



Covid-19 pandemic recession - comparison with the GFC and Great Depression

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Recently there have been comparisons between what is happening to economic activity now, and what happened in the 2008-09 Global Financial Crisis (GFC) and even in the Great Depression of the 1930s. Some argue that the Covid-19 pandemic recession is materially different to previous recessions, whilst others argue there are many parallels. In this article, we outline our thoughts on this topic, and the ramifications for economic activity and inflation going forward.

First, we present our views on the key features of the three major financial crises of the past century, comparing and contrasting the elements that we see as critical to the shape of the recoveries in each case (**Sections 1-3**). Next, we review three widely advocated solutions to escape from the current downturn: negative interest rates, yield curve control, and monetary financing of budget deficits (**Section 4**). Finally, we consider whether there will be any long-term effects of the Covid-19 economic crisis on the growth of major economies in the future (**Section 5**).

1. Great Depression

The Great Depression of the 1930s was widely seen at the time as a failure of the capitalist system. This was partly because socialist governments in Western Europe and the communist government in Russia were promoting systems of government and business organisation that called for a much greater role for government in the ownership of resources and the regulation and control of corporate activity. However, subsequent research by Clark Warburton and still later by Milton Friedman and Anna Schwartz showed convincingly that the Great Depression was primarily due to a failure of monetary policy.

After the stock market crash of October 1929, the US Federal Reserve (Fed) had allowed what would probably have been a mild recession in 1930 to be converted into a severe depression - essentially by inaction. Under the rules of the gold exchange standard that was being operated at that time, countries with net inflows such as the US or France should have allowed their money supplies to expand, fuelling increased spending, higher inflation and a reversal of the capital inflows. However, this adjustment mechanism was short-circuited by sterilisation - i.e. by open market operations by the Fed and the Bank of France which offset the impact of gold inflows.

Although the Fed cut the discount rate six times between October 1929 and the end of 1930 - from 6.0% to 2.5% and later to 1.5% in 1931 - the size of the Fed's balance sheet consistently declined for a whole year after the stock market crash. On the asset side the Fed's holdings of gold increased steadily by about US\$1 billion as funds from Europe poured in, but Fed credit - bills bought and discounted together with holdings of securities - **declined** by over US\$1 billion, with the result that high-powered money or the monetary base also declined continuously. Instead of facilitating or promoting positive monetary growth by conducting open market purchases, Fed officials looked at low interest rates and wrongly concluded that monetary conditions were easy. This was despite the on-going decline in the volume of deposits and the quantity of money (what we now call M2).

In October 1930 the first of three banking crises produced runs on banks. Customers converted deposits to cash currency, which meant that the monetary base did start rising, but deposit withdrawals meant that banks were forced to reduce loans with the result that the money supply fell even further. Yet still the Fed did not supply adequate reserves to the banks - although it could have easily done so by purchasing securities. By April 1933 the broad money supply (M2) had declined by a cumulative and catastrophic 35%.

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Only in 1934 did M2 start growing again, by an average of 7.3% for the 12 months to December, followed by 15.0% in 1935 and 12.1% in 1936. The results for real GDP were spectacular: having declined for the four consecutive years 1930-33, growth surged by 7.7% in 1934, 7.6% in 1935 and 14.2% in 1936. It is true that President Roosevelt, who took office in March 1933, immediately embarked on a series of New Deal policies designed to raise prices and wages after a period when prices had fallen sharply - supporting farmers, the unemployed, youth and the elderly - while increasing expenditure on infrastructure. The New Deal also included legislation to regulate the banking industry, insure deposits, and the Glass-Steagall Act to separate securities business from commercial banking. Finally, there was a set of macro-economic policies designed to re-inflate the economy and to devalue the dollar. All these played a part, but it is reasonable to argue that none of these policies, on their own, could have turned the tide without the huge directional shift in monetary growth.

2. Global financial crisis

In the years preceding the 2008-09 GFC recession, US money and credit growth (as measured by our M3 proxy) exceeded 10% per annum, which is an unsustainable growth rate for an economy such as the US. When the housing market peaked and residential mortgage loans deteriorated, commercial banks' (and shadow banks) were compelled to undertake a drastic "spring clean", which caused money and credit to contract. In the immediate aftermath of the GFC, large scale stimulus programmes were put in place consisting of monetary easing and fiscal support.

On the monetary side, in addition to cutting interest rates almost to zero, the Fed and the Bank of England (BoE) both responded with Quantitative Easing from November 2008 in the case of the US and from March 2009 in the case of the UK. (The Euro-area and Japan did not adopt QE policies until March 2015 and April 2016 respectively.) However, because, as mentioned, money and credit in the US & UK were already contracting, these QE programmes did little more than offset the declines in broad money; they did not lead to rapid monetary growth. All four economies suffered anaemic recoveries from 2009 onwards.

One of the underlying reasons for the lack of adequate monetary stimulus in the wake of the 2008-09 crisis was that bank and household sector balance sheets, having been leveraged up in the years 2002-08, were severely impaired as a result of the crisis, requiring an extended period of balance sheet repair. In the case of the banks, besides coping with the losses they faced, numerous new regulations were imposed such as the Dodd-Frank Act (in the US) and Basel III (internationally) which raised bank capital requirements substantially. Therefore in addition to facing an environment of weak loan demand due to household and non-bank financial sector deleveraging, the banks themselves had to raise capital, which inevitably drew funds from their customers' deposits and dampened their loan growth to a pace that was slower than it would otherwise have been.

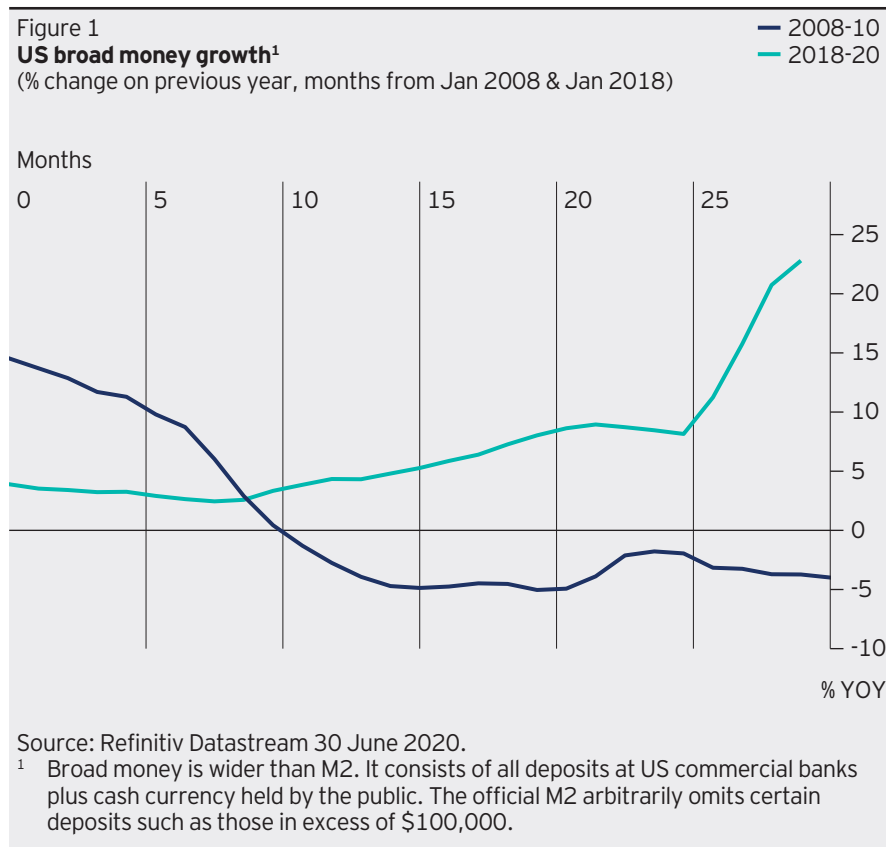
On the fiscal side, despite central government deficits in most advanced economies such as the US and UK of 10-12% of GDP in 2009-11, there was initially little success in achieving self-sustaining growth in the private sector other than in China. The reason was that China was the only economy that had successfully engineered rapid money growth. The failure of fiscal stimulus in the advanced economies illustrated very clearly the widely forgotten lesson that without money growth, fiscal spending only transfers spending from the private sector to the public sector; it does not add to total spending. Only in China where broad money growth (M2) doubled from 15% to 30% p.a. in 2008-2010 did fiscal spending appear to succeed. However, appearances are deceiving; with the benefit of hindsight we can see that it was the rapid money growth that fuelled the increase in Chinese spending in 2009-11. In the developed west, the lack of money growth necessarily implied that fiscal stimulus could not succeed. Outside China, spending growth data - such as real and nominal GDP - therefore remained sub-par for most of the next decade.

3. Covid-19 recession

How does the Covid-19 pandemic recession compare to the two predecessors we have just discussed? The simple, straightforward answer is that it has been entirely different. After a decade of banking reforms (most notably Dodd-Frank and Basel III), commercial banks are much better capitalised and hold much higher levels of liquid assets now compared to 2008/09. Moreover, the household sectors in the US and the UK (and to a lesser extent in the Euro area and Japan) have de-levered significantly. Therefore when the pandemic struck the developed economies in March 2020, instead of being unable to extend credit as they had been in 2008-09, these reforms allowed commercial banks to extend credit to the private non-financial sector in response to the sudden drawdown of credit lines by corporates. In the US we estimate that such drawdowns amounted to over US\$400 billion in March and April alone. As an added bonus, US banks were also in a position to purchase US Treasury bills to partially fund the fiscal deficit.

Three factors explain the surge in US broad money growth: (1) the US\$400 billion increase in lending by the banks to meet credit line drawdowns by companies (which were reflected in increased deposits for the banks), (2) bank purchases of US\$200 billion of Treasury bills (also matched by incremental deposits), and (3) Fed purchases of securities from non-banks, which would be reflected in additions to deposits of the sellers of those securities. In combination these developments have caused US broad money growth to rise above 20% year-on-year - in marked contrast to what happened in the GFC. Figure 1 below compares US broad money growth in the aftermath of the GFC with money growth during the Covid-19 pandemic recession.

In our view the injection of substantial purchasing power into the US, UK and Euro-area economies in 2020 will almost certainly ensure a vigorous recovery in 2020-21. The shape of the recovery will therefore be more similar to what happened in 1934-36 than what happened in 2009-2019.



“After the GFC of 2008-09, the lack of money growth necessarily implied that fiscal stimulus could not succeed... (whereas after Covid-19) the injection of substantial purchasing power into the US, UK and Euro-area economies in 2020 will almost certainly ensure a vigorous recovery in 2020-21.”

4. Are the widely suggested remedies appropriate?

Several remedies to combat the Covid-19 pandemic recession have been suggested. Broadly, these can be categorised into the following:

- a) Negative interest rates (central bank policy rates)
- b) Yield curve control (YCC)
- c) Direct monetary financing of government spending (MMT)

The first two suggested remedies, negative central bank policy rates and YCC, rely on the orthodox understanding of monetary policy having first and foremost to do with interest rates. This has been the mainstream measure of monetary conditions for decades now and has led some countries to adopt these radical policies. This is a mistake in our opinion. A more appropriate metric for measuring monetary conditions is the growth in the quantity of the money supply, broadly defined. The third suggested remedy, direct monetary financing of government spending (MMT), does allow for an increase the quantity of the broad money supply, but comes with its own problems.

a) Negative central bank policy rates

Negative policy rates have already been experimented with in several countries, most notably in the Euro area and in Japan, with other central banks such as the BoE known to have considered the possibility of negative policy rates. Have these policies been effective in these two economies?

The Euro area was the first economy to implement negative policy rates when the European Central Bank (ECB) lowered its deposit facility rate (the main short-term policy rate) to -0.10% in July 2014. To measure the effectiveness of negative policy rates in reflating the Euro area we will compare the period prior to 2014 with the period since 2014. Between 2005 and 2014, the ECB policy rate averaged 1.05%, whilst inflation (as measured by the preferred HICP index) averaged 2.0% year-on-year. In contrast, since 2014 the ECB policy rate has averaged -0.35% whilst inflation averaged 0.9% year-on-year. On the face of it, negative interest rates in the Euro area have had little effect on average inflation rates. Does the quantity theory shed any light on this discrepancy? Between 2005 and 2014, our constructed Euro area broad money proxy (a broader measure of money than the official M3) averaged 5.5% year-on-year growth, but since 2014 this average growth rate has fallen to 3.3% year-on-year, which adequately explains the recent period of sub-target inflation.

Moving to Japan, we see a slightly different story. The Bank of Japan (BoJ) was more cautious about setting negative policy rates, eventually deciding to implement negative policy rates in March 2016. Once again, we can conduct the same experiment that we did with the Euro area, comparing a period prior to the adoption of negative rates with the period since then. Between 2005 and 2016, the BoJ policy rate averaged 0.16%, whilst inflation (as measured by the CPI index) averaged just 0.3% year-on-year. Japanese policy rates have changed only marginally since 2016, averaging -0.10%, which has been accompanied by a slight increase in average inflation of 0.5% year-on-year. Proponents of negative policy rates might cite this as a victory, but does the quantity theory offer a better explanation? Between 2005 and 2016, our constructed Japanese broad money proxy (broader than the official M3 measure of the money supply) averaged 2.7% year-on-year growth, but since 2016 this average growth rate has risen to 4.6% year-on-year, which adequately explains the increase in inflation.

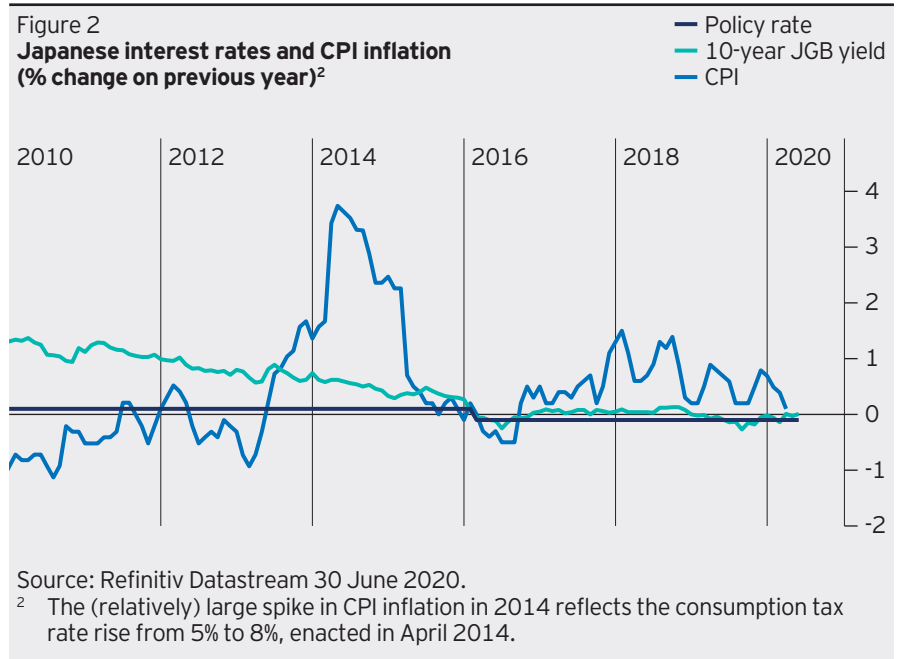
From the two case studies above it seems reasonable to assert that instead of raising average inflation rates, negative central bank policy rates may in fact cement sub-target inflation in place, especially when combined with excessive banking regulations. Commercial banks now have to hold much more liquid assets than prior to the GFC, which are mostly constituted by bank reserves at the central bank and short-term government securities. These assets are now negative yielding, with any loss impacting retained earnings and eventually bank capital. On top of this, as longer-term interest rates have fallen, net interest margins for the commercial banks have also fallen, which has also impacted on bank profitability. All of this has affected bank capital, and ultimately bank credit creation.

b) Yield curve control (YCC)

A natural extension of negative policy rates (when they are deemed as ineffective) is to control not just short-term interest rates, but interest rates further out along the yield curve. Two important case studies to consider are the US during and following World War 2, and Japan since 2016.

During World War 2, massive borrowing by the US federal government was necessary to fund the war effort. However, this threatened to send interest rates soaring, making such debt increasingly more burdensome to service. In response, from 1942 to roughly 1947, the Fed successfully kept the government's borrowing costs down by purchasing any government bond that yielded more than certain targeted rates. It should be noted that bond yield control was accompanied by a general programme of price controls, and therefore the Fed was able to meet its obligations to the government with relatively modest bond purchases. Reflecting this, labelling this policy explicitly as YCC might be misleading.

“Since YCC was introduced in 2016, Japan’s inflation has not been at the target rate of 2% for a single month, despite that fact that the entire yield curve was essentially at zero.”



YCC has been in place in Japan since 2016, when the BoJ decided to purchase a sufficient amount of Japanese Government Bonds (JGBs) to keep the 10-year JGB interest rate at zero. Effectively, the BoJ views its purchases of JGBs as a way of reducing long-term interest rates, not as a way of directly affecting the supply of money in the economy. This is a common view in central banks and the private financial sector across developed economies. Has this policy been successful in reflating the Japanese economy? Figure 2 above suggests not.

The target inflation rate for the BoJ is currently 2% year-on-year (for the “core” CPI excluding fresh foods), having been raised by Prime Minister Abe in 2013 from 1% year-on-year. Since YCC was introduced in 2016, the change in the CPI has not been at the target rate of 2% for a single month, despite that fact that the entire yield curve was essentially at zero. The latest inflation print for Japan came in at just 0.1% year-on-year for May 2020.

c) Direct monetary financing of government spending (MMT)

Modern Monetary Theory (MMT) is a set of ideas that has become popular in the past few years, particularly with politicians and economists on the political left, but whose core remains outside the mainstream of accepted macroeconomic theory. Much of MMT’s appeal derives from the sense that, in contrast to orthodox economics, it appears to offer easy solutions to some of the central problems of modern economies, especially in the aftermath of the GFC. For example, one of its core ideas is that a government - such as the US, UK or Japan - that creates its own money generally need not, and will not, default on debt denominated in its own currency.

Converts often extend this proposition to suggest that there is effectively no limit to the expansion of government spending. Under this banner recent candidates for the White House have advocated universal basic health care, or new infrastructure spending, or a ‘Green New Deal’ (meaning massive federal spending to manage climate change and the environment). Restraint on public spending, they argue, is only needed when full employment is reached, or when inflation becomes a problem. Adherents of this view can be expected to point to the huge increase in government spending designed to deal with the coronavirus pandemic and say it proves there was scope for much higher government spending than orthodox economics had allowed for in the past.

Before going any further along this wishful yellow brick road, we need to stop and unpack some of the elements of the MMT thesis. First, in almost all macroeconomic analysis it is best to separate the government and fiscal policy from the central bank and monetary policy. There may be occasions when it is appropriate to consolidate the accounts of the Treasury and the central bank, but mostly it makes for much clearer thinking if the two are treated separately. Similarly, there were times in the past - before central banks became responsible for monetary policy - when the Treasury, by managing its cash balances, could affect monetary conditions but those conditions no longer exist.

Second, the liabilities of the government are debt while the liabilities of the central bank are types of money (bankers’ deposits or cash currency). Debt and money are different, and the two are not always interchangeable at par. The liabilities of the central bank are mostly assets of the private sector and cannot - as MMT disciples believe - be preempted to finance government expenditures. Contrary to what the advocates of MMT proclaim, the government cannot simply finance its spending by using money from the central bank instead of relying on taxation or debt issuance. In some countries (such as Japan and the euro-area) the fear of the consequences is such that the funding of government debt in the primary market by the central bank is prohibited by law.

Figure 3

Propositions and fallacies in Modern Monetary Theory

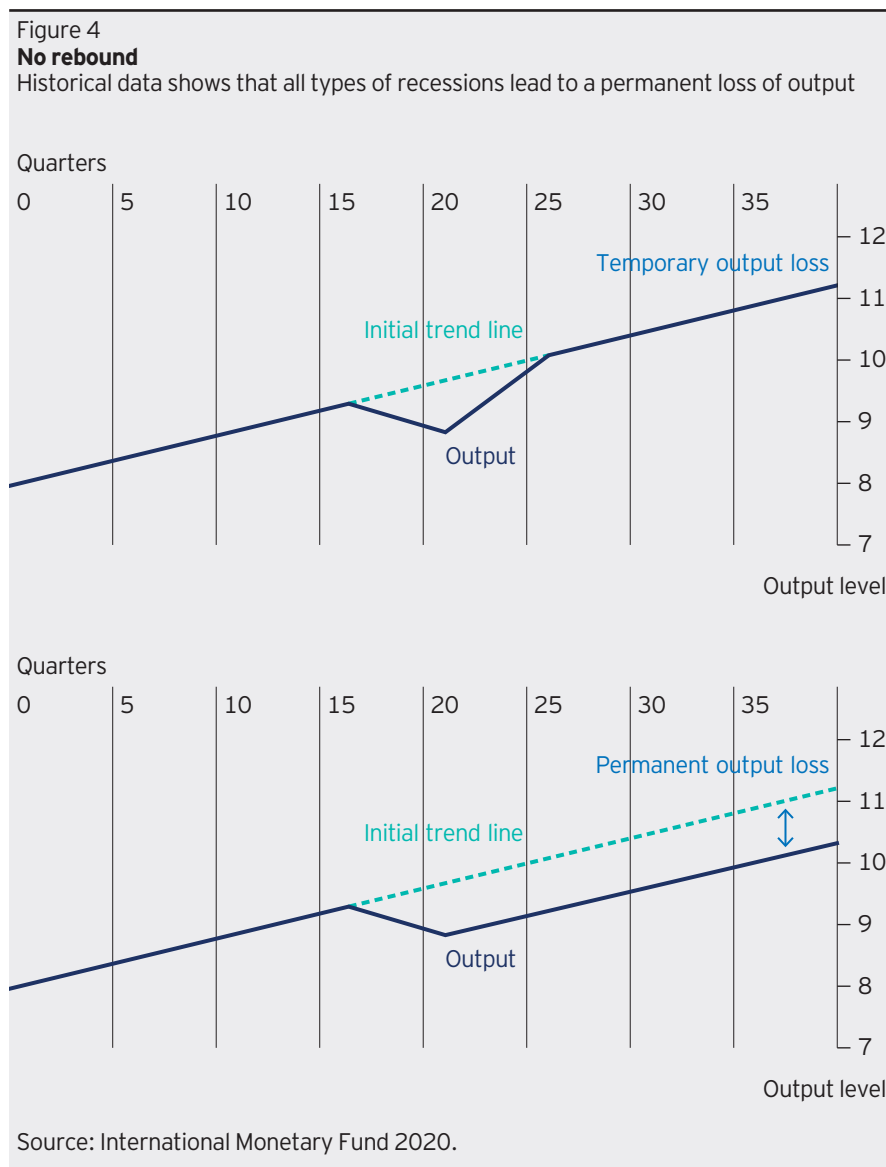
MMT³	MMT Error
A government deficit is necessarily mirrored by an equivalent private sector surplus.	<p>True, but this only applies in a closed economy. An open economy will suffer trade deficits or capital outflows and a weaker currency if large amounts of government spending are funded irresponsibly (e.g. by holding down interest rates).</p> <p>The correct equation is: Private Sector Balance + Government Sector Balance + Overseas Sector Balance = 0.</p>
Monetary policy is relatively ineffective in a slump: fiscal policy is more powerful.	<p>This is not true. Many observers make this mistake because they judge monetary policy by interest rates. However, if monetary policy is measured by the change in the quantity of money, it is always possible for the central bank to boost broad money growth by buying securities from the non-bank private sector (QE) or by buying foreign currency (for example, as the Swiss National Bank does).</p>
A government can buy goods and services without the need to collect taxes or issue debt.	<p>The idea being suggested here is that since the government owns the central bank and money is a government monopoly, the government can somehow print money freely to finance its expenditures. But the monetary liabilities of the central bank are assets of the private sector (banks, companies or individuals), not a plaything of the government. "Printing" money for the government in this sense would either rob the private sector or dilute the value of private money holdings.</p>
Through money creation, interest costs can be constrained. Indeed, a substantial and persistent budget deficit can be financed at low, if not near-zero, cost.	<p>This is a common fallacy. When the central bank encourages faster money growth, interest rates generally fall. But this is not the end of the story; it is only the first effect of easier money. If faster money growth persists, the economy will recover, the demand for credit will rise, and ultimately inflation will also increase. In that case interest rates will start to rise. In short, the first effect of easy money is low rates, but the second and more permanent effect of easy money is higher interest rates. This explains why interest rates in countries like Venezuela, Turkey and Argentina are so high. Consequently, with faster money growth, persistent budget deficits cannot be financed at "near-zero" cost. If, however, persistent budget deficits are accompanied by very low money growth (as in Japan), then interest rates will stay low.</p>
Government spending and money creation need be limited only to the extent that employment becomes 'over-full' and encourages inflation.	<p>First, this is a variant of the fallacious Phillips curve analysis - the idea that inflation comes from "over-full" employment or growth of the economy in excess of its potential. In reality, inflation is a monetary phenomenon and results from excessive growth of the quantity of money. The only way, therefore, to control inflation is to limit the growth of the money supply.</p> <p>Second, even if the government spends less this does not ensure that overall spending declines. Suppose that the government taxes less or borrows less, it could be that the private sector continues to spend rapidly with the result that total spending does not decline at all. In this case there is no reason why inflation should decline. It is total spending that matters for inflation, not simply government spending.</p>

³ The propositions in the left column are drawn from John Llewellyn and Russell Jones's excellent summary of MMT, https://docs.wixstatic.com/ugd/264e4c_f68326397097468982e1fe02d28e6a93.pdf

Third, while it is true that the past decade has been a period of sub-par growth and sub-target inflation in many leading economies, this does not mean that economic nirvana of full employment and low inflation can be achieved by boosting government expenditure. The main reason for sub-target inflation was that monetary growth was too low in the US, in the eurozone and in Japan. In turn this was a result of the imposition of substantially higher capital requirements and other regulations on commercial banks, combined with a prolonged period of balance sheet repair by lenders and borrowers so that bank lending - which is the main source of deposit and money growth - remained anaemic. The way to solve this problem is by slightly faster lending and money growth, not by vastly higher government spending programmes.

5. Economic scarring

Will the global economy and real GDP growth be materially damaged following the Covid-19 pandemic? This difficult-to-answer question has also been stated as “how much economic scarring will the Covid-19 pandemic inflict on the global economy?” Economic scarring is defined as a permanent loss of output following a recession, rather than a temporary loss of output. The following illustration is from the IMF and provides a clear picture of the definition.



According to the IMF economic scarring is not an outlier, but is the general trend following all types of recessions.⁴ Reflecting this, the real question is, what the extent of the economic scarring will be and how will it manifest? The potential economic disruptions that would count as scarring can be divided into supply side and demand side factors that might damage the global economy.

Supply side

1. Deglobalisation of supply chains due to the inability of firms and governments to obtain critical supplies during the pandemic.
2. Sanctions, tariffs or other measures imposed on China may limit global supplies and raise costs.
3. If banks and other financial institutions are required to hold higher levels of capital due to loan losses, this could slow credit and loan growth in the future, slowing total spending.
4. Corporate bankruptcies could cause the loss of certain activities, increase unemployment, and impose losses on banks and other financial institutions that have extended credit or that hold equity in such firms.

Demand side

1. Continuing concerns about the risk of catching the virus deter consumers from spending.

⁴ <https://blogs.imf.org/2018/03/21/the-economic-scars-of-crises-and-recessions/>

Conclusion

The Covid-19 pandemic recession is materially different to both the 2008-09 GFC recession and the 1930s Great Depression for several reasons. The most important distinction between the Covid-19 pandemic recession and the other two is the role of money and credit; throughout the GFC and the Great Depression there was a significant contraction in money and credit, whereas now there is a historic expansion in money and credit. Much more typically, recessions result from some imbalances in the economy, either in the financial sector or the real economy, which have to be rebalanced. There were no such imbalances in this recession. There was instead a government-imposed lockdown in order to suppress transmission of the coronavirus, resulting in a large shock to demand.

There are many suggested “remedies” that have been put forward in response to the Covid-19 pandemic recession. Negative central bank policy rates and yield curve control are seen as obvious extensions of an interest rate led monetary policy, but as we have argued these policies will be ineffective in reflating economies. Direct monetary financing of government spending (MMT) at least attempts to increase the money supply but can lead to excessive money creation and ultimately inflation.

Clearly, the Covid-19 pandemic is having a large effect on economic output in the short term and will probably leave some economic scarring in the longer term. Despite extensive monetary and fiscal measures taken to counter these problems in almost all countries, it is inconceivable that any combination of monetary or fiscal remedies will prevent or quickly repair every case of job loss, company closure, or other economic misfortune. Both supply side and demand side economic disruptions are therefore likely to persist, especially if we enter a phase of uncertainty regarding the trajectory of the coronavirus outbreak or, more worryingly, a second wave of the pandemic.

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