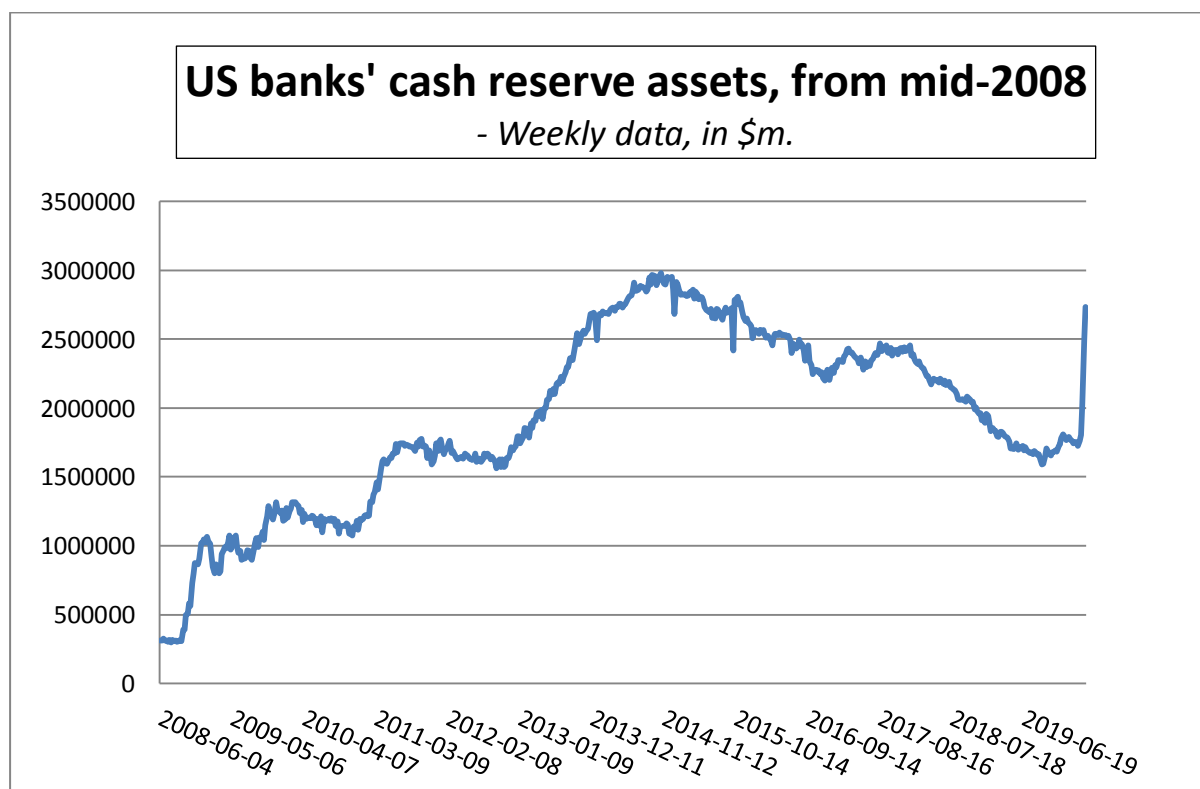


Dear fellow macroeconomists and monetary analysts,

A lot of interest has been stirred up by my last two “special e-mails”, in which I pointed out that bank deposits at US commercial banks soared in the fortnight to 25th March. We now have the US commercial bank data for another week, that to 1st April, as well as an estimate (from Shadow Government Statistics) of M3 growth in March. This special e-mail is to provide another update on the latest monetary developments.

In the week to 1st April bank deposits at US commercial banks rose by 1.0%, less than half the rate of increase in the two previous weeks, but still very fast by normal standards. (1.0% a week implies an annualised rate of increase of 67.8%.) In the three weeks to 1st April – roughly speaking, the period since the announcement of the national emergency by President Trump on Friday, 13th March – these deposits went up by 5.8%. (The implies annualised rate of increase is 165.0%.)

The explanation for the 1.0% gain in the latest week is to be sought in the Federal Reserve’s asset purchase (or “quantitative easing”) programme and/or direct Federal Reserve financing of the budget deficit. Commercial banks’ own credit extension was *not* remarkable and a surprise is that their holdings of US Treasury securities actually declined. The big addition to banks’ assets was in their cash holdings which jumped in the week from \$2,490.8b. to \$2,734.3b. The chart below shows how these cash holdings have surged in the last three weeks. The steepness of the climb is impressive, compared notably with that seen in the three instalments of QE from 2008 to 2014.



According to Shadow Government Statistics, the USA’s M3 measure of money went up by 3.9% in March. In one of recent e-mails I suggested that deposits might on average be \$200b. higher in April than at the final March date (i.e., that for 25th March) and that this would be consistent with a 4% - 5% jump in M3 in April. (In the USA the monthly money number is an average of all the weekly numbers, not an end-month value.) Deposit in fact went up by \$140.5b. in the first relevant week of April, which is not inconsistent with my conjecture, but argues that I may have been too cautious. If deposits keep on rising by \$140b. a week, the growth between the months of March and April would

be 5%, and that of M3 would be similar. So we would have M3 money growth rates in the three successive months – February, March and April – of 0.5%, 3.9% and 5.0%. The consequent annualised rate of increase in the three months would be almost 45%.

I would expect very fast money growth to persist in May and June, and perhaps for somewhat longer, because,

- i. The 2020 US Federal deficit of \$3,000b. - \$4,000b. may fall particularly in the March-June period, but it will still be well above the 2019 level through to spring 2021, and to a significant extent it will be financed from the Federal Reserve and the commercial banks, and
- ii. Programmes to improve credit availability to cash-starved corporates have been announced, and will be causing additional and well-above-normal bank credit for a few quarters yet. (The programmes include the Primary Market Corporate Credit Facility, mostly for large, investment-grade companies; the \$350b. Small Business Administration loan programme; and the Temporary Corporate and Small Business Liquidity Facility, with potentially \$1,000b. of loans, backed by \$85b. of US Treasury capital, with the loans perhaps lasting five years and carrying an interest rate of 2¼%.)

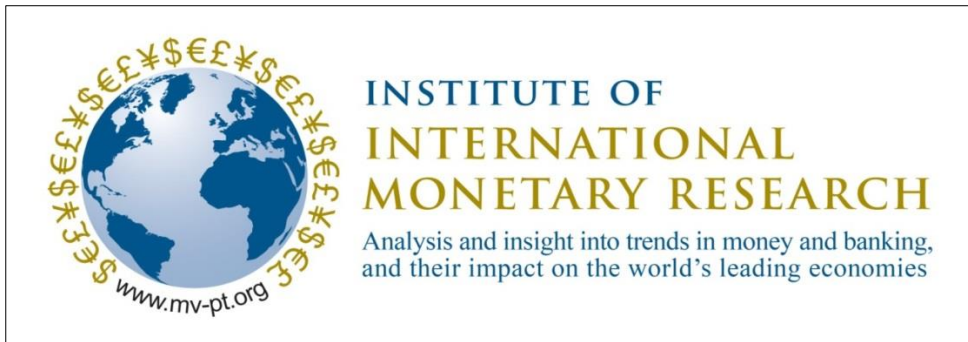
Having said that, it seems plausible that the peak money growth in this episode will have been in March and April 2020. As before, my central view is the US broad money growth in – say – the year to late 2020/early 2021 will lie in the 15% - 20% band and could be the highest in US peacetime history.

With best wishes,

A handwritten signature in black ink that reads "Tim Congdon". The signature is written in a cursive, flowing style.

Professor Tim Congdon CBE

Chairman of the Institute of International Monetary Research, at the University of Buckingham



[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.]

Special e-mail from Professor Tim Congdon – 6th April, 2020

Prospects for US money growth in spring 2020

The main point of this e-mail is to bring attention to another remarkable week in the US monetary scene, following up the special e-mail of 30th March. **Deposits at the US commercial banking system increased in the week to 25th March by 2.6%, from \$13,797.5b. to \$14,150.3b., according to a Federal Reserve press release. In the fortnight to 25th March they climbed by 4.8%, or at annualised rate of almost 240%.** As these deposits are the principal element in the quantity of money, broadly-defined, it is clear that March and April will see extraordinarily high growth rates of money. If deposits are on average in April \$200b. higher than at the end of March (which seems cautious, in view of current policy-making), the growth of deposits between March and April will be 4.5%, and the growth of M3 broad money will be similar. The annual growth rate of deposits/broad money in the year to April will then reach 13% - 14%, already ahead of the 10% - 12½% range suggested in the Institute's original March 2020 note. The annual rate of broad money growth could continue to accelerate in summer and autumn 2020, to move into the 15% - 20% band. **US money growth in 2020 may be the highest ever in peacetime.**

Variations in the ratio of money to nominal GDP (or "velocity") do occur, but large variations are unusual. In the medium term they are ironed out as the underlying stability of agents' money holding behaviour takes over. **It follows that – at some point in the next two/three years – the growth rate of US nominal GDP will accelerate towards a figure in the teens per cent. Given that the trend growth rate of real output is not much more than 3% a year, a big resurgence in inflation is implied by our analysis.** The only way to prevent this is for the Fed not just to end its current stance as ready financier of the government deficit, but to withdraw the money stimulus (i.e., to cause the quantity of money to fall by the "excess over normal growth" now being recorded.). In a Presidential election year, that seems very unlikely.

Money trends in the USA in spring 2020: the fortnight to 25th March

More announcements and data are emerging that bear on the prospects for US money growth in 2020, as the coronavirus hits the US economy. But let me start with comments on the last two weeks of numbers in the *H8* 'Assets and Liabilities of Commercial Banks in the United States' press release from the Federal Reserve. As noted above, deposits jumped by 4.8% in a mere fortnight to 25th March. Inspection of banks' assets shows that two main influences were at work. First, companies drew down credit lines to have the cash to pay bills in the next few weeks – and also to pre-empt possible attempts by banks to cancel the lines. So “commercial and industrial loans” went up from \$2,376.0b. on 11th March to \$2,740.9b. on 25th March. A fair comment is that this movement is an exceptional, non-recurring one-off. All the same, the money is to be used and will soon pass to borrowing companies' employees and suppliers, and then to other agents in the economy, and it will have the usual effects of any increase in money balances. Secondly, banks' cash reserves climbed from \$1,804.1b. on 11th March to \$2,491.6b. on 25th March. The Fed's opening instalment of “quantitative easing” – which it was said in advance would be \$650b. in one week – must be the main driver here.

For those concerned about the eventual inflationary impact of the money growth acceleration, the one-off nature of the credit line drawdown might be a comfort. However, the next section may restore a sense of alarm.

Money trends in the USA in spring 2020: the next few weeks and months

I pointed out last week that the 2.2% increase in deposits in the week to 18th March had occurred *before*

- the implementation of the massive hand-outs in the CARES legislation, with a fiscal cost of \$2,000b., and
- the Fed's indication that it will finance the budget deficit on its own balance sheet, if markets are not prepared to do so at a low enough level of bond yields.

Nothing unusual about holdings of Treasury securities in US banks' balance sheets is to be reported in the second half of March. “Treasury and agency securities” were \$3,139.5b. on 11th March and \$3,182.3b. on 25th March. However, the 4th/5th April issue of the *Financial Times* carried a story to the effect that, “The US Treasury department issued a record amount of short-dated debt this week... The Treasury flooded the market with \$319b. of Treasury bills, which mature in one year or less – far surpassing the previous record of \$190b. seen in October 2008.” The Treasury probably took the view that it could not finance the hugely enlarged Federal deficit – now expected to lie within the \$2,500b. - \$4,000b. over the next year or so – by longer-dated debt issues that might be of interest to non-bank investors. At least, it could not do so without a sharp and embarrassing rise in yields.

Commercial banks will be happy holders of short-dated Treasury bills, as long as there is a bit of a yield curve from which they can profit. Let me explain. Suppose the one-year yield is 1.5% and that the cost of funding a purchase is nil. The return on the money seems pathetic at only 1.5%. But remember that banks are highly geared with, say, a capital/assets ratio of 5% and government securities having the attractive property that, under the Basel rules, no capital needs to be held against them. It is then obvious that – ignoring costs – the return on capital from buying one-year Treasuries is $[(1.5/5) \times 100]\%$, which is of course 30%. Unfortunately, the one-year Treasury yield in the USA is at present 0.15%. Banks still hold them as assets, partly because they help to meet liquidity requirements. All the same, a somewhat steeper curve will be needed to persuade the banks to acquire, say, \$50b. - \$100b. of short-dated US Treasuries per month.

What about the Fed itself? It doesn't have to make a profit, although it is supposed to avoid losses. The mechanics of monetary financing of budget deficits at central banks may puzzle people new to the subject, but they are simple in essence. The Fed has a deposit from the US Treasury on the

liabilities side of its balance sheet, and holdings of US Treasuries on the assets side. If the Treasury issues \$100b. of new Treasuries, they are acquired by the Fed and add to its assets, and the Fed pays for them by increasing the Treasury's deposit also by \$100b. (Where does the "money" come from? It comes out of thin air; it is just a balance-sheet entry.) When the Treasury purchases \$100b. of something – anything – from private sector non-banks, their bank deposits rise and that is extra money in the economy. It should be obvious from the last few sentences that the process is unlimited. (By the way, the debate over the last few years among economists – including alleged "experts" in the subject – about the supposed "exhaustion of monetary policy" is evidence of the shallowness of much so-called "expertise" in this supposed "science". Monetary policy can *never* be exhausted.)

My guess/surmise is that monetary financing of the Federal deficit will average \$100b. - \$150b. a month over the next six months to a year. With US broad money on the M3 measure at just over \$20,000b., the result will be an upward bump in broad money of 7½% - 10%. Given that the Fed is also undertaking QE operations which include purchases of newly-issued commercial paper (i.e., securities issued by the private sector), it seems to me plausible that money growth in the year to late 2020/early 2021 will lie in the 15% - 20% band. As I said last week, "Quite probably, money growth in 2020 will be the highest ever in peacetime." Let me then remind readers of the medium-term relationship between changes in money and changes in nominal GDP, with again a table that speaks for itself.

| | % annual growth rate: | |
|---------------------|-----------------------|-------------|
| | M3 | Nominal GDP |
| 1960 – 2018 | 7.4 | 6.5 |
| 1960 – 1970 | 7.7 | 6.8 |
| 1971 – 1980 | 11.4 | 10.3 |
| 1981 – 1990 | 7.7 | 7.7 |
| 1991 - 2000 | 5.6 | 5.6 |
| 2001 - 2010 | 7.1 | 3.9 |
| Eight years to 2018 | 4.0 | 4.0 |

Does the Fed understand what it is doing?

At some point – probably by mid- or late 2021 – the coronavirus crisis will be over. Excess deaths globally may have run into the low millions (compared with a normal annual global mortality of about 60 million), but millions of lives will have been saved/extended by hospitals equipped with ventilators; "herd immunity" will be established, more or less; a vaccine will be available and will be administered to vulnerable groups; and so on. And what will happen to the "excess over normal" money balances created by public policy in 2020 and early 2021? The answer is that – as in the aftermath of wars – an inflationary boom in the world's leading economy has to be the central forecast. It seems to me that a major increase in inflation due to this boom is inevitable. Whether that increase is to 5% or 10%, no one knows for certain yet. But – given that the return to normalcy will be accompanied by bottlenecks and supply shortages, and given also that the current energy price slump may give way to an energy price surge – an inflation figure of over 10% would be a logical associate of an annual rate of money growth of between 15% and 20%.

Does the Fed understand what it is doing? The Fed is a large organization, employing thousands of officials and economists with divergent opinions and different bodies of expertise. My comments are three-fold. First, I doubt that the most of the key decision-makers (on the Federal Open Market Committee) have an exact understanding of

- i. the institutional details of money creation, or
- ii. the processes by which non-banks adjust portfolio and spending decisions to rises or falls in the rate of money growth.

If an unbiased third party were to put them – separately and individually – in a room (without experts or other committee members around to brief them), and to ask them relatively simple questions about these matters, they would not impress with their answers. This may seem shocking. Well, I have been monitoring the Fed – and other central banks and bankers for over 40 years – and that is my verdict. You can take it or leave it. I would say much the same thing about the top brass at the Bank of England, the European Central Bank, the Bank of Japan, the Reserve Bank of Australia, etc. In mitigation, much of the trouble stems from the chaotic state of macroeconomics and the theory of monetary policy, which is discussed below. Also in mitigation, all these institutions do have individuals (in their research departments) who understand both how money is created and the monetary theory of national income determination. They are usually in a minority and struggle against the consensus. It is very much up to the senior officials to bring these individuals forward, regardless of their own (i.e., the senior officials’) prejudices and the accepted career promotion ladders. From what I know of today’s central banks, I am not an optimist.

Second, I said that central bank researchers interested in money, in the sense of “the quantity of money”, “struggle against the consensus”. That is – by implication – scathing about “the consensus”. Well, actually there isn’t really a consensus, just a babble. The truth is that most macroeconomic research in central banks nowadays neglects money – and does so deliberately. Instead a range of non-monetary theories – three-equation New Consensus Macro, the New Classical School obsessed by so-called “rational expectations”, old Keynesianism with its mania for government spending and budget deficits, New Keynesianism with its focus on labour markets, “real business cycle theory”, the creditism of Bernanke, Gertler and others, the debtism (as I call it) of the Bank for International Settlements – have taken over from standard monetary economics, and jostle for attention. Standard monetary economics has been pooh-poohed, by-passed, side-lined, suppressed etc. So – when a former investment banker like Jay Powell asks about the consequences of a 15% - 20% rise in the quantity of money in one year – he hears a cacophony of conflicting opinions and assessments from the dozens of “economic experts” his organization employs.

Third, researchers interested in money, in the sense of the quantity of money, have themselves to blame – to a significant extent – for the mess in the subject. My position is not a secret. In my view, Milton Friedman was a force for good, and the rise of monetarism did lead to the control of inflation and the sharp improvement in macro-stabilization performance enjoyed in the Great Moderation (and the Great Stabilization, i.e., the decade of stable outcomes from the Great Recession). But even Friedman’s contribution was – in my view – unsatisfactory or at least incomplete. He never was emphatic enough that the key propositions in monetary economics relate to an all-inclusive, broadly-defined measure of money, with much chopping and changing between M1, M2, the base and so on. But the transmission mechanism cannot be the same for M3 as for M1, since M3 is more than ten times larger than M1, and the two aggregates are held by different agents for different purposes. Friedman also believed in a money creation process (which turned on the monetary base and the base multiplier) that was misleading most of the time. My views here are,

- i. a simple-sum measure of broad money is the concept relevant to 1. the major theoretical propositions of the quantity theory of money (“monetarism”), 2. the monitoring of the macroeconomic situation, and 3. the conduct of policy, and
- ii. changes in the rate of growth of broad money are best understood as the result of changes in banks’ assets (i.e., the credit counterparts), since – although commercial banks’ balance-sheet expansion is subject to constraints of various kinds – banking systems nowadays, with central bank help, can create money “out of thin air”.

Samuelson said that the quantity theory of money had too many “black boxes”, because it did not contain a convincing account of the transmission mechanism. I don’t agree with Samuelson, but one has to concede that quantity theorists are often poor at explaining how changes in money growth rates impact on the economy.

At any rate, it must *not* be assumed that Jay Powell will this week receive several memos from his research team on the inflationary dangers of monetary financing of budget deficits.

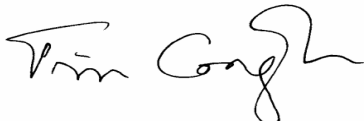
Who is to blame? Is anyone to blame?

Clearly, I am alarmed about rapid money growth in the USA and the probability of a sharp rise in inflation over the next couple of years. Does that mean that the US administration and the Federal Reserve have made serious mistakes? Will they be to blame if my prognosis proves correct? To be frank, I am not sure there was much else that the key players could have done. In an open democratic society with free speech and a free press, politicians in the public eye must do everything possible to prevent avoidable deaths. Throughout the last few weeks they have confronted the “lives vs. livelihoods” dilemma, and the political and media pressures have obliged them to put lives first. If the US administration has decided that it will save lives, the Federal Reserve – the government’s banker – is well-advised to be supportive and helpful. If it were obstructive and difficult, it could be criticised for causing avoidable deaths, and – rather obviously – that would be quixotic and foolish.

All the same, I don’t believe that much thought was given at any stage to either

- the problem of financing the enormous budget deficits that have emerged so suddenly, or
- the inflationary implications of monetary financing of the deficit.

The senior officials at the Fed – and in similarly placed central banking institutions – could plead, in self-exculpation, that the advice they receive from economists is diverse, inconsistent, muddled and unclear, as well as often being of extraordinary complexity. Quite so.



6th April, 2020