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# INFLATION:

## the next threat?

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## Summary

- The policy reaction to the Covid-19 pandemic will increase budget deficits massively in all the world's leading countries. The deficits will to a significant extent be monetised, with heavy state borrowing from both national central banks and commercial banks.
- The monetisation of budget deficits, combined with official support for emergency bank lending to cash-strained corporates, is leading – and will continue to lead for several months – to extremely high growth rates of the quantity of money.
- The crisis has shown again that, under fiat monetary systems, the state can create as much as money as it wants. There is virtually no limit to money creation. The frequently alleged claim that 'monetary policy is exhausted at low (if not zero) interest rates' has no theoretical or empirical basis.
- By mid- or late 2021 the pandemic should be under control, and a big bounce-back in financial markets, and in aggregate demand and output, is to be envisaged. The extremely high growth rates of money now being seen – often into the double digits at an annual percentage rate - will instigate an inflationary boom. The scale of the boom will be conditioned by the speed of money growth in the rest of 2020 and in early 2021. Money growth in the USA has reached the highest-ever levels in peacetime, suggesting that consumer inflation may move into double digits at some point in the next two or three years.
- Central banks seem heedless of the inflation risks inherent in monetary financing of the much-enlarged government deficits. Following the so-called 'New Keynesian Model' consensus, their economists ignore changes in the quantity of money. Too many of these economists believe that monetary policy is defined exclusively by interest rates, with a narrow focus on the central bank policy rate, long-term interest rates and the yield curve.

- The quantity theory of money today provides – as it always has done – a theoretical framework which relates trends in money growth to changes in inflation and nominal GDP over the medium and long term. A condition for the return of inflation to current target levels is that the rate of money growth is reduced back towards annual rates of increase of about 6 per cent or less.

# Introduction

In 2020 the world economy is likely to experience an output fall and increases in unemployment rates comparable to those in the Great Depression years of the early 1930s. The current coronavirus-related slump is therefore a very unusual episode in modern economic history.<sup>1</sup> An exceptional feature is that the crisis is mainly due to a supply-side shock in the economy and not to a drop in aggregate demand or spending. Developed and developing economies have been put in 'lockdown' by governments, while international trade and world-wide supply chains have been severely disturbed. Entire sectors such as aviation, travel, hospitality and other services companies have virtually closed down. Further, this very deep disruption has happened in a matter of weeks, if not days. In effect, people and companies have been told not to produce. The final impact on output and job losses remains unknown.

In the normal course of events with demand given, a negative supply shock first provokes a fall in output and an increase in prices. Of course, the impact on prices will depend on how demand has been affected as well. The greater the fall in output relative to demand, the more severe the inflationary effects of the supply shock will be. However, governments have reacted to the current crisis as if the falls in output reflected a deficiency of aggregate demand, as in a 'standard' recession. Their efforts have focused on supporting spending by households and in keeping businesses afloat. A notable example is in the USA, where the aviation sector has received a \$50 billion package of grants and loans. This is understandable from a political point of view. In a desperate effort to sustain

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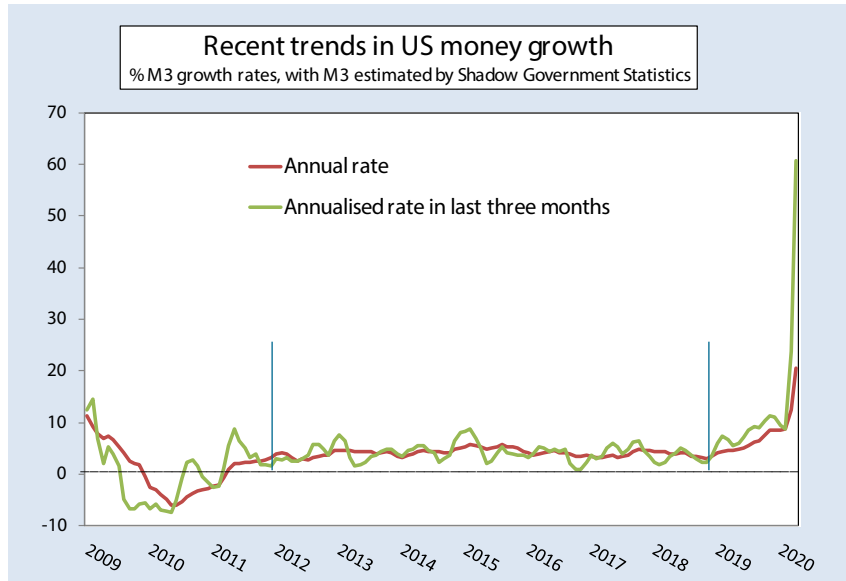
<sup>1</sup> The IMF has recently published its 'World Economic Outlook' with its GDP forecasts for 2020 and 2021. For 2020, it expects a 6.1 per cent fall in output in advanced economies and a 1 per cent fall in emerging economies. A swift return to economic growth is forecast in 2021 (IMF 2020).

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companies and people's income, a wide range of budget measures have been implemented by governments in a record time. These will widen budget deficits by several percentage points of GDP. In a similar vein, central banks have acted promptly to provide as much cash as needed, both to governments, to help finance the budget deficits, and to the banking sector, to support asset expansion. In addition, central banks have resumed large-scale financial asset purchases from banks and non-banks (so-called 'quantitative easing', or QE). The purchases have been mostly of existing government and corporate bonds.

The reaction of central banks and financial regulators to the current crisis is in sharp contrast to their response to the Global Financial Crisis (2008-2010). Rather than 'punishing' banks with demands for higher ratios of capital to risks assets (which by 2010 were over 60 per cent higher than they had been three years earlier), they have relaxed the bank capital requirements. They have even asked banks to limit bad debt provisioning, fearful that provisioning may lead, first, to loan write-offs and the loss of capital and, second, to balance-sheet shrinkage as banks cut assets so that they are in line with lower capital (Morris and Vincent 2020).

An argument has been made that the sharp increases in banks' capital/asset ratios from autumn 2008 forced banks to shed risk assets and so led to the destruction of money balances, with wider deflationary effects. Instead of combating deflation, policymakers made it worse.<sup>2</sup> Only when central banks implemented their asset purchase programmes (QE) did they manage to stop the fall in the amount of money and stabilise its rate of growth at levels consistent with sustained growth of real output at around the annual trend rates of 1 per cent to 2½ per cent, with low inflation. The USA offers a good example of the success of QE in this respect, delivering in effect a second round of the Great Moderation with excellent macroeconomic outcomes (see Figure 1 and Table 1). After a fall in broad money in 2009 and 2010, the conduct of US monetary policy came, for the eight years from 2011 to 2018 inclusive, with an average annual growth rate of 4.0 per cent for both the quantity of money (on the M3 measure) and nominal GDP.

**Figure 1: Rate of growth of broad money (M3) in the US, 2009-2020**

Source: IIMR May 2020 Money Update. The blue vertical lines signal the period of moderate and sustained rate of growth of money and stable economic growth. See: <https://mv-pt.org/monthly-monetary-update/>

**Table 1: Average of rate of growth of broad money (M3) and Nominal GDP in the USA, 1960-2019**

	% 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

Source: IIMR May 2020 Money Update. See: <https://mv-pt.org/monthly-monetary-update/>



Figure 1 shows that in 2019 the USA had already started to depart from the path of monetary stability. In the second half of the year the annual rate of growth of money rose above 8 per cent. In fact, the monetary developments in the USA by the end of 2019 were already inflationary, in the sense that they were incompatible with a rate of inflation of 2 per cent or so. Of course, no one could have anticipated in autumn 2019 that there would soon be a shock to the economy like the coronavirus crisis. All the same, the damage from the coronavirus is being felt not long after policymakers had already allowed quite a noticeable acceleration in money growth.

## How will the enlarged government deficits be paid for?

The key determinant of the growth of nominal GDP in the long run is the growth of the quantity of money. In that sense monetary policy matters more to macroeconomic outcomes than fiscal policy. (No economist has proposed that an  $x$  per cent increase in nominal public debt ‘causes’ an identical  $x$  per cent increase in nominal GDP, as the evidence against this notion is overwhelming.) True, governments may overspend and incur deficits in an effort to increase internal demand. This policy, however, will be inflationary if the central bank opts for a monetary policy that accommodates too readily the needs of the government (i.e. so-called ‘fiscal dominance’, when the central bank’s priority is to finance the budget deficit, not to keep inflation under control or to attain the usually understood objectives of macroeconomic policy). Unhappily, current developments in countries with full monetary sovereignty – notably the USA and the UK – look very much like the ‘fiscal dominance’ that sound-money economists deplore.

A warning sign comes when central banks say that they will extend overdraft finance to the government or that they will purchase government bonds at issue, and particularly when no limit to these processes is imposed. Recent announcements from the Federal Reserve in the USA and the Bank of England in the UK have been worrying. Of course, central bank finance for governments is not new at all. Since their inception central banks have had a close relationship with government,<sup>3</sup> with their ability to raise money coming to the rescue of the Treasury in times of crisis. This is the direct financing or so-called ‘monetisation of budget deficits’ from which spendthrift governments have benefited for centuries.

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3 See the analysis on the establishment of modern central banks by Vera Smith in her seminal book (Smith 1936).

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In recent years proponents of self-described 'Modern Monetary Theory' have appealed to a 'magic money tree' to justify their appeal to central bank finance for government expenditure. In their view, the monetisation of the deficit overcomes traditional government budget constraints and enables the state to implement active economic policies in a quest for full employment. MMT supporters are right in saying that there is no limit to the creation of money under purely fiat monetary systems. But their theory forgets that private-sector agents have a finite demand to hold real money balances. In other words, there is a 'monetary equilibrium' in which a maximum quantity of nominal money balances is compatible with a given price level of goods and services. If the monetary authorities double the quantity of money and shatter the equilibrium, the level of real money balances will not change in the long run. Instead the price level will also double. More generally, persistent increases in the amount of money relative to existing output will end up in inflation.

### ***The monetisation of the deficit***

The mechanics of monetary financing of budget deficits by central banks are simple in essence. The central bank has a deposit from the Treasury on the liabilities side of its balance sheet, and holdings of government bonds on the assets side. If the Treasury issues \$100 billion of new bonds, they are acquired by the central bank and add to its assets, and the central bank pays for them by increasing the Treasury's deposit also by \$100 billion. The new money comes 'out of thin air'; it is just a balance-sheet entry, no more and no less. When the Treasury uses the \$100 billion to purchase goods and services from private sector non-banks, their bank deposits rise. Those deposits are extra money in the economy. In principle, the process has no limits. In the current (purely fiat) monetary systems, the central bank – in cahoots with the Treasury – can create as much as money as it wishes. It follows – almost by definition - that monetary policy can never be exhausted. (Some economists see monetary policy through the lens of changes in interest rates. Because of their obsession with interest rates, they believe that central banks can do nothing more to affect the economy once interest rates are at or close to zero. This is a grotesque under-estimation of the potential for monetary abuse. Citizens of Zimbabwe or Venezuela - victims of hyperinflations that have ruined their countries - would be bemused by the notion that monetary policy can be exhausted.)

A budget deficit can be financed by commercial banks as well as by the central bank. In general, commercial banks do not take deposits from the

government. However, they can acquire Treasury bills and other securities from the government and pay for them by debiting their own cash reserves at the central bank and crediting the government's balance. The government can then spend the money in its central bank deposit by purchasing goods and services from private sector non-banks, in the same way as described in the last paragraph. Indeed, even before the coronavirus outbreak the process was evident in US banking system data. Thus, US commercial banks' holdings of US Treasuries advanced in the six months to October 2019 by 7.9 per cent (to almost \$3,000 billion, out of balance-sheet totals of \$17,500 billion), or at an annualised rate of 16.5 per cent. This pattern will become more pronounced in the next few months and quarters, because the US federal deficit – almost \$1,000 billion in the 2019 fiscal year - is expected to fall within the \$3,000 billion to \$4,000 billion band in the 2020 fiscal year.<sup>4</sup>

Whether financed from the central bank or the commercial banks, the US government has money to spend. Every time the government buys goods or services from private sector non-banks, and the private sector non-banks make no offsetting payment to government (for example, to pay taxes or to purchase government bonds), it increases the level of bank deposits and therefore the amount of money in the economy. When the Covid-19 outbreak comes under control, it will take a few quarters to curb the budget deficit, while the excess money balances will still be present. Unless drastic steps are taken to remove these excess balances, an inflationary boom is possible. The dimensions of the boom, and the extent of the inflationary damage, are still uncertain at this stage. Much will depend on money growth in the rest of 2020 and in early 2021.

### ***Expected money growth in the USA in 2020 and 2021***

At the time of writing (10 June 2020), the latest available figures for the US commercial banks relate to 27 May. They show extraordinary increases in bank deposits in recent weeks, as the coronavirus epidemic has threatened to spread through the population, and the Trump administration and the Federal Reserve have tried to mitigate the hardships caused by the lockdown. Bank deposits at the commercial banks increased in the 11 weeks to 27 May by 14.0 per cent, or at an annualised rate of increase of 91.0 per cent. In the month of March, the M3 money measure – which

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4 The April 2020 issue of the International Monetary Fund's *Fiscal Monitor* suggests that the US budget deficit will be 15.4 per cent of GDP in 2020 (over \$3,500 billion), the highest ratio in the USA's peacetime history.

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is dominated by bank deposits – increased by 4.0 per cent, according to the Shadow Government Statistics consultancy. April was even more extraordinary, with an increase of 7.7 per cent, and May saw another jump of 4.5 per cent. We therefore had M3 money growth rates in March, April and May of 4.0 per cent, 7.7 per cent and 4.5 per cent, respectively. The resultant annualised rate of increase in money in the three months was 87.7 per cent. In May the annual rate of increase in the quantity of money was 25.5 per cent, the highest in American peacetime history.

No one can predict exactly the rate of growth of the quantity of money in June and July 2020, and in subsequent months and quarters. But the US Treasury's need to finance the hugely increased federal deficit will be a difficult issue well into 2021. It cannot be overlooked that 2020 is a presidential election year, and that the Republican and Democrat leaderships will be making expensive promises to cut taxes and boost expenditure. Already financial markets are aware of record amounts of short-dated US government debt.<sup>5</sup> In addition, along with other programmes to enhance lending in the economy, on 9 April the US Fed launched new funding (\$600 billion) to buy the loans of small and medium sized businesses arranged from the banking system. While the commercial bank making the loan will retain 5 per cent of the loan (and hence of the risk of loss), the Fed will buy the remaining 95 per cent of the loan. Effectively, this means that the Fed is acting, if indirectly, as a lender to businesses.

Let us assume that monetary financing of the federal deficit will average \$100 billion to \$150 billion a month over the year from May 2020. Then, with US broad money on the M3 measure at just over \$20,000 billion at present, an upward bump in broad money growth of perhaps 7½ per cent to 10 per cent is on the cards. 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 plausible that annual money growth in the year to late 2020/early 2021 will stay near to the 25 per cent number and may go higher. To repeat the message, these will be the highest-ever rates of increase in the quantity of money in US peacetime history. (Some months in late 1919 had annual growth rates of broad money in the 18 per cent to 19 per cent vicinity.)

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5 As reported by the *Financial Times* on 4/5 April, 'The US Treasury department issued a record amount of short-dated debt this week ... The Treasury flooded the market with \$319bn of Treasury bills, which mature in one year or less – far surpassing the previous record of \$190bn seen in October 2008'.

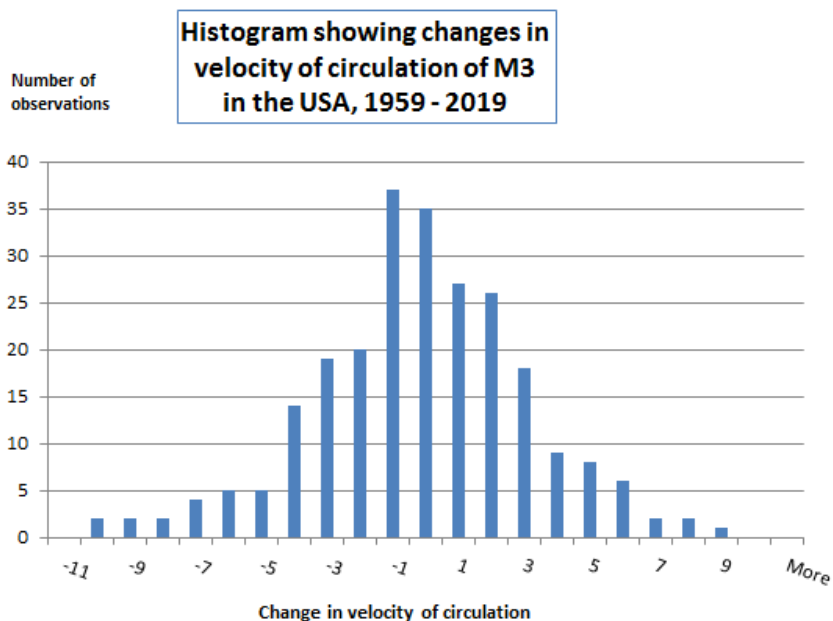
## How changes in the amount of money affect the economy

Spring 2020 is a time of great uncertainty, which should increase the precautionary demand for money balances, while many investors are sitting on the side-lines, keeping cash out of the markets and holding above-normal speculative balances. These increased precautionary and speculative demands to hold money will be associated in 2020 with a sharp fall in the velocity of circulation. It is entirely possible that a fall in nominal GDP will coincide with an unusually large rise in the quantity of money. Nevertheless, the evidence – in the USA as in other countries – is that over the medium term the underlying stability of the demand to hold money causes velocity to revert to its long-run mean (or, at any rate in present circumstances, to a value not that far from that when the coronavirus epidemic took hold). Figure 2 is a histogram of annual changes in the velocity of circulation of broad money in the USA. The chart suggests the interpretation that these changes are normally distributed, implying that large and continuing changes in velocity away from its mean value are improbable.<sup>6</sup>

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<sup>6</sup> The Kolmogorov-Smirnov test does not reject normality of the distribution.

Figure 2: Histogram of money velocity in the USA (1959-2019)



Source: Calculations by IIMR. Data are quarterly and refer to the annual change in the ratio of nominal GDP to M3.

On this basis, the current sharp acceleration in money growth in 2020 matters enormously. When the aggregate quantity of money is growing sharply, at well above the economy's trend rate of output growth, some sectors in the economy will have excess money balances. An argument can be made that the excess money balances are already affecting behaviour and will continue to do so. The Fed's QE asset purchases have been mostly from financial institutions, many of which are investors in equities and bonds. These financial institutions have constantly to balance 'cash' (i.e. bank deposits) against their longer-term investments. When their bank deposits soared from mid-March, many of them took the view that the pandemic crisis would not last forever and refused to let their 'cash ratios' (i.e. the ratio of bank deposits to total assets) rise above already high levels. Between a low point on 23 March and the time of writing (10 June) the S&P 500 index, the best measure of US equity prices, jumped 45 per cent. Share prices are somewhat lower than in early February 2020, but they are roughly 10 per cent up on a year ago.

These gains will help the economy in at least two ways. First, companies will find it easier to raise funds from investors. The excess money balances in long-term savings institutions will be transferred to companies, easing cash strains due to lockdown-related interruptions to revenue. Despite the gloomy news background, company financings have in recent weeks continued at strong levels. According to a 2 April report from Reuters (Duguid and Franklin 2020):

Highly rated US corporate bond issuers raised a record \$110.502 billion this week, according to Refinitive IFR ... The market for new investment-grade debt has boomed since the Federal Reserve and Treasury Department announced monetary and fiscal stimulus to help contain the economic fallout from the pandemic.

Because of the impressive volume of their fund-raising, companies will be in a better financial position to undertake capacity expansion and commit resources to long term investment projects. This will boost both aggregate investment and the hiring of new staff. Second, household wealth – to which the stock market is so important – will be helped by the recovery in equity markets. There is an obvious contrast between the depth and persistence of the bear market in 2008, which was accompanied by a slide in consumption, and the shallowness and brevity of the bear market in 2020 associated with the coronavirus lockdown. The extremely high rates of money growth in March and April 2020 are at least a candidate explanation for this contrast.

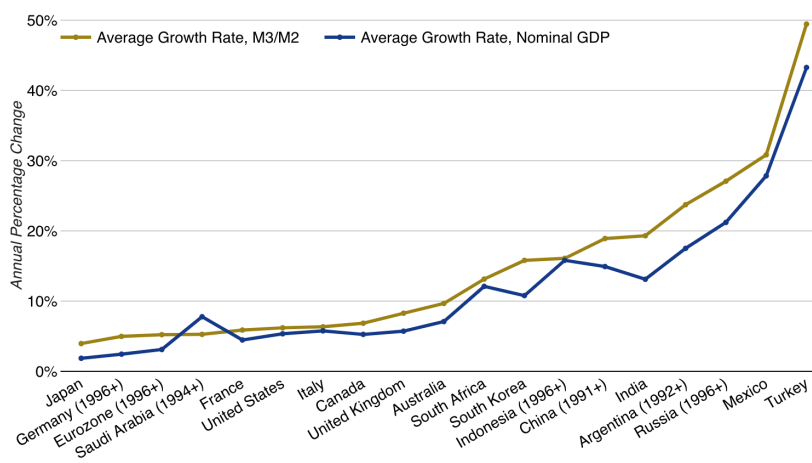
The prices of assets do not move in isolation from the prices of goods and services. Eventually, a range of arbitrage mechanisms keep the price of goods and services rising – over the medium and long runs – at rates similar to the prices of assets. The logical forecast here is that the current and probably continuing money growth explosion will promote further gains in share prices, and that these gains will spill out into real estate, both residential and commercial. Surprising though it may seem today, annual money growth percentage rates in the teens imply an inflationary boom in 2021 and perhaps 2022. The size of the boom will depend on the rate of growth of money in coming months and quarters, and on the extent to which any spare capacity and unemployment due to the lockdown is eliminated.

How much inflation is to be expected? The correlation between changes in the quantity of money and nominal GDP is shown in Figure 3, which



depicts historical trends in the G20 group of both developed and developing economies. Given that the growth of real output is in most countries lower and more stable than that of nominal output, the link between excessive money growth and inflation is clear and consistent. For the time being, no one can offer precise inflation forecasts for 2021 and 2022 in any economy. So much is uncertain and conjectural. But – given that the return to normality 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 rate of over 10 per cent in the USA would be a plausible consequence of annual rates of money growth of well over 20 per cent. Table 2 summarises the latest money growth figures in the six largest world economies, and Table 3 gives the Institute of International Monetary Research’s view on the likely peak rates of money growth in the next 12 to 18 months. One message is that the USA is at present departing most radically from the ‘old religion’ of balanced budgets and sound money. Developments elsewhere are less extraordinary, but higher inflation is again a likely sequel to the money growth surges now being recorded.

**Figure 3: Average growth of broad money and nominal income**



Source: IIMR, see: <https://mv-pt.org/>

**Table 2: Latest money growth in the six largest world economies**

Name of country/ jurisdiction	Share of world output		Growth rate of broad money	
	In purchasing-power parity terms, %	In current prices and exchange rates, %	In last three months at annualised rate, %	In last twelve months, %
USA	15.1	23.3	87.7	25.5
China	18.7	16.1	13.3	10.6
Eurozone	10.6	16.4	15.4	7.5
Japan	4.2	5.9	5.5	3.0
India	7.7	3.3	12.3	10.6
UK	2.2	3.4	14.0	7.4

Source: National sources and calculations by IIMR (see IIMR May 2020 Money Update).

**Table 3: Expected annual growth rates of the quantity of money, in late 2020 and early 2021**

USA	22½% - 27½%
Eurozone	7½% - 12½%
Japan	4½% - 7%
UK	7½% - 15%

Source: IIMR, May 2020 Money Update.

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## The debate on inflation: a test of rival economic theories lies ahead

Central banks in the developed world do not pay much attention to money growth. Indeed, sometimes they ignore it altogether in their commentary and analysis. Only those countries that have suffered from high inflation quite recently – all in developing regions – have central bank economists and research departments that monitor money trends. They know from recent experience how much harm excessive money growth can do to economic efficiency and social cohesion. But the underlying processes that connect changes in money and in nominal GDP are at work in all nations at all times. If the USA records a doubling of the quantity of money in less than a year, it is just as vulnerable to rapid inflation as Argentina or Brazil.

Why do central banks in the leading countries ignore money? The problem lies in the main model typically used by central banks when they make policy decisions. In this model, often called ‘New Keynesian’, the rate of inflation depends on expected inflation and the degree of spare machine capacity (summarised in a so-called ‘output gap’); the rate of change of output (and so the level of output relative to trend, ‘output gap’) depends on the central bank discount rate and expected output gap; and the discount rate is set by the central bank in response to inflation pressure and the estimated ‘output gap’.<sup>7</sup> The model overlooks the banking system and its monetary liabilities more or less entirely. So, money cannot determine

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<sup>7</sup> Technically, the New Keynesian Model is summarised in three equations: an ‘expectations-augmented Phillips curve’, an IS function with expectations [as from Hicks’ IS-LM framework], and a ‘central bank reaction function’ guided by a ‘Taylor-type rule’.

either national income or national wealth; it cannot affect the price level of goods and services or any significant asset yield.

However, there is something wrong with three-equation New Keynesianism. During and after the Great Recession central banks adopted QE programmes to maintain monetary stability and achieve sound macroeconomic outcomes. This adoption may have been inadvertent and unplanned, but it was the favoured method to defeat recession. But QE-type measures – which impact on the quantity of money (and perhaps on banks' cash reserves) – make no sense in a New Keynesian framework. Further, as shown in Figure 1 above, the rate of growth of M3 broad money in the USA from 2011 to 2019 seems to have followed almost perfectly a rule first proposed by Milton Friedman in 1959, in which the rate of growth of money in nominal terms is managed by the monetary authorities so that it is close to the rate of growth of real output. Specifically, M3 broad money grew on average by 4 per cent a year – and the rate of increase in nominal GDP was almost exactly the same. The growth of demand and output was stable, while inflation was low and in line with the Fed's target at just under 2 per cent a year. It would be nice if these outcomes had been predicted by the Fed as a consequence of the stability at a low but positive rate of money growth. But Fed officials have been charmingly frank in admitting that they were not looking at any monetary aggregate! The superb macroeconomic numbers in this eight-year period were due to ... well, serendipity.

Some economists – whom we might call the inflation doubters – believe that the very recent spurt of money growth will not lead to any inflationary damage. They point out that QE operations were widely forecast in 2009 and 2010 to have serious inflation effects, but it just did not happen. The inflation mongers then were quite wrong. But the inflation doubters need to be more careful. In our analytical work at the Institute of International Monetary Research we always rely on movements in a broadly defined measure of money which includes all money balances, nowadays to be understood as M3 in the USA.<sup>8</sup> In the 2008 to 2011 period M3 growth was very weak, despite the money injected into the economy by QE operations. One of us in fact went out of his way to deny that QE would result in higher inflation.

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8 The Federal Reserve is in such a muddle that it stopped preparing data for M3 in 2006. As noted earlier, we use figures prepared by Shadow Government Statistics.

The experience of a decade ago warns that close attention must be paid to actual money growth data, using a broadly defined money measure. For various reasons M2 is no longer a money aggregate of the right sort in the US. Our concerns about future inflation arise from monitoring totals for all bank deposits (as reported every week in the Federal Reserve's release on US banks' balance sheet numbers) and the monthly M3 figure prepared by Shadow Government Statistics.

The monetary and bank regulatory environment today is considerably looser than in late 2008 and 2009, and M3 money growth rates are dramatically higher. Time will tell whether the inflation doubters or the inflation mongers are right. The next few years may be very interesting in offering an unusually specific test of the validity of different theories of national income determination and inflation. Surprisingly, a majority of economists are vocal with claims that 'money doesn't matter' (where 'money' means 'the quantity of money') and many even assert that outright monetary financing of the deficit, on any scale, cannot cause inflation. We will see. In our view, strong grounds exist for believing that the highest growth rate of the quantity of money in US peacetime history will lead to a double-digit rate of inflation.

## Conclusions

- The sudden increase in government deficits in most advanced economies will be financed to a large extent by banks and central banks. This will reveal the inflationary implications of the monetary financing of the deficit.
- At some point in the next two or three years the annual growth rate of US nominal GDP will accelerate towards double digit figures. A similar trend, though not as dramatic, will be followed in other advanced economies. Given that the trend growth rate of real output is not much more than 3 per cent a year, a big resurgence in inflation is implied by our analysis. The only way to prevent this is for the US Fed and other central banks not only to end their current stances as ready financiers of government deficits, 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 the USA, during and immediately after a presidential election year, that seems very unlikely.
- The current focus of central banks on interest rates as the main driver of inflationary pressures in the economy is not only misleading but also insufficient to explain the effects of monetary policies over the medium and the long term. Only when we incorporate changes in the amount of money in the analysis will we be able to assess the inflationary effects of the current policy measures in two or three years' time. Central banks could explicitly incorporate into their policy strategies a far greater role for the analysis of changes in the amount of money in the economy.
- Accountability of central banks is key in democratic societies. Central banks have the power to create money out of nothing and to affect people's livelihoods quite significantly. The current monetary policy framework in most countries sets an inflation target that central banks will most likely severely exceed in the next two or three years. The

adoption of a reference value for broad money growth compatible with price stability (i.e. a 0-2 per cent rate of inflation) would help to keep inflation in check and better monitor the performance of the central bank. It could well be taken as a leading indicator of inflation and give the central banks time to reverse inflationary policies that affect the most economically vulnerable in society so badly. In addition, the achievement of a certain rate of money growth in the economy is an operation under the control of central banks, and therefore a more realistic and enforceable metric by which to assess their performance.

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Parts of this paper, in particular the second section, are an extended version of the recent reports and notes published by the IIMR in March and April 2020. For more details and information on our analysis, please

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