

[ The Institute of International Monetary Research is a research institute with charitable status. This note is being e-mailed to people and organizations interested in global money trends, and the relationships between money and banking on the one hand and macroeconomic outcomes on the other. It is not business or investment advice, and the Institute accepts no responsibility for decisions taken in the light of the analysis given. ]

***Monthly e-mail from Tim Congdon – 28<sup>th</sup> February, 2017***

## ***Global money round-up at the start of 2017***

Not much has happened in the last few weeks to alter the assessment made at the end of January. US money growth is running at a slower rate than has been normal in the last three/four years, but it is not collapsing. By contrast, money growth in the Eurozone is steady at about a 5%-a-year annual rate and in Japan seems to be rising from the very low rates of increase typical over the last two decades. The UK's silly blip of broad money acceleration last summer seems to have stopped and to some extent been reversed.

As I noted, a few weeks ago money growth in India has also taken a tumble, as a by-product of prime minister Modi's attack on the cash-based "black economy". China seems to be a bright spot in the world economy at present, but money growth there is at best moderate. **Overall a fair verdict is that 2017 will see roughly trend growth of world output, somewhere between 3% and 3¼%, with the familiar pattern of the developing countries achieving faster expansion than the developed.** (The end of output declines in Russia and Brazil will also boost output growth in 2017 relative to 2016.)

## Money trends at the start of 2017 in the main countries/jurisdictions

What are the latest money growth trends in the main countries? And what is the message for global economic activity over the next year or so, and for inflation/deflation over the medium term thereafter? The table below summarizes the key numbers. For detail, it is recommended that the reader looks at the individual country comments below. Beneath the table I make an overall assessment. The comments are unchanged from my late January appraisal. (I am short of time! – but indeed nothing much has happened.)

Name of country/ Jurisdiction	Share of world output, in purchasing-power-parity terms, %	Growth rate of broad money, in last three months at annualised rate, %	Growth rate of broad money, in last twelve months, %	Comment:
USA	16.1	4.0	3.6	Money growth weak, as Fed runs off QE assets run off and credit slows.
China	16.9	11.6	11.6	Money growth at moderate rate in stable context..
Eurozone	11.9	4.7	5.0	Money growth back up to ideal 5% annual rate, after downward blip in autumn.
India	7.1	-5.1	6.3	Attack on cash 'black economy' badly mishandled, adverse short-term effect on growth.
Japan	4.3	3.9	3.5	Broad money growth moderate.
UK	2.3	3.5	7.2	Money jump due to misjudged post-Brexit QE may be fading.

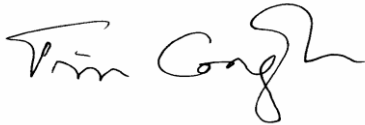
The dispersion of money growth rates in the main countries/jurisdictions is quite marked in early 2017, in contrast with the almost perfect pattern in spring/summer 2016. In spring/summer 2016 money growth in all four developed countries/jurisdictions ran at an ideal 3% - 5% annualised, while in the two big developing countries it was in the low double-digits % annualised. Now the USA has a three-month annualised figure is 4.0% and India has suffered a drop in the quantity of money. (Note that most central banks do not pay much attention to broad money in setting policy.)

While the American setback may be temporary, it is a (fairly minor) negative for economic activity in early 2017. Future developments under the Trump presidency may have a very different message. The new administration may repeal much or all of the Dodd-Frank legislation and also discuss with the Fed a slowing in the implementation of the new Basel III/IV capital requirements. If so, the growth of bank credit and broad money will accelerate. The timing is unclear, but presumably not much will happen before late 2017 or 2018. If the growth of bank credit to the private sector revives further some quarters from now, a normalisation of interest rates is to be envisaged. It is not to be ruled out that Fed funds rate is back to 3% or more by late 2018 or 2019.

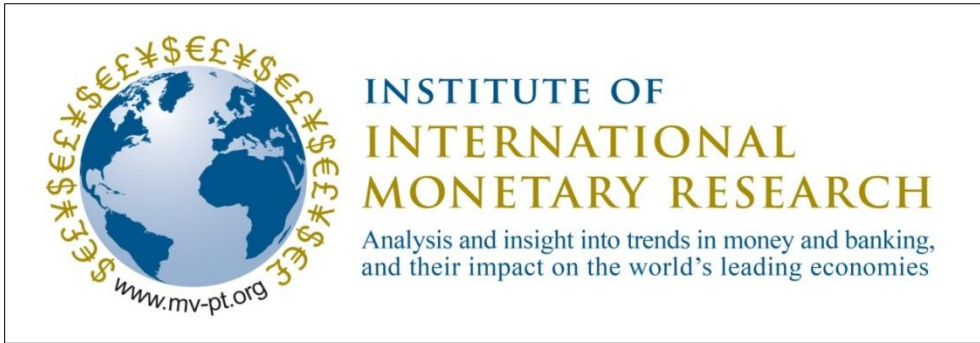
Meanwhile in India the BJP government's attempt to crack down on the cash-based "black economy" has been mishandled. As the table shows, it has caused broad money growth to go negative. Some adverse cyclical impact on demand and output is to be expected, quite apart from the damage done by the huge inconvenience arising from the withdrawal of notes from circulation. As India had high economic growth (of about 7½% a year) in 2015 and 2016, a lower growth number in 2017 will lead to unfavourable commentary. The Indian authorities may not persist with their attempt to reduce the importance of cash transactions in an economy where banking is still quite new to many people.

Elsewhere money growth patterns are consistent roughly trend growth of demand and output. There is a lot to say in each case and readers are referred to the country notes below.

It is worth mentioning that in 2015 national output fell by 3.8% in Brazil and 3.7% in Russia, and in 2016 it went down by 3.3% in Brazil and 0.8% in Russia. Negative and exceptional supply-side shocks (the Petrobras scandal in Brazil, international sanctions on Russia after the invasion of the Ukraine) were to blame. The impact was to take 0.4% off global growth in 2015 and 0.2% in 2016. Both economies are expected to return to growth in 2017, and that is one reason that most projections are for higher world growth this year.

A handwritten signature in black ink, appearing to read "Tim Conger". The signature is fluid and cursive, with the first name "Tim" and the last name "Conger" clearly distinguishable.

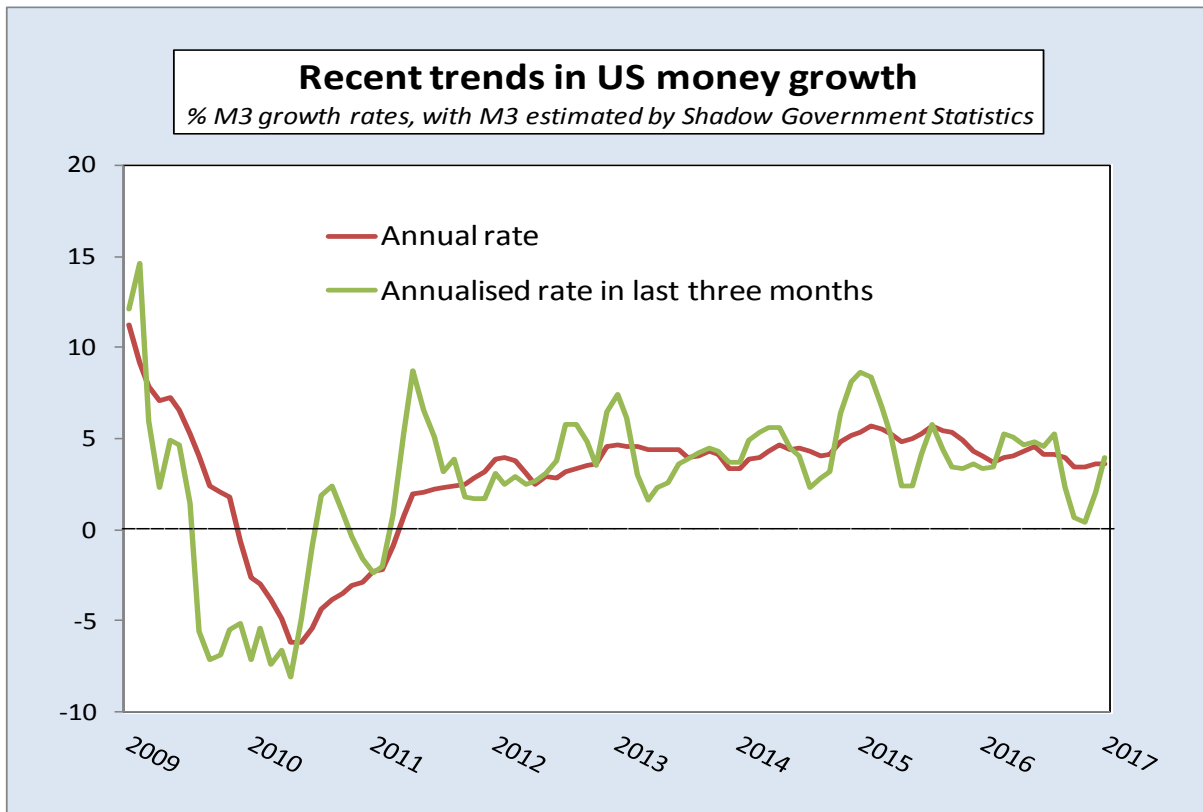
28<sup>th</sup> February, 2017



## USA

	% annual/annualised growth rate:	
	M3	Nominal GDP
1959 - 2015	<b>7.5</b>	<b>6.6</b>
Four years to 2015	<b>4.3</b>	<b>3.8</b>
Year to January 2017	<b>3.6</b>	<b>n.a</b>
Three months to January 2017 at annualised rate	<b>4.0</b>	<b>n.a.</b>

Sources: Shadow Government Statistics research service for M3 after 2006 and US Bureau of Economic Analysis for GDP



## QT on pause, but M3 growth still a little on the slow side

**Summary:** In the three months to January 2017, US M3 grew at an annualised rate of 4.0%. This continued the recovery which began in December, following a fall in annualised broad money growth to a mere 0.4% in the three months to November. (This 0.4% was the lowest annualised quarterly growth rate in over five years.) 2017 begins with US broad money growing at an annual rate of 3.6% which, as the graph above shows, is below the average for recent years. The slowdown has been mainly caused by “quantitative tightening”, with the Fed allowing the stock of bond assets bought in QE to run off as they mature. (Our M3 data in this note are from the Shadow Government Statistics company.)

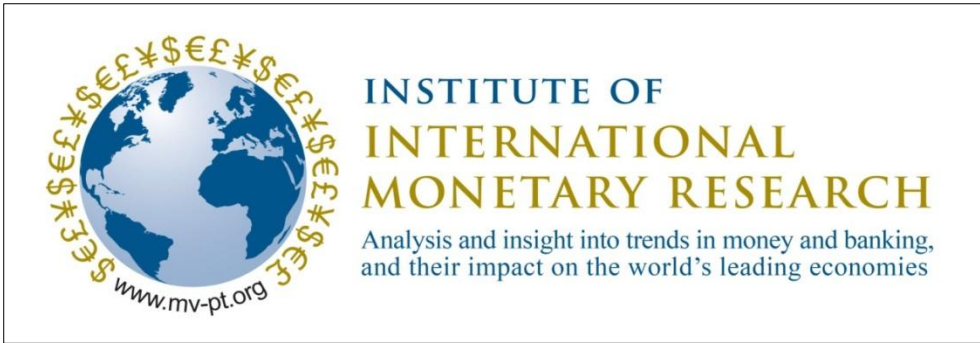
As far back as September 2015, these notes have mentioned how the Fed has been engaged in “quantitative tightening” (i.e., the reversal of quantitative easing) when it allows its stock of asset-backed securities to run off at maturity. The Fed can use proceeds from the maturing ABSs to reduce its cash reserve liabilities to the banks rather than to finance new, offsetting purchases of securities. A significant amount of QT occurred during 2016, although this development has received little media coverage.

The Fed’s large-scale asset purchases ended on 29<sup>th</sup> October 2014, with US commercial banks’ cash reserves peaking shortly afterwards at \$2,957.1b. on 26<sup>th</sup> November. Cash reserves were still \$2,765.6b. almost a year later on 4<sup>th</sup> November 2015. But the corresponding date in 2016 saw the figure down to \$2,231.4b. The decline has been in two spasms, one in autumn 2015 and other in autumn 2016. Figures for December and preliminary numbers of January suggest that this second QT episode has come to an end, with banks’ cash assets standing at \$2,279,6b. on January 25<sup>th</sup>. Even so, the negative monetary effect of the QT over the last two years is comparable with the positive effect of QE2, which involved \$600b. of purchases of government securities. The lack of any formal announcement from the Fed suggests that QT is not a deliberate policy, but is happening by default and therefore could resume again in the future. Fed chairman, Janet Yellen, has in fact noted in recent speeches that – if the QE asset stock is allowed to run off – that by itself constitutes policy tightening.

President Trump has promised a “phenomenal” overhaul of business regulation and is considering outright repeal of the Dodd-Frank Act, which enforced tougher conduct rules regulation of financial institutions in the wake of the Great Recession. In view of the sluggish growth of broad money and the possibility of further hikes in the Fed Funds Rate, an easing of banks’ capital requirements would stimulate faster growth in bank credit and might serve as a boost to the US economy.

*John Petley*  
10<sup>th</sup> February, 2017

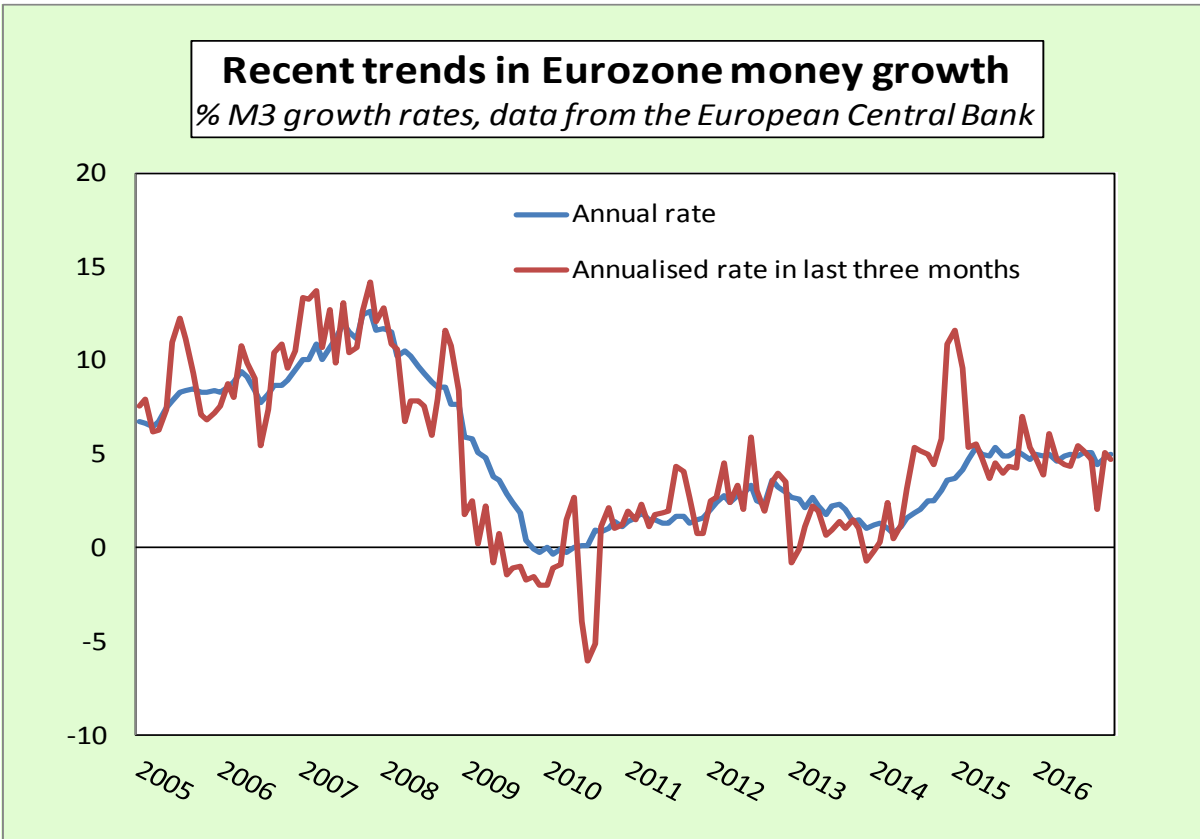
	% annual growth rate:	
	M3	Nominal GDP
1960 – 2014	<b>7.6</b>	<b>6.7</b>
1960 – 1970	<b>7.7</b>	<b>7.7</b>
1971 – 1980	<b>11.4</b>	<b>10.7</b>
1981 – 1990	<b>7.7</b>	<b>7.7</b>
1991 - 2000	<b>5.6</b>	<b>5.6</b>
2001 - 2010	<b>7.1</b>	<b>3.9</b>
Four years to 2015	<b>4.3</b>	<b>3.8</b>



## Eurozone/Euroland

	% annual/annualised growth rate:	
	M3	Nominal GDP
1995 – 2015	<b>5.3</b>	<b>3.1</b>
Five years to 2015	<b>3.0</b>	<b>1.6</b>
Year to December 2016	<b>5.0</b>	<b>n/a</b>
Three months to December 2016 at annualised rate	<b>4.7</b>	<b>n/a</b>

Sources: European Central Bank and Institute of International Monetary Research estimates



## Money growth satisfactory, as deflation concerns fade

**Summary:** In the final quarter of 2016, the Eurozone's M3 money measure grew at an annualised rate 4.7%, a very satisfactory figure if slightly down on the 5.1% recorded in the three months to November. The lower growth rate is a result of the quantity of money broadly-defined growing by €29b. in December as opposed to €79b. the previous month. However, the single currency area ends 2016 with annual broad money growth bang in line with the 5% figure that, almost certainly, was intended when the “quantitative easing” programme began two years ago. It appears that October's disappointing M3 increase of only €9b. (and a fall in the quantity of broad money in Germany) were nothing more than a blip. The ECB's QE programme continues to strengthen asset prices and balance sheets, and so to boost aggregate demand, by raising annual broad money growth above the 2% average during the 2009-2013 period.

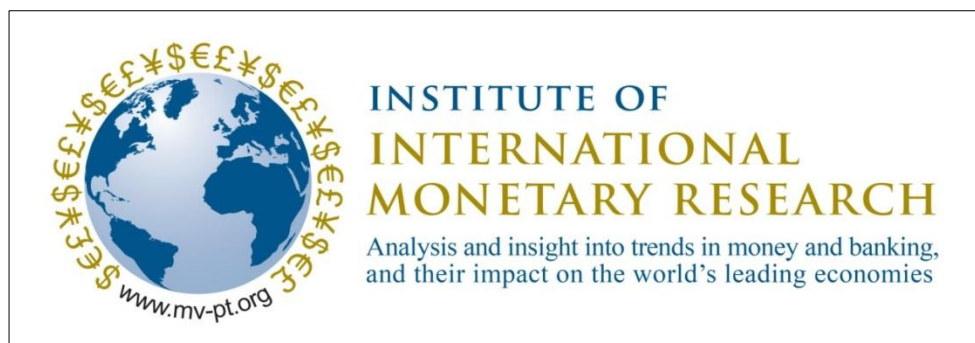
2016 ends in the Eurozone, with deflation concerns finally fading away. The prime objective of the QE programme was to return the inflation level to the target of 2% or just below. This target has not yet been reached, with consumer prices only 1.1% higher at the end of 2016 than a year earlier, but January 2017's figures have already appeared and the annual rate of consumer price inflation has risen sharply to 1.8%, which is near to the desired level. Indeed, in some countries, inflation is now above target. Spain, for instance, which experienced price deflation as recently as August 2016, saw prices rise by 3.0% in the year to January, while Belgium's rate rose to 2.7%. Even Cyprus saw prices rise in the year to January and Greece ended 2016 without a negative annual inflation rate, for the first time in over four years. On the inflation front too, therefore, the ECB's QE operations have been a success.

The decision by ECB Governor Mario Draghi to extend the monthly bond purchases beyond March nonetheless makes sense. Money growth arises from banks' extension of credit to either the state (as with QE) or to the private sector. For the time being bank lending to the private sector remains weak. The QE programme will continue for a further nine months with the asset purchase level reduced from €80b. to €60b, per month. In addition, the ECB can now buy government bonds yielding less than its deposit rate of -0.4%, such as German bunds. Draghi left open the option to extend the programme for longer and even to increase the asset purchases, if macroeconomic conditions deteriorated. The recent money figures suggest that such a deterioration is unlikely in early or even mid-2017.

The stock of mortgage lending is now growing at an annual rate of 2.7%. Business lending ended the year on a more sluggish note. The biggest risks facing the single currency bloc in 2017 are political, with general elections in France, Germany, the Netherlands and possibly Italy. Furthermore, the IMF has recently warned that Greek debt remains at an unsustainable level. The potential exists for Grexit or a shock election result to have a knock-on effect economically, but the money figures point to a stable, even positive macroeconomic outlook.

John Petley  
9<sup>th</sup> February, 2017

	% annual growth rate:	
	M3	Nominal GDP
1995- 2015	<b>5.3</b>	<b>3.1</b>
1995 – 2000	<b>4.5</b>	<b>4.0</b>
2001 – 2010	<b>6.7</b>	<b>3.4</b>
Five years to 2015	<b>3.0</b>	<b>1.6</b>



## China

	% annual/annualised growth rate:	
	M2	Nominal GDP
1991- 2014	<b>20.3</b>	<b>15.8</b>
2010 - 2014	<b>15.2</b>	<b>12.8</b>
Year to December 2016	<b>11.6</b>	<b>n/a</b>
Three months to December 2016 at annualised rate	<b>11.6</b>	<b>n/a</b>

Sources: People's Bank of China for M2 and Institute of International Monetary Research estimates



## Broad money growth continues at a respectable level

**Summary:** In the final quarter of 2016 China's M2 expanded by 2.9% or at an annualised rate of 11.6%. This is a respectable figure, up on the 11.3% recorded in the three months to November, although down on the three preceding months when annualised quarterly growth topped 12%, the fastest growth seen this year. The annual growth rate rose from 11.1% to 11.6%, somewhat below the Chinese government's target of 13% annual broad money growth. The People's Bank of China seems comfortable with the figures.

GDP growth for 2016 stood at 6.7%, the lowest in over 25 years. But Chinese policy-makers recognise that a decline in the trend growth rate is inevitable, as the extraordinary boom since the late 1970s was possible only by copying existing Western technologies. It cannot be repeated. A more moderate rate of money growth (from the 20% plus annual rate seen in the boom years) fits in with this story. The lack of any recent monetary stimulus, such as a cut in interest rates, confirms the lack of concern in Beijing about an annual rate of money growth in the low double digits. A policy response of some sort would follow any hint of a serious slowdown. Consumer price inflation is running at a modest level, with the annual rate falling from 2.3% in the year to November to 2.1% at the end of the year. Producer prices, however, are rising sharply. After over four years in negative territory, September 2016 saw the first year-on-year increase, a modest 0.1%. But three months later this figure had risen to 5.5%. (This 5.5% positive number came a mere 11 months after factory-gate prices were falling at an annual rate of 5.3%.) Inflation is likely to track upwards into 2017.

Some signs are emerging that the housing boom has peaked. Prices are still rising steeply, but the rate of increase fell for the first time in over a year. Property prices in the 70 largest Chinese cities rose by an average of 12.4% in the year to December, whereas November's figure was 12.7%. In Shanghai, where prices rose by a massive 39% in the year to November, December's figure was 26.5%. It appears that the government-imposed curbs on mortgage lending in 20 cities are finally having an effect. Arguably, the strength of the housing market is an indication of the underlying domestic confidence in China, despite much foreign disquiet about corruption and authoritarianism. Another marker of this confidence was a new record for new car registrations, over 2.7 million, in December.

The annual growth of the stock of bank lending to the private sector rose to 13.5% in December after five steady months at around 13%. After a year with no change to bank lending rates, the next move in interest rates is likely to be upward. On 3<sup>rd</sup> February the PBoC, the central bank, raised the interest rate it charges on short-term open market operations. Although this hike was a modest 0.1% and the bank lending rate was left unchanged, it indicated the direction of travel. However, given the high levels of debt and concerns about non-performing loans, any sudden or sharp monetary tightening is highly unlikely. It remains to be seen quite how the new US Trump administration will deal with China. An all-out trade war would be foolish, but also seems unlikely. As things stand, the money numbers suggest that China's current course of lower but steady growth will continue into 2017.

John Petley  
9<sup>th</sup> February, 2017

	% annual growth rate:	
	M2	Nominal GDP
1991 - 2000	<b>20.3</b>	<b>15.8</b>
2001 - 2010	<b>15.2</b>	<b>12.8</b>
Four years to 2014	<b>14.1</b>	<b>11.6</b>



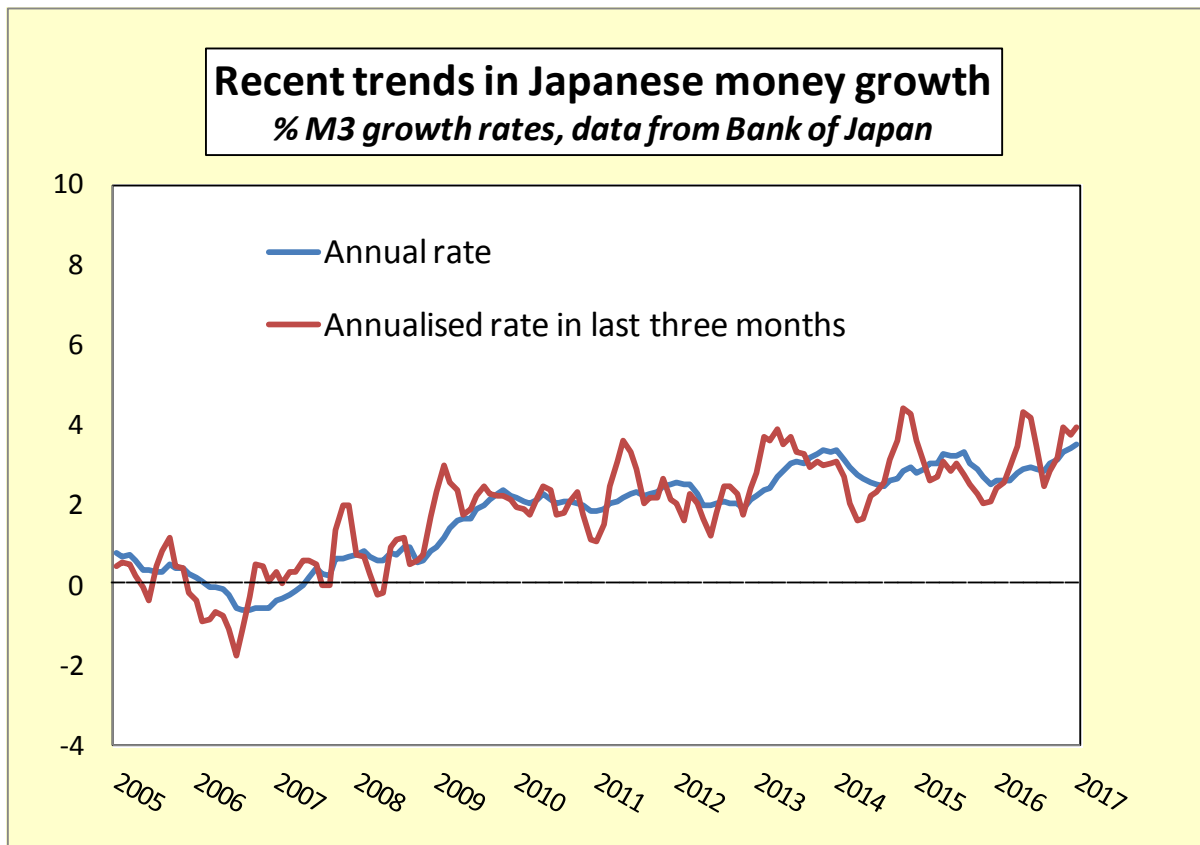
**INSTITUTE OF  
INTERNATIONAL  
MONETARY RESEARCH**

Analysis and insight into trends in money and banking,  
and their impact on the world's leading economies

## Japan

	% annual/annualised growth rate:	
	M3	Nominal GDP
1971- 2015	<b>6.3</b>	<b>4.3</b>
Five years to 2015	<b>2.7</b>	<b>0.4</b>
Year to January 2017	<b>3.5</b>	<b>n/a</b>
Three months to January 2017 at annualised rate	<b>3.9</b>	<b>n/a</b>

Sources: Bank of Japan for M3 and IMF for GDP



## Broad money growth improves into 2017

**Summary:** As 2017 begins, the annual growth rate of Japanese M3 broad money is – at 3.5% - higher than the average of recent years, as the graph above indicates. Meanwhile the annualised rate of increase in the last three months is a fairly buoyant 3.9%. By Japanese standards both of these figures are positive. The amelioration in the rate of broad money growth reflects the Bank of Japan’s programme of so-called “qualitative and quantitative easing”. For most of the period since 2010 broad money has increased steadily at an annual rate between 2% and 3½%, but the latest numbers are stronger.

It is possible that some form of additional monetary loosening may be tried in 2017, as the stated objective of the “QQE” programme was not to increase the quantity of money broadly-defined, but to raise inflation. During 2016 the central bank monthly asset purchases of 80 trillion yen (about \$6½b.) continued, supplemented by additional measures seeking to stimulate the economy (and inflation) further. These included “negative interest rates” at the start of the year and “yield curve control” (whereby the BOJ will buy as many 10-year government bonds as necessary to keep yields at their current level of 0%) from September.

At the close of 2016, however, the annual rate of consumer price inflation stood at 0.3%, a decline from the 0.5% recorded in the year to November. Haruhiko Kuroda, the Bank of Japan’s Governor, has moved the target date for hitting the 2% inflation objective forward to 2018. This is not the first time the target date has been moved in this way. While the money figures do not point to a significant acceleration in inflation in the short term, they are consistent with at least trend demand and output growth in 2017, and a 2% increase in consumer prices in 2018 is possible. Japan’s economy grew by 1.0% during 2016. Growth in exports was the main driver of GDP growth in the final quarter, aided by a fall in the value of the yen. Domestic consumption remains weak for the moment, with consumer spending and retail sales falling in December. Unemployment levels remain static at just over 3% and pay growth is anaemic, with wages rising by a mere 0.1% in the year to December. .

The picture for bank lending is better, with the stock of bank loans increasing by 2.5% in the year to January. In recent months the annual growth in bank lending has picked up. In the first eight months of 2016, it hovered at around 2.0% - 2.2%, but more recently has been running at 2.4% - 2.6%. It is possible that yield curve control will lead to heavy purchases of government bonds from non-banks in early 2017, which would be helpful for asset markets and economic activity. The money figures suggest that this year could bring a further improvement to Japan’s economy. Certainly, if the three-month annualised rate moves to 5% in the next few months, Japan could surprise on the upside.

John Petley  
14<sup>th</sup> February, 2017

	% annual growth rate:	
	M3	Nominal GDP
1981 – 1990	9.2	6.2
1991 - 2000	2.4	1.3
2001 - 2010	1.1	-0.5
Five years to 2015	2.7	0.4



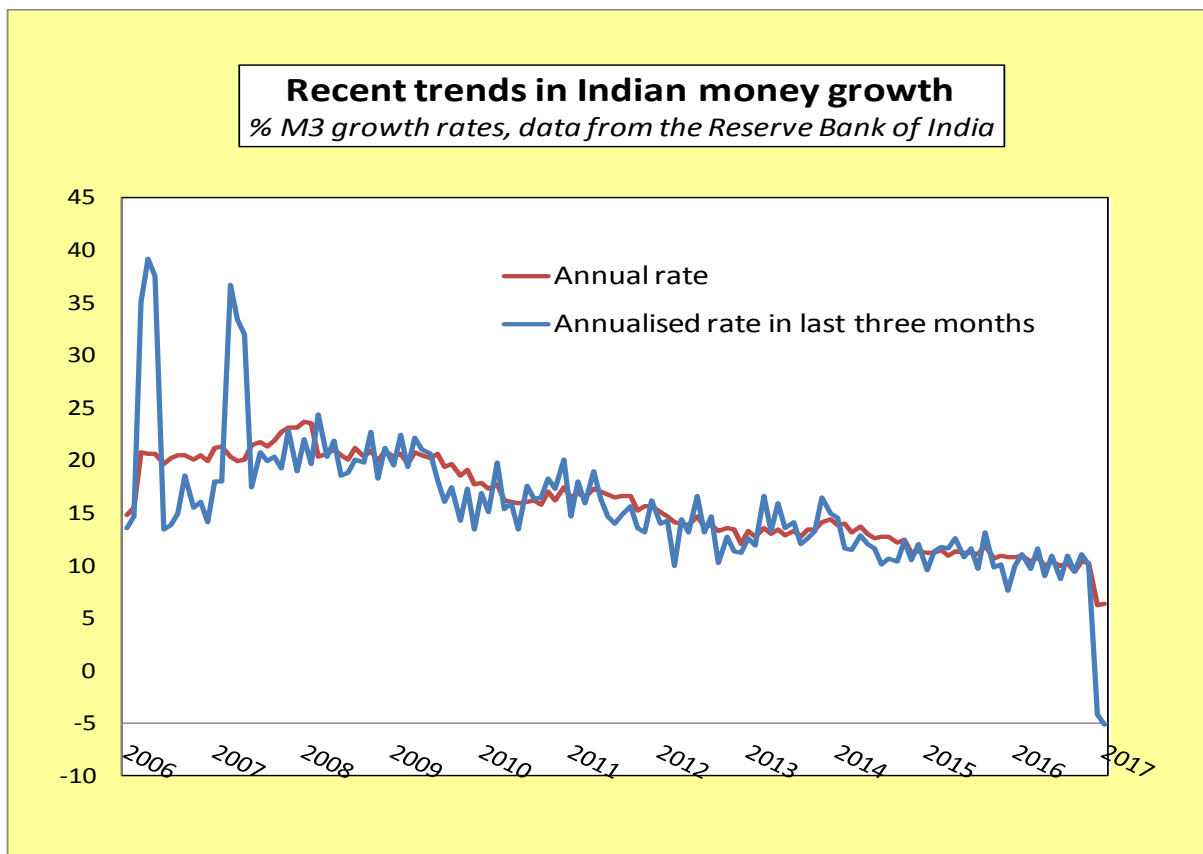
## INSTITUTE OF INTERNATIONAL MONETARY RESEARCH

Analysis and insight into trends in money and banking, and their impact on the world's leading economies

### India

	% annual/annualised growth rate:	
	M3	Nominal GDP
1991- 2014	<b>16.5</b>	<b>13.8</b>
2010 - 2014	<b>14.2</b>	<b>14.4</b>
Year to January 2017	<b>6.3</b>	<b>n/a</b>
Three months to January 2017 at annualised rate	<b>-5.1</b>	<b>n/a</b>

Sources: Reserve Bank of India for M3 and IMF for GDP



## Demonetisation chaos will affect money growth for months

**Summary:** In the three months to January 2017, Indian M3 shrank at an annualised rate of 5.1%. The annual growth rate stood at 6.3%. In January itself, unadjusted Indian broad money grew by just over Rs. 1,000b., but this follows a drop of almost Rs. 3,800b. in the final two months of 2016. The end-2016 plunge dragged down the annual and annualised quarterly growth rates after an extended period of some quarters at a relatively stable level of 9-11%. This sudden fall in the money supply was caused by the mass withdrawal 500 and 1,000 rupee notes from circulation in November, purportedly to limit tax evasion and corruption in the black economy.

During November and December, Indians faced lengthy queues at banks as they sought to beat the 30<sup>th</sup> December deadline for exchanging or depositing the old notes. Now that deadline has passed, the quantity of money has picked up again, but some estimates suggest that it will take many months before sufficient replacement notes are in circulation. Furthermore, provisional data from the Reserve Bank of India suggests that deposit growth fell in January. In such circumstances, Indian broad money growth during 2017 looks set to be much lower than the recent norm,

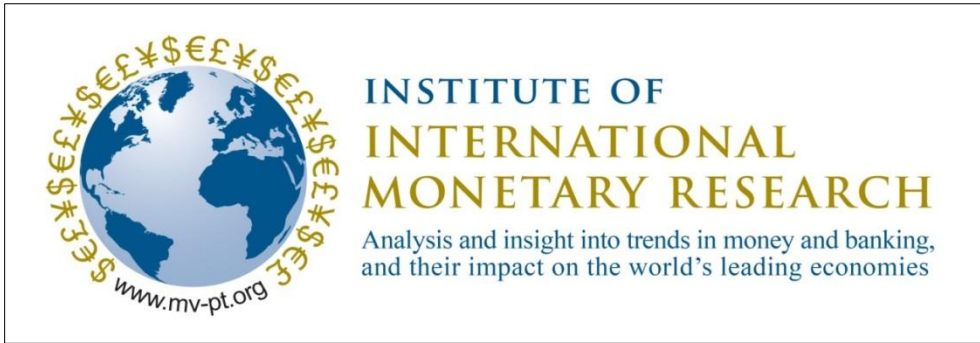
The scale of the fall in the quantity of money is somewhat larger than expected given that, even in India, coins and banknotes in circulation comprise well under 15% of the total M3 measure. An early February update on the Reserve Bank of India's website insists that there is no going back on the end December cut-off point. At this stage, it is hard to estimate how much money has been destroyed as a result of the old banknotes becoming completely worthless, but the scale of the drop in the quantity of money points to other issues – such as a shift of quasi-black money out of the banking system into trade credit or other channels – as being partly responsible. This badly-handled exercise has affected business sentiment. Bank lending was growing at an annual rate of over 10% as recently as the third quarter of 2016. That figure fell to 5.1% in December and remained down in January.

In the third quarter of 2016, annual GDP growth was running at 7.3%. In spite of a reduction in bank lending rates by ¼% on 4<sup>th</sup> October 2016, the final quarter's figures are unlikely to be as high. Following a good monsoon, food price inflation had been falling and that had pushed down the annual consumer price inflation rate. A reduction in bank lending rates, which stood at 6.5%, was a sensible move. The Indian economy was poised to end the year on a good note, but this has been wrecked by the note withdrawal. Inflation has continued to fall, with the annual rate of 3.1% reported in January 2017 being the lowest number in five years. The RBI did not announce a further cut in bank lending rates in February, even though Indian banks are keen for plenty of liquidity given that the demonetisation fiasco has eaten into their attempts at loan recovery. Non-performing loans are still rising, with the latest estimates suggesting they now amount to 12% of all bank lending. All in all, India's short-term macroeconomic prospects look tricky at the moment.

*John Petley*

*13<sup>th</sup> February, 2016*

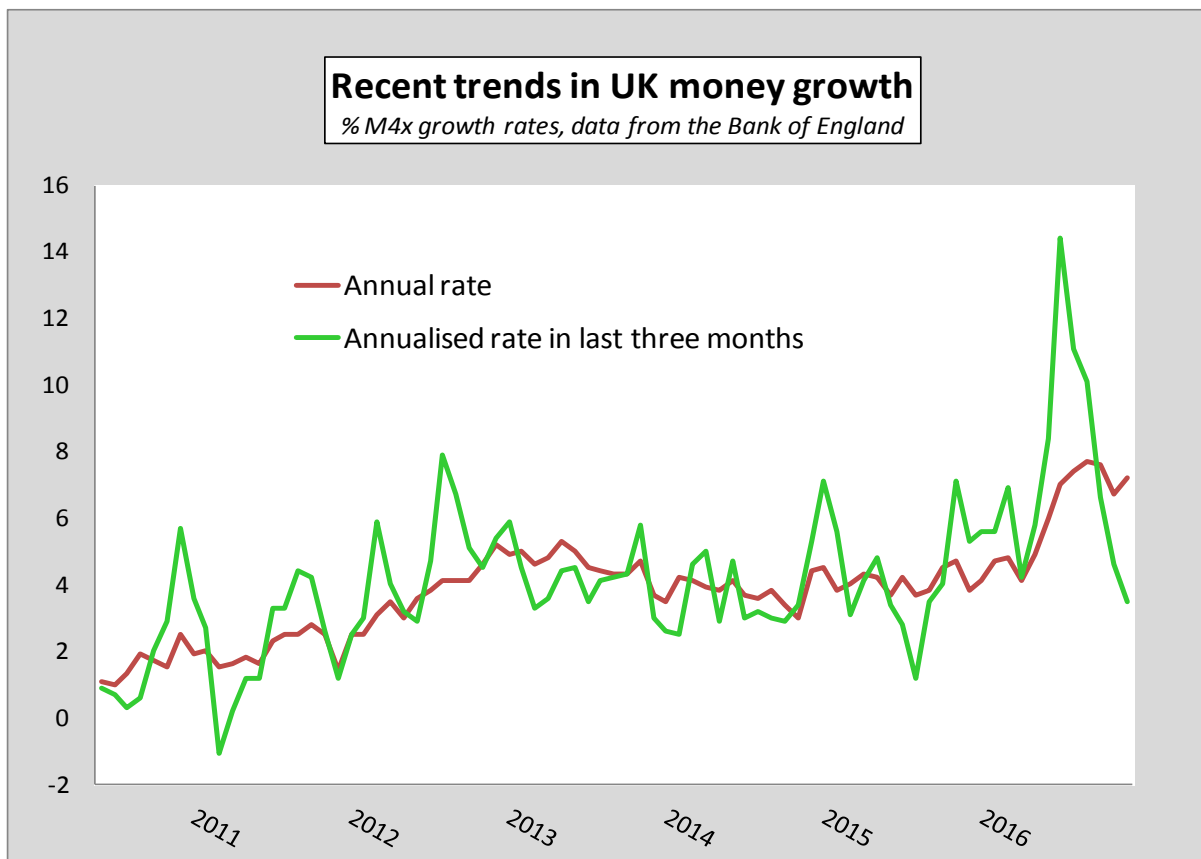
	% annual growth rate:	
	M3	Nominal GDP
1991 - 2000	<b>16.9</b>	<b>14.4</b>
2001 - 2010	<b>17.3</b>	<b>13.6</b>
Four years to 2014	<b>13.4</b>	<b>12.9</b>



## UK

	% annual/annualised growth rate:	
	M4x/M4 before 1997	Nominal GDP
1964 – 2015	<b>10.0</b>	<b>8.2</b>
Five years to 2015	<b>3.7</b>	<b>3.6</b>
Year to December 2016	<b>7.2</b>	<b>n/a</b>
Three months to December 2016 at annualised rate	<b>3.5</b>	<b>n/a</b>

Sources: Bank of England and Office for National Statistics.



## M4x growth slows, but the annual rate of growth remains at a high level

**Summary:** In the final quarter of 2016, UK broad money M4x grew at an annualised rate of 3.5%. The quantity of money, broadly defined, grew by £10½b. after falling by nearly £5b. in November. The spike in money growth in June and July continues to affect the annual rate of increase. (The annualised quarterly growth rate was as high as 14.4% in July.) The annual pace of broad money expansion is now returning the more typical levels (3% - 5%) seen in the last four years.

The UK consumer price index rose to 1.6% in the year to December. The producer price index, however, hit 2.7% suggesting a further rise in shop inflation in 2017, and this has proved to be the case. January's inflation rate was 1.8%, the highest since June 2014. The unnecessary instalment of quantitative easing last autumn has not helped to restrain inflation, although the fall in the pound after Brexit takes most of the flak. With UK unemployment having fallen below 5% in May, there is an argument for raising interest rates at some point during the year, although a recent report in the *Financial Times* suggests that the Bank of England believes that neither wages nor inflation are likely to rise to levels justifying a rate rise any time too soon. Latest figures suggest, however, that wage growth is starting to accelerate. The 2.8% increases in the average earnings index recorded in the year to November – the most recent month for which figures are available – was the highest in over a year.

Banks are now more keen to expand risk assets and increase lending the private sector. (New loans boost the quantity of money by creating new deposits.) The growth in the stock of business lending, however, has stalled in recent months, with the amount outstanding falling from £452.7b. in October to £449.1b. two months later. Larger businesses seem more reluctant to borrow than smaller companies, with the services sector particularly hesitant. Mortgage approvals are up for a fifth consecutive month although growth in consumer credit and retail sales slowed in December. Nonetheless, credit levels are still at their highest since the Great recession and lending to individuals is a respectable 4% higher than twelve months ago.

Business surveys report a healthy level of orders and quite strong output-raising intentions. The slowing of broad money growth in recent months came after an extraordinary surge in the summer and can hardly be viewed as a restrictive influence at this stage. Indeed, the Bank of England has recently revised its forecast for UK GDP growth during 2017 upwards to 2.0%, less than three months after revising its predictions from 0.8% to 1.4%. This comes in the wake of the UK ending 2016 with the highest growth rate of the G7 countries. In spite of the litany of gloom during the Brexit campaign and indeed its aftermath, the UK economy has continued to perform well. The monetary data do not suggest that this is about to change any time soon.

John Petley  
14<sup>th</sup> February, 2017

	% annual growth rate:	
	M4/M4x	Nominal GDP
1964- 2015	<b>10.0</b>	<b>8.2</b>
1991 – 2000	<b>7.5</b>	<b>5.9</b>
2001 – 2010	<b>7.0</b>	<b>4.2</b>
Five years to 2015	<b>3.7</b>	<b>3.6</b>