4	(2.0)	1.7	(1.2)
China	6.6	2.1	6.2	(6.3)	2.1	(1.4)
India	7.1	3.6	7.3	(7.2)	4.1	(3.8)

Source: Consensus Economics, Survey Date: 11 March 2019.

## End- or mid-cycle?

Excess money growth and/or excess leverage are the two main underlying triggers for recessions. Therefore, if money and credit growth remain moderate and inflation stays subdued, it follows that there will be no need for central banks to tighten in such a way as to threaten a recession. Equally, provided that leverage does not build up excessively - as it did in 2003-08 - then there is no reason to expect a major financial accident similar to the bankruptcy of Lehman Brothers, which led to the freezing of credit markets and the collapse of spending and hence GDP in 2008-09.

On this basis, and in contrast to most forecasters, I maintain that the US economy is closer to mid-cycle than end-cycle. Growth has been moderate and inflation restrained, while the US Federal Reserve (Fed) has been gradually attempting to normalise interest rates. But the manufacturing slowdown of 2018 combined with the Fed's rate hikes last year set alarm bells ringing for some investors. In my view the US has been experiencing the kind of mid-course correction that occurred as a result of the interest hikes in 1994-95 or the milder correction witnessed in 2004-05. In both cases the business cycle expansion continued for several more years after the series of interest rate increases. The obvious implication is that the US economy - and those economies strongly affected by the US business cycle - can continue to expand for several more years. In turn that means that risk asset prices - equities, real estate or commodities - can rise further before the end of the current upswing.

## Yield Curve Inversion

Starting around November/December 2018, investors on Wall Street became alarmed at the mild inversion of part of the US Treasury yield curve. Financial markets have learned the mantra that yield curve inversions are followed by recessions. The result was a steep sell-off in equities and commodities in October and December, and a risk-off retreat into government bonds. Subsequently, and particularly after members of the Fed's Federal Open Market Committee started to indicate a switch in interest rate and balance sheet strategy, the equity and commodity markets recovered strongly.

Is Wall Street's mantra reliable? Do yield curve inversions invariably imply that a recession is imminent?

First, the shape of the yield curve depends on supply and demand in the bond and credit markets; it is not solely decided by policymakers at the central bank or at the national treasury.

Second, some yield curve inversions have been followed by recessions in the US (and elsewhere), but there have been numerous examples of recessions without yield curve inversions, as well as inversions of the yield curve without recessions. Numerous episodes from the past three decades of financial history in the US, Australia, Japan and Germany clearly demonstrate that the yield curve is not a reliable predictor of recession.

Third, when the Fed (or other central bank) deliberately tightens policy, slowing money and credit growth by raising short-term rates, this typically inverts the yield curve and will typically be followed by a recession. However, it should be noted that it is the slowing of money and credit growth that causes the recession (because this restricts spending power), not the rising short rates alone. In other words, an inverted yield curve will normally be followed by a recession only when it is a symptom of tightening monetary policy. Currently the data show that the Fed is not trying to tighten monetary conditions - only to "normalise" monetary policy.

The growth of US broad money (M3, for example) and credit has not slowed since the start of 2018. Moreover, the Treasury yield curve has inverted mainly because of changed views about inflation and growth resulting from the fall in the oil price last autumn and the slowdown in consumer price inflation. Lower growth and inflation expectations have led investors to buy more long-dated Treasuries (pushing down their yield). In addition the US government has been issuing more short-term Treasuries to finance the increased federal deficit, pushing up their yield alongside Fed's rate increases until

December. The Treasury shifted its bond issuing strategy to increase short-dated issues in response to banks' greater demand for safe assets under the new BIS (Bank for International Settlements) rule that banks must hold higher quality liquid asset ratios.

In summary, the recent yield curve inversion is more a symptom of shifts in supply and demand in the credit markets, not a result of Fed tightening. I therefore believe that it will not be followed by recession in the US any time soon.

## Modern Monetary Theory

MMT or Modern Monetary Theory is an approach to monetary theory and fiscal policy which has been much discussed in recent months. Its adherents say MMT justifies large increases in government spending which will ensure full employment without inflation. The theory relies on the experience of recent years to claim that any government that creates its own currency can run very large deficits without igniting inflation. In the US its leading proponents (such as Stephanie Kelton, adviser to Senator Bernie Sanders in his 2016 campaign) advocate schemes like a "federal jobs guarantee" programme, the "Green New Deal", and "Medicare for All" - all schemes that imply there is room for much more government spending without risking inflation.

However, a careful review of both theory and data make it clear that it has been low money growth that has kept inflation under control, and that, separately, large government deficits have only been financed at low interest rates because (a) inflation has been low, and (b) simultaneously the private sector was reducing its indebtedness, creating space for larger fiscal borrowing without the normal pressures of crowding out. In the absence of these unique pre-conditions in the aftermath of the GFC, however, the implementation of MMT could easily have resulted in the uncontrolled expansion of government debt, potentially rapid money growth and accelerating inflation.

In my view MMT has been popularised in recent years as a result of three key misunderstandings or mistakes about economic theory. First, MMT misunderstands the role of quantitative easing (QE), implying that there was somehow a "free lunch" available from the authorities that could somehow be distributed as free money to lower income groups or to those who are unemployed. Second, MMT confuses money (which is a stock or balance sheet item) with tax revenues (which are a flow item from the national income statement). Third, MMT confuses monetary policy, which has the role of creating the right amount of money in an economy, with fiscal policy, which

# United States (Continued)

has the role of dividing national income or spending between the public sector and the private sector. For clear thinking in these matters it is always best to separate monetary and fiscal policy.

The first point is that money is created in an economy when commercial banks make loans. However, in the aftermath of the GFC of 2008-09, commercial banks became risk averse, reducing their lending which in turn meant that the money supply could have declined precipitously. If the central banks had done nothing there was a real risk of repeating the Great Depression of 1931-33 when the stock of money declined by one third, in part because bank lending had declined by a similar magnitude and in part because there were runs on banks. QE was therefore introduced in 2008-09 by the Fed in the US and the Bank of England (BoE) in the UK, in effect enabling these central banks to create money at a time when the commercial banks were either not creating money or were actually shrinking the amount of money in the economy.

Now that US and UK banks have been recapitalised and repaired and are once again lending normally, money is growing and there is no need to continue with QE. In fact it would be a mistake to do so as it would risk creating too much money, and hence inflation. The fact that central banks can create money in an emergency does not mean it is a good idea to do so regularly (as MMT advocates imply).

Moreover, just because governments have been able to run large deficits without inflation in recent years does not mean it is always possible to do so. What has happened is that - thanks to risk aversion on the part of lenders and borrowers, plus new, tighter regulations on bank capital, loan underwriting and bank liquidity - overall money growth has remained slow keeping inflation low. Meantime, households and financial institutions in the private sector have been reducing leverage, allowing governments to increase their indebtedness. Monetary restraint has dominated fiscal expansion.

The second and third points can be taken together. MMT believers tend to conflate money created by the central bank with revenue available to the government, making out that money created by the central bank can be deployed by the government just like any normal stream of tax revenue or debt issuance. But the "money" that central banks created via QE was not "income" or government revenue or a free lunch available to be distributed to the unemployed, to those requiring medical treatment or to anyone else. It was a monetary operation that created a deposit liability against the purchase of a security from a non-bank entity (such as a pension fund or insurance company), in turn representing the hard-earned funds of an individual or corporation. At some stage the security will need to be sold back to the non-bank private sector by the central bank to reduce excess reserves in

the banking system and ensure that broad money does not start to grow too rapidly. Once the QE money created by the central bank has served its purpose it will need to be withdrawn; it will not be available as a free hand-out.

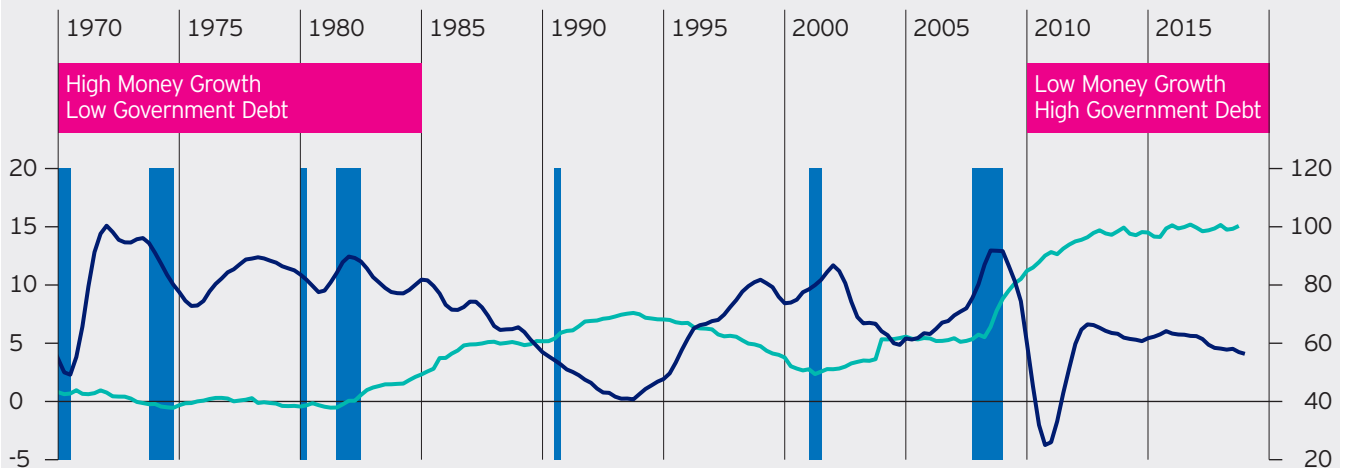
In sum, the task of a central bank is to ensure that the supply of money to the economy - whether via the banks or via the central bank - is neither too much nor too little but just sufficient to meet the inflation target, whereas the task of any democratic government (in a budgetary sense) is to ensure that revenues and expenditures are broadly matched over the cycle, and that the share of government spending as a share of total spending or GDP is in line with the wishes of the electorate. By confusing monetary and fiscal policy or treating them as if they were one and the same, MMT threatens to undermine the separate contributions of each to sound and stable finances.

Figure 3

### Slow money growth has prevented high levels of government debt from creating inflation

US: Growth of M3 & government debt

— M3 & Proxy M3 (12M MAV, LHS)  
— All gov't debt/GDP (% , RHS)  
■ Recession



Source: Refinitiv as at 10 April 2019.

## Temporary slowdown or chronic deficiency of demand?

The manufacturing downturn in the Euro-area during 2018 has been particularly severe in some of the capital goods industries as well as in the auto sector. The question is whether it will prove to be a temporary period of weakness, or whether it is symptomatic of a deeper, underlying shortage of aggregate demand.

Aggregate demand or total spending on goods and services in any economy is ultimately driven by the rate of growth of aggregate purchasing power, which essentially means the growth in the quantity of funds available for spending, and the preferences of the holders for how much they choose to hold relative to income (i.e. the income velocity of circulation). In the Euro-area there has been no problem with the behaviour of velocity which declined by 2.8% p.a. from the start of the single currency area in 1999 until 2010. The euro debt crisis of 2011-12 caused a temporary upward shift, and since then the decline of velocity has been at a slower 0.5% p.a. The problem has been with the erratic growth of broad money (M3) before and after the GFC.

Prior to the GFC (until about 2004) there had been a commitment on the part of the European Central Bank (ECB) to maintain a "monetary pillar" expressed as a "reference" growth rate of roughly 4% p.a. for M3. This rate turned out to be too low (6% would have been a better choice) and therefore the target was dropped, and M3 gradually accelerated to double-digit growth rates in the year or two before the GFC, helping to exacerbate asset bubbles in the peripheral economies.

Since the GFC the ECB has had the opposite problem: money growth has been too low most of the time, which explains why the CPI has persistently undershot its target for inflation of "below but close to 2% over the medium term". In part the reason was because the ECB chose to ease liquidity by lending to the banks (initially through LTROs in 2011-13, and more recently through so-called "Targeted LTROs") instead of conducting QE operations along the lines of the operations by the Fed or the BoE. In effect this meant that the ECB was lending to risk-averse banks who simply took the cheaper funds from the central bank in place of the funds they had previously obtained from the inter-bank market, but they did not increase lending to non-financial companies or households. The result was that Euro-area lending declined between 2011 and 2013 from +4% year-on-year to -4% and M3 growth averaged only 1.8% between 2010 and 2014.

Instead, if the ECB had bought securities from non-banks starting in 2009 or 2010 it would have created new deposits in the banking system, enabled the banks to unwind their loans without reducing or slowing M3 growth, and would probably have greatly reduced the severity of the Eurozone debt crisis of 2011-12. It would also have avoided the damaging move into negative interest rates.

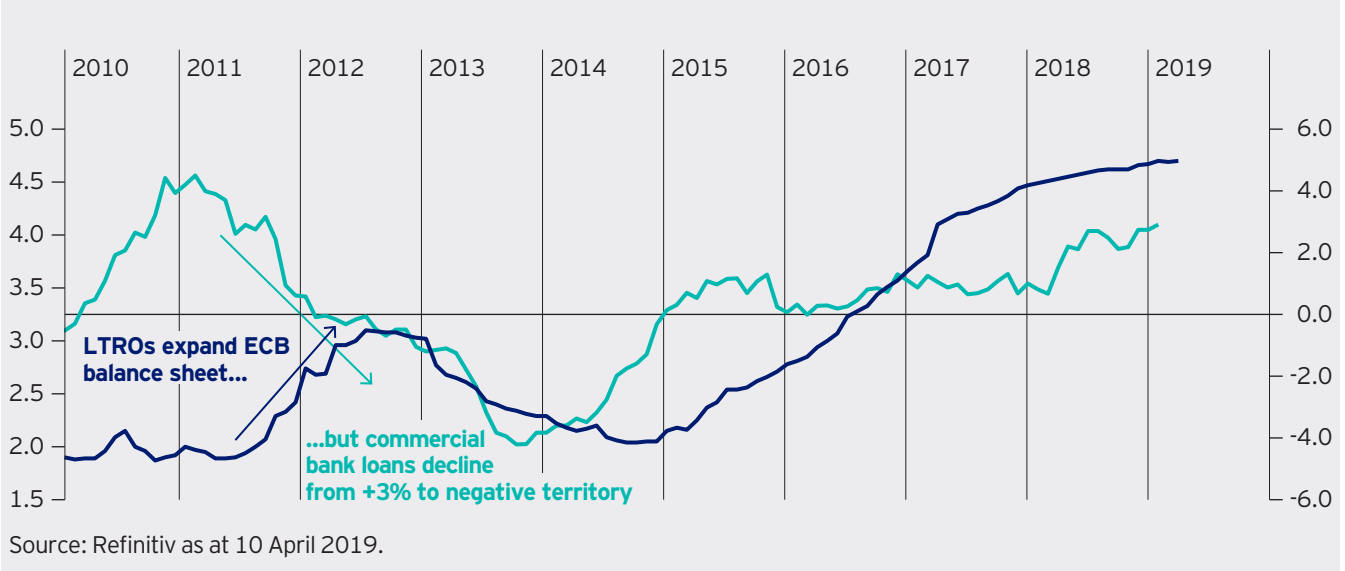
From the start of QE in March/April 2015, M3 growth improved to close to 5%, and as a result there have been clear areas of improvement - notably the labour market. From a peak level of 13.1% in mid-2013, Euro-area unemployment had fallen to 7.8% by February - data clearly consistent with a recovery that has some momentum behind it, and driven by permanent, full-time, better paid jobs in sharp contrast to earlier dependence on part-time job growth.

However, since the end of 2017 and the start of ECB tapering of its asset purchases, M3 growth has slowed, falling to 3.5% last September and 4.3% in February. The problem remains that while Euro-area banks have not fully repaired their balance sheets, they remain risk-averse, and lending is still anaemic. Without the boost from the ECB's QE asset purchases it is therefore highly likely that M3 will slow further, undermining the potential recovery. This is likely to outweigh the importance of any putative recovery in manufacturing or in the capital goods sector.

Figure 4

### A larger ECB balance sheet does not guarantee commercial bank loans increase

Eurozone: Total assets of ECB & commercial bank loans



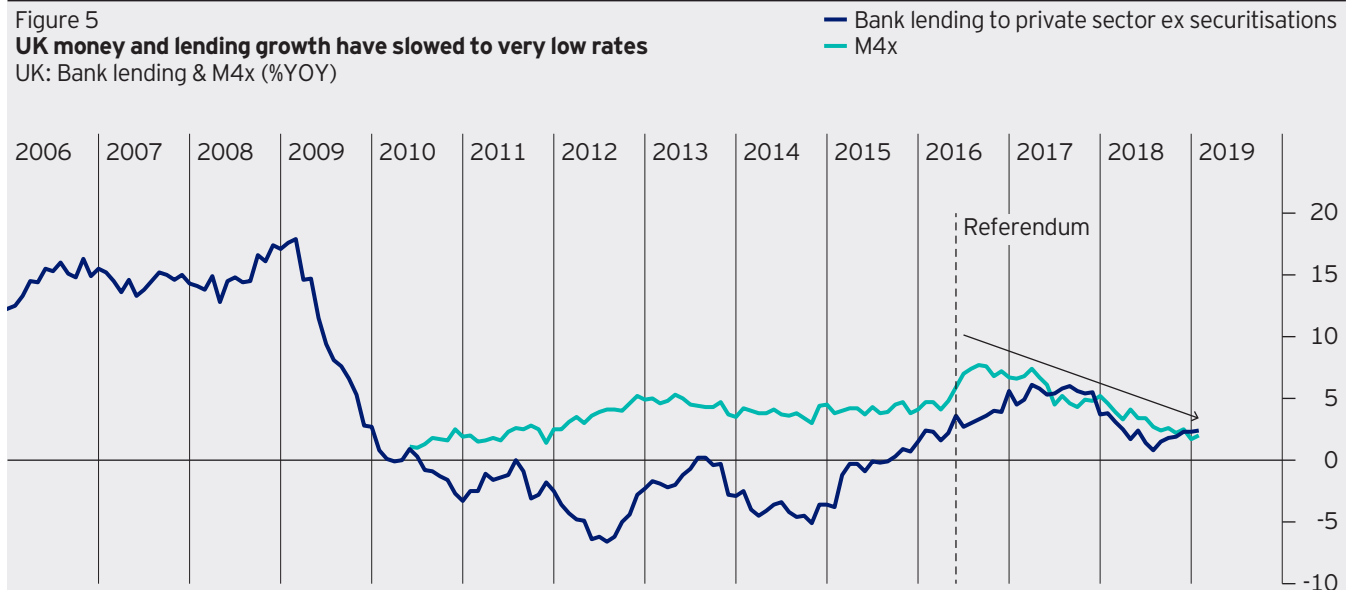
# United Kingdom

## Brexit-related hesitancy continues to hold down bank lending and investment

The BoE's Monetary Policy Committee (MPC) decided to keep Bank Rate unchanged at 0.75% at its meetings on 7 February 2019 and 21 March 2019, and to keep the stock of outstanding government and corporate bond purchases unchanged at £445 billion (comprised of £435 billion in government bonds and £10 billion in corporate bonds). Until the uncertainties of the Brexit crisis are resolved it seems unlikely that the BoE will embark on any new initiatives in monetary policy. Despite having given clear signs last year that interest rates would be rising in 2019, the BoE's Governor, Mark Carney, and the MPC members have been compelled by economic weakness to postpone any thought of tightening or normalising action in the sphere of monetary policy. Meantime, money and credit growth - the fuel for spending growth in the economy - have been slowing: M4x, or money held by households and businesses, slowed from 7.4% year-on-year in April 2017 to 2.0% in February 2019, mostly driven by slower bank lending which decelerated from 6.1% in April 2017 to as low as 0.8% in August 2018, and has averaged a low 2.4% year-on-year over the six months August 2018 to February 2019. Brexit or no Brexit, these low growth rates will almost certainly result in very low inflation over the next year or two.

In normal times such low growth rates would have been ringing alarm bells in policy circles, prompting urgent corrective action. However, the political and economic forces unleashed by the Brexit saga are such that the BoE is unable to turn things around on its own. Having played the primary role in restoring the British economy to growth after the slump of 2008-09, monetary policy has had to play second fiddle to the policy-makers in Downing Street and Westminster since the referendum. Consumer and business confidence and hence the rates of growth of spending in the economy have been knocked back severely by the on-going uncertainties of the tussle between London and Brussels over the future of the UK after Brexit. Consequently it is only feasible to forecast a meagre 1.3% real GDP growth for the year, well below the long-term potential growth rate of the economy.

Figure 5  
**UK money and lending growth have slowed to very low rates**  
 UK: Bank lending & M4x (%YOY)



Source: Refinitiv as at 10 April 2019.

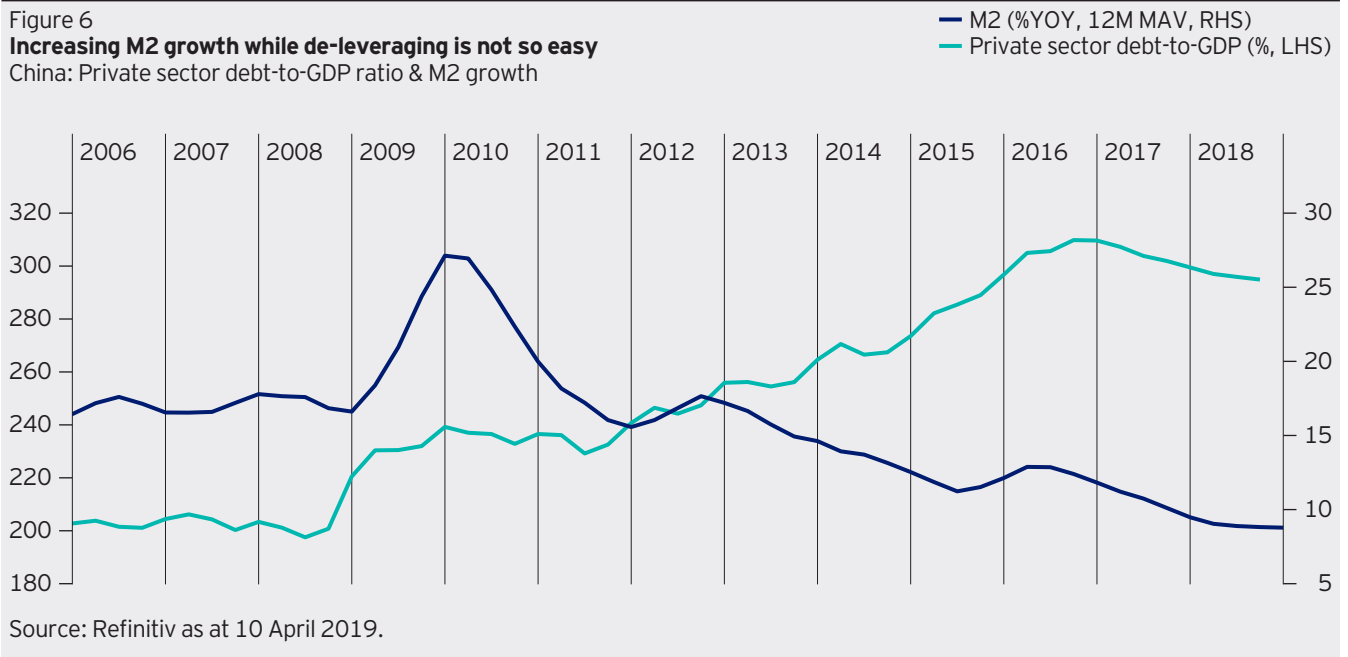
## Confronting the challenge of deleveraging while maintaining growth

As many of the developed western economies learned in the wake of the GFC, it is difficult if not impossible to repair the balance sheets of major sectors of an economy while at the same time trying to expand at a normal economic growth rate. This is the dilemma at the heart of China's slowdown over the past two years. Having accumulated large amounts of debt over the preceding 7-8 years, the Chinese state-owned corporate sector and parts of the financial sector find their growth constrained. They cannot continue to borrow and invest at the same carefree pace as before, yet the People's Bank of China and other authorities are wary of allowing the growth rate to fall too sharply because of the social unrest that may follow.

The results in the short term are likely to comprise some further slowing of growth momentum and a significant downturn in reported inflation. Already there was deflation at the producer price level reflecting the falls in commodity prices in late 2018, and consumer prices had fallen below 2%. Unless and until a more expansionary macro-economic policy mix starts to gain traction, inflation in China is likely to fall further.

As a result, China's macro-policy making over the past year or so has therefore shifted from the previous clear directional thrust - either to expand or contract - to a seemingly contradictory set of strategies that include a mixture of restraints on lending by the shadow banking system and macro-prudential controls on lending to the housing sector on the one hand accompanied by the easing of interest rates and lowering of reserve requirement ratios on the other. All this has been happening against the backdrop of the on-going trade negotiations with the Trump administration, which, at the time of writing, are still not completed.

Figure 6  
**Increasing M2 growth while de-leveraging is not so easy**  
 China: Private sector debt-to-GDP ratio & M2 growth



## Japanese economy continues to undershoot the inflation target

The Japanese Prime Minister, Shinzo Abe, has been in power for just over six years since his election victory in December 2012. One of his first decisions as prime minister was to appoint Haruhiko Kuroda as 31st Governor of the Bank of Japan (BoJ) from 20 March 2013 for a five-year term. In turn, Mr Kuroda undertook to raise the inflation rate to 2% within two years - two years being the standard length of the lag between monetary policy actions and their presumed effect on inflation.

Yet six years after his appointment, and following his re-appointment in April 2018 for a further five years, Governor Kuroda has signally failed to raise Japan's consumer price inflation rate to 2%. This is despite large-scale asset purchases that have resulted in a near-quadrupling of the BoJ's balance sheet from JPY 144 trillion in March 2012 to 562 trillion in March 2019 under a much trumpeted policy known as "Quantitative and Qualitative Easing" (QQE). On the latest figures (for February 2019) the headline CPI had increased by a mere 0.2% year-on-year, while the core CPI - which excludes fresh food - was up only 0.7% over the year and the "core-core" CPI - which excludes food and energy prices - was up just 0.3% over the twelve months. Something is clearly amiss with the policy, but the question is precisely where have things gone wrong?

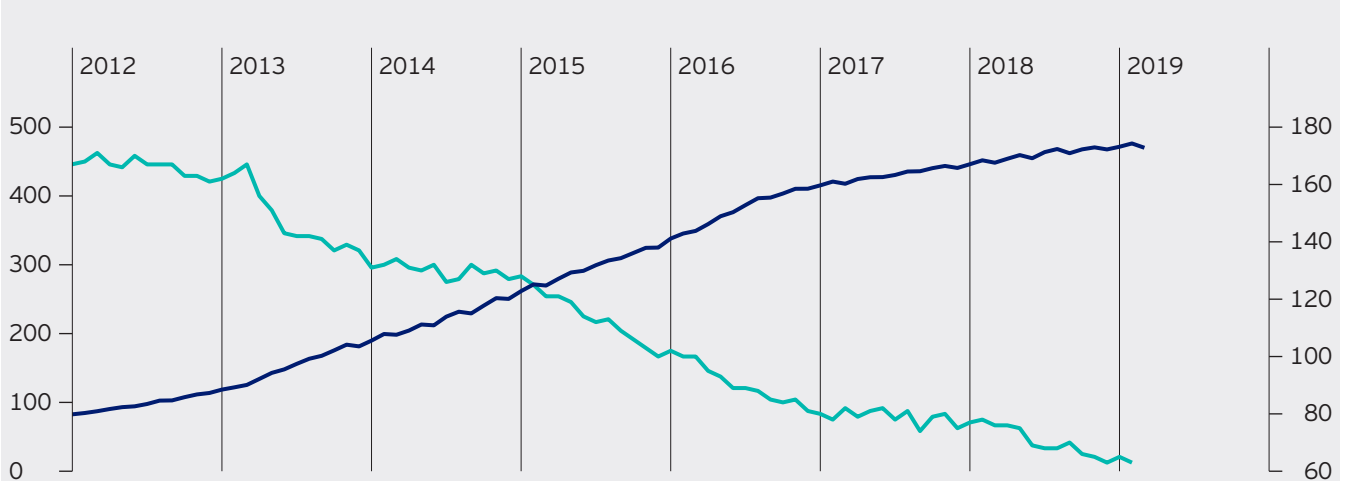
Nevertheless, in pursuit of the theory that interest rates drive investment and spending, and in turn inflation, the BoJ first lowered short-term money market rates to zero, and then reduced interest rates on one tier or segment of its complementary deposit facility for banks and "tanshi" (or short-term money market brokers) to negative territory. In addition, it has undertaken a policy of yield curve control (YCC), effectively keeping the yield on the 10-year JGB close to 0% since September 2016. The problem here, as in the Eurozone, is that despite the availability of zero or negative rates, the lenders are risk-averse and reluctant to lend while the borrowers are also reluctant to increase their indebtedness in an environment of very slow real or nominal growth. In other words, it is not the level of rates alone that is the key to ensuring the growth of bank lending or money growth, or inflation.

The second error concerns the counterparties to its asset purchase programme. Instead of buying securities from non-banks and paying them with new deposits (thereby increasing the money supply), the BoJ has bought the bulk of its JGBs from the banks. This can clearly be seen in the decline of commercial bank holdings of securities as contrasted with the increase of BoJ holdings in Figure 7. (Note, however, that because the data in the chart are based on month-end balance sheet data they understate the implied sales of JGBs by commercial banks to the central bank.) The result has been that the central bank has had to rely on risk-averse banks to increase lending and hence broad money growth, instead of creating the required deposits itself. If it had purchased JGBs from non-bank financial corporations or households, there would by now be a substantially higher level of deposits and money in the Japanese banking system, M2 could be growing at 5-6% p.a. instead of 1-3%, and the inflation rate would be 2% or greater. Instead, the purchase of over JPY 400 trillion has largely been wasted. Of course the purchases of ETFs and J-REITs are mainly from the non-banks and these have helped to boost M2, but the scale of these purchases has been only 5% of total asset purchases. Another way to state this proposition is to say that it is broad money that creates inflation, not money on the balance sheet of the central bank.

Figure 7

### Bank of Japan has purchased JGBs mainly from banks<sup>2</sup>

BoJ & commercial bank holdings of JGBs (JPY trillion)



Source: Refinitiv as at 10 April 2019.

<sup>2</sup>Commercial bank data showing JGB holdings do not reflect securities purchased and sold between month-end dates.



# Commodities

The softening of global manufacturing, as reflected in Purchasing Manager Indices (PMIs), during the second half of 2018 prompted a moderate decline in the Commodity Research Bureau Index of commodity prices. Between mid-June and late December the index fell close to 10% in US dollar terms. (This index consists of 22 sensitive items but excludes crude oil and other energy products.) However, over the same period the S&P GSCI Index of spot prices fell just over 25%, reflecting the large weighting of energy products in this index. (The S&P GSCI is a world-production weighted index that is based on the average quantity of production of each commodity in the index over the last five years of available data.)

Since the end of 2018 there has been a recovery in both indices, with the S&P GSCI again leading thanks to its large weighting in energy. Brent crude oil prices, for example, have risen from a low of \$50.47 on 24 December to just over \$71.73 on 10 April, a rise of 42%. Decisions by OPEC and temporary disruptions to oil supply due to political and other factors in Venezuela, Libya, Iran and elsewhere have accentuated the rapid recovery in oil prices, but the longer term outlook for oil and commodity prices in general will be shaped by global demand, driven in turn by the business outlook.

Here the picture is more subdued based on the demand-side drivers that formed the focus of earlier sections of this report. As long as aggregate spending is restrained by slow-to-moderate rates of growth of money and credit, and inflation pressures therefore remain under control, the medium term demand-side outlook for commodity prices will be subdued - except for those specific sectors which are subject to supply-side disturbances.

Reviewing the performance of commodity prices as a whole since 2008 (in Figure 8) confirms this lesson. The big surge in commodity prices between February 2009 and April 2011 was almost entirely due to the huge surge in Chinese domestic spending as a result of the massive acceleration of money and credit at that time. Subsequently, the growth of Chinese spending in both real and nominal terms has slowed, and with it the overall performance of global commodity prices. Therefore it follows that unless China's domestic spending and/or that of the OECD nations increases significantly in real or nominal terms over the next year or so, commodity prices are likely - in general - to remain subdued over that time horizon.

Figure 8

**Aside from the recovery in oil prices, little momentum in commodity prices**  
Commodity prices



Source: Refinitiv as at 10 April 2019.

---

## Conclusion

---

There was too much anxiety in financial markets about the risks of a US recession during the period October-December last year. The sell-off in markets was overdone in my opinion. The dangers of the very minor yield curve inversion, the leverage levels of the non-financial business sector, the threat of the Fed over-tightening, and the risks of a trade war were all, in my view, exaggerated. None of them on their own could have precipitated a recession.

For over two years my view has been, and remains, that the US current business cycle expansion is likely to be the longest in US recorded financial history (using the NBER data from the Business Cycle Dating Committee). The tenth anniversary of the start of the present expansion will come in June 2019. Aside from the improved

health of balance sheets in the US financial and household sectors, the most important fact is that inflation remains below 2%, implying that the Fed has no reason to tighten monetary policy in such a way as to end the expansion any time soon. This is the fundamental explanation of why the US and other equity markets have been recovering since 24 December 2018. Ultimately, asset prices, like the economy and inflation, are determined by the business cycle. As long as the business cycle continues to expand, it would be historically unprecedented if the asset markets were to deviate very much from the underlying profile of the business cycle.

---

**John Greenwood**  
Chief Economist, Invesco  
10 April 2019

---

## Important information

---

By accepting this document, you consent to communicate with us in English, unless you inform us otherwise.

The marketing document is exclusively for use by Professional Clients and Financial Advisers in Continental Europe (as defined below), Qualified Investors in Switzerland, Turkey and Russia and Professional Clients in Dubai, Ireland, the Isle of Man, Jersey and Guernsey, Malta and the UK. It is not for consumer use.

This document is marketing material and is not intended as a recommendation to invest in any particular asset class, security or strategy. Regulatory requirements that require impartiality of investment/investment strategy recommendations are therefore not applicable nor are any prohibitions to trade before publication. The information provided is for illustrative purposes only, it should not be relied upon as recommendations to buy or sell securities.

The value of investments and any income from them will fluctuate (this may partly be the result of exchange rate fluctuations) and investors may not get back the full amount invested.

Where John Greenwood has expressed opinions, they are based on current market conditions and are subject to change without notice. These opinions may differ from those of other Invesco professionals.

For the distribution of this document, Continental Europe is defined as Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Italy, Luxembourg, Netherlands, Norway, Poland, Romania, Slovakia, Slovenia, Spain and Sweden.

All data provided by Invesco, unless otherwise stated.

Data as at 10 April 2019, unless otherwise stated.

---

### **This document is issued in:**

Austria by Invesco Asset Management Österreich-Zweigniederlassung der Invesco Asset Management Deutschland GmbH, Rotenturmstraße 16-18, 1010 Vienna, Austria.

---

Belgium by Invesco Asset Management SA Belgian Branch (France), Avenue Louise 235, B-1050 Bruxelles, Belgium.

---

Finland, France, Greece, Malta, Norway and Luxembourg by Invesco Asset Management SA, 16-18 rue de Londres, 75009 Paris, France. Authorised and regulated by the Autorité des marchés financiers in France.

---

Germany by Invesco Asset Management Deutschland GmbH, An der Welle 5, 60322 Frankfurt am Main, Germany.

---

Italy by Invesco Asset Management SA, Sede Secondaria, Via Bocchetto 6, 20123 Milan, Italy.

---

The Netherlands by Invesco Asset Management S.A. Dutch Branch, Vinoly Building, Claude Debussylaan 26, 1082 MD Amsterdam, The Netherlands

---

Sweden by Invesco Asset Management SA (France) Swedish Filial, c/o Conventum, Jakobsbergsgatan 16, Box 16404, SE-111 43 Stockholm, Sweden.

---

Spain by Invesco Asset Management SA, Sucursal en España, C/ GOYA, 6 - 3º, 28001 Madrid, Spain.

---

Switzerland by Invesco Asset Management (Schweiz) AG, Talacker 34, 8001 Zurich, Switzerland.

---

Dubai by Invesco Asset Management Limited, Po Box 506599, DIFC Precinct Building No 4, Level 3, Office 305, Dubai, United Arab Emirates. Regulated by the Dubai Financial Services Authority.

---

Jersey and Guernsey by Invesco International Limited, 2nd Floor, Orviss House, 17a Queen Street, St Helier, Jersey, JE2 4WD. Regulated by the Jersey Financial Services Commission.

---

Isle of Man by Invesco Management S.A. 37A Avenue JF Kennedy, L-1855 Luxembourg.

---

Ireland by Invesco Global Asset Management DAC, Central Quay, Riverside IV, Sir John Rogerson's Quay, Dublin 2, Ireland. Regulated in Ireland by the Central Bank of Ireland.

---

UK by Invesco Asset Management Limited, Perpetual Park, Perpetual Park Drive, Henley-on-Thames, Oxfordshire RG9 1HH, UK. Authorised and regulated by the Financial Conduct Authority.

---