

# An Overview of Central Banks' Answers to Economic Stimulus Following Covid-19

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## Abstract

In this paper we discuss the implications of various economic stimulus mechanisms implemented by the United States and EU central banks to combat the economic downturn caused by the Covid-19 pandemic. The huge increase in both the Federal Reserve's and European Central Bank's balance sheets using financial tools has led to a distortion of stock markets and government bonds. In turn, this has led to a monumental increase in MZM (deprecated M3) that may prove to be unsustainable. As such, the central banks' governance bodies have taken steps to provide alternatives to fiat money as a means of last resort.

**Keywords:** monetary policy, financial instability, fiat money, inflation, economic stimulus, Covid-19

## Introduction

Market forces have dictated fiscal policy constantly for the last years. The deregulation of the financial industry during the Reagan administration in the 1980s (including the passing of the Garn-St. Germain Depository Institutions Act and of the Financial Institutions Reform and Recovery Act) directly led to the 2008 mortgage crisis which in turn has brought about

short-sighted approaches from central banks which include huge amounts of intervention in the open market through financial vehicles. These were described to the public by the Federal Reserve as Quantitative Easing (QE). Preventing a recession through the constant expansion of money supply, the Federal Reserve started rolling back its measures only to be faced with the Coronavirus pandemic.

As such, even more financial vehicles were allowed and put into action, which included Quantitative Easing and the appropriation of the bond market and direct acquisitions of assets by the Federal Reserve. These include and are not limited to vast amounts of corporate bonds, US treasury bonds and even stocks. These preventative measures were brought about by the huge economic impact of the lockdowns and shutdowns throughout the world during 2020. Most other central banks have implemented similar measures to the United States Federal Reserve bank.

In this article we look at the history of the current economic model, its provisions for the expansion and contraction of monetary supply, the responses central banks have taken to deal with the pandemic as well as thoughts on the various possible outcomes. Much emphasis is put on the current liquidity trap, which is a precursor to rampant incoming inflation. As an addendum, we look and address the possibility of a government-backed digital currency thanks to the added pressure on fiat currencies, whether through expansion, inflation, or loss of confidence by the public.

The questions we look to answer with this article are: (1) How have the governments and central banks responded to the pandemic. (2) Are their liquidity injections into the economy justified, and if so, do they harm the free market? (3) Why has there been no rampant inflation? (4) Where does all this stimulus leave the fiat currencies?

To achieve this, I collected primary data from FRED (the Federal Reserve Economic Data database maintained by the research arm of the United States Federal Reserve Bank of St. Louis) and secondary data from the United States Treasury and the European Central Bank. The data was analysed as thematic analysis, based on a deductive approach by going over the information with queries from the FRED database.

### **Theoretical background**

Market economists have taken John Maynard Keynes's 1936 seminal publication *The General Theory of Employment, Interest and Money* to heart and used its views on monetary policy and central bank fiscal policy to respond to the Great Depression. The solution applied then was to stimulate the economy by a reduction of interest rates and a huge government investment in infrastructure. Franklin D. Roosevelt shared the Keynesian opinion that insufficient buying-power was the cause of the Depression, but the response would actually plunge the United States economy into a further recession.

However, success did materialize for the policy during the onset of World War II, which itself provided the needed boost to the world economy and a newfound loss of uncertainty thus rebuilding lost capital. Keynes's ideas became a staple of social-democratic Europe after the war and took over in the U.S. in the 1960s.

As the leader to the British delegation to the United Nations Monetary and Financial Conference in 1944 - the one that established the Bretton Woods system - Keynes advocated for a global bank system that issued its own currency (*bancor*), that would become a unit of account between nations, actively measuring a country's trade deficit or surplus (Constabile, 2007). He supported the idea of taxing surplus countries who he viewed as having a "negative externality" (Stiglitz, 2010) on trading partners and thus lead to weak global aggregate demand.

The contrary argument to Keynesian policies came from monetarists who argue that the excessive expansion of the money supply is inherently inflationary and as such proposed a fixed monetary rule that would limit any sudden increase. The collapse of the Bretton Woods system in 1972 and the oil shocks of 1973 were unable to be explained by Keynesian economics. Therefore, these events brought popularity to Milton Friedman, a champion of monetarism who outlined the shrinking of the monetary supply as a direct cause for the Great Depression in his 1963 seminal work *A Monetary History of the United States, 1867-1960*. He also described how the over-supply of currency caused the post-war inflation.

The two economic theories came head-to-head in 1979 when United States President Jimmy Carter appointed Paul Volcker as Federal Reserve chief. At that time, the high unemployment called for Keynesian reflation (the increase in money supply and reduction in interest rates) but the rising inflation seemed to call for disinflation. The new Fed chairman implemented the Friedman rule (Friedman, 1969) to tame the ensuing inflation and resulted in a major rise in interest rates. Dubbed the “Volcker shock”, the measures decreased inflation and increased unemployment (Reichart and Abdelkader, 2016).

The same monetarist measures were implemented by Prime Minister Margaret Thatcher in her battle against inflation in the United Kingdom, reducing it from a high of 15.4% during the May 1979 general election to 4.6% by 1983. However, unemployment increased from 5.7% to 12.2%.

From the mid-1980s until 2007, the United States followed the Taylor rule, proposed by economist John B. Taylor who served as advisor for the Gerald Ford and George H. W. Bush administrations. It was subsequently adopted by the Federal Reserve during the chairmanship of both Paul Volcker and Alan Greenspan. The rule prescribes that central bank enforce economic activity regulation by choosing a nominal interest rate based on the gap between targeted inflation and actual inflation rates and the output gap between the actual and natural level.

The adoption of the Taylor rule ushered in an era dubbed the Great Moderation (Bernanke, 2004). This ended with the 2007-2008 financial crisis when the Federal Reserve ushered in an “unprecedented” (Rushton, 2014) program of monetary policy called *quantitative easing* by which it bought between \$600 billion and \$2.1 trillion in mortgage-backed securities, bank debt and Treasury notes starting from November 2008 until June 2010.

Quantitative easing was not a new idea - it had been undertaken by the Bank of Japan to fight deflation in the early 2000s (Voutsinas, Konstantinos and Werner, 2011). However, it was done as a measure of last resort; the short-term interest rates had been maintained close to zero since 1999. On 19 March 2001, the Bank of Japan flooded commercial banks with liquidity to promote private lending by buying up government bonds and later asset-backed

securities and equities. The empirical evidence for the lack of effectiveness of QE when interest rates approach zero has been tackled by influential writers from a theoretical perspective, including Krugman (1998), Fujiki, Okina and Shiratsuka (2001), Woodford (2003), Svensson (2003), Eggertsson and Woodford (2003) and Benhabib, Schmitt-Grohé, and Uribe (2003). They all concluded that QE will not have any effect when used in conjunction with a zero-interest rate policy. Of course, all their models made assumptions that included rational expectations and general equilibrium. The studies ultimately found that the QE employed by the Bank of Japan ultimately improved the macroeconomic performance of average stock prices but failed to curtail deflation.

The Federal Reserve halted its QE program in June 2010 as the economy started to improve but QE resumed in August 2010 when it was decided the recovery was not growing as fast as anticipated. Starting November 2010, the Fed started QE2, by buying more Treasury notes and continued to do so. In September 2012 it started QE3 that relieved \$40 billion a month in commercial housing market debt risk and was subsequently increased to \$85 billion per month in December of that year. Quantitative Easing officially halted in October 2014, after accumulating over \$4.5 trillion in assets on the Federal Reserve balance sheet.

Similar actions were taken by the European Central Bank, the Bank of England, the Sveriges Riksbank and other central banks throughout the world to combat the 2007-2008 financial crisis, with varying degrees of success. As a sidenote, at the start of 2013, the Federal Reserve's holdings equalled about 20% of US GDP, while the ECB's assets were about 30% of GDP (Blackstone and Wessel, 2013).

The International Monetary Fund agreed (Vladimir, Phil de Imus and Krishna, 2009) with Federal Reserve chairman Alan Greenspan that quantitative easing measures taken swiftly by the Fed contributed to the reduction in system risks, burgeoning market confidence, increased consumption and a general strong performance of the US economy in the late 2010s (Board of Governors Federal Reserve, 2012).

## **The Central Banks' answers to Coronavirus and possible implication**

On March 23rd, 2020, the U.S. Federal Reserve announced (Board of Governors Federal Reserve, 2020) that it would use a range of new measures to support and prop up the ailing U.S. economy which had been ravaged by the untimely lockdowns spurred on by the coronavirus pandemic. To “promote the stability of the financial system”, the Federal Reserve put into action several financial vehicles whose sole purpose was to support the flow of credit to American families and businesses.

Some of these financial vehicles are the *Federal Open Market Committee* (FOMC) that purchases Treasury securities and agency mortgage-backed securities, the *Exchange Stabilization Fund* (ESF), the *Primary Market Corporate Credit Facility* (PMCCF) and *Secondary Market Corporate Credit Facility* (SMCCF) that provide liquidity for outstanding corporate bonds, the *Term Asset-Backed Securities Loan Facility* (TALF) that enable the issuance of asset-backed securities such as student, auto, credit card or other asset loans, the *Money Market Mutual Fund Liquidity Facility* (MMLF) and the *Commercial Paper Funding Facility* (CPFF) that facilitate a flow of credit to municipalities.

All in all, these new programs are, in fact, just more quantitative easing. Although the world economy had not yet even recovered from the 2007-2008 crisis (it was propped up by QE and never allowed to get to equilibrium), the lockdowns and economic collapse triggered by the coronavirus pandemic needed a swift response. The Federal Reserve was just the first one to act.

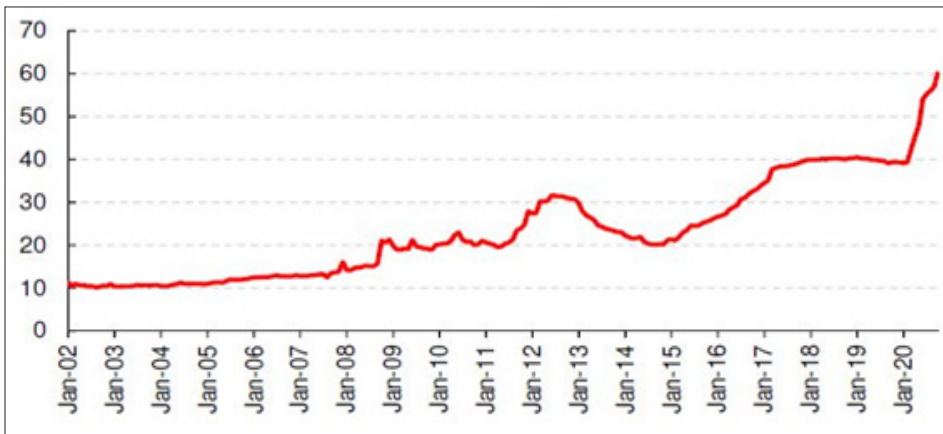
In the run-up to April 2020, the European Central Bank established its own financial vehicles: *Targeted longer-term refinancing operations* (TLTROs), *Pandemic emergency longer-term refinancing operations* (PELTROs), the *Asset purchases programme* (APP) and the *Pandemic emergency purchase programme* (PEPP).

Up until the publishing date of this article, the stimulus vehicles employed by the world's central banks have not stopped issuing new currency. Even through the Biden administration, fiscal aid has continued unabated, with increasing direct payments to consumers and bank-led asset-buying programmes.

## POLITICAL STUDIES FORUM

QE has been implemented in most major economies, including Australia (Heath, 2020), Japan (Takeo, 2020), the United Kingdom (Smith, 2020), Switzerland, Sweden (Rolander and Lindeberg, 2020), Canada (Hagan, 2020), China, India, Indonesia, Malaysia, New Zealand, Pakistan, Philippines, South Korea, Sri Lanka, Thailand, Vietnam (Curran, Jamrisko and Martin, 2020) and many others. It has kept the world economy going and prevented an all-out global recession, but has it fixed the underlying issues?

The world has never seen so much liquidity pumped into its economic systems. Trillions of dollars and euros have been added onto central banks' balance sheets to guarantee the survival of businesses and governments.



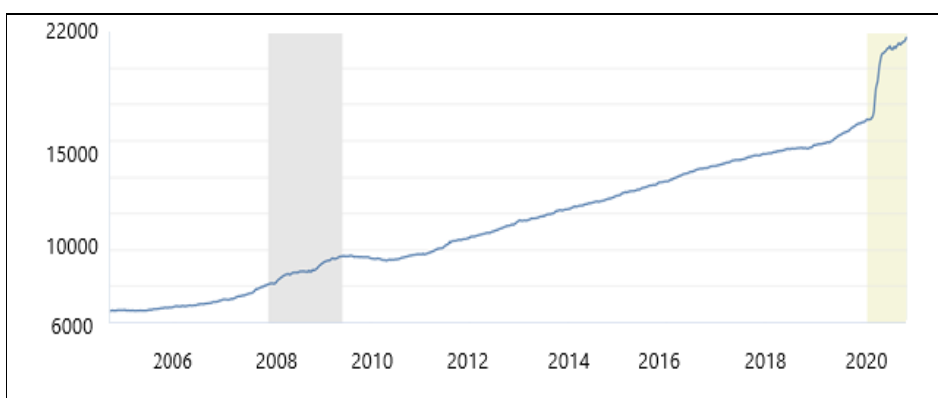
*Chart no. 1 - European Central Bank balance sheet as a percentage of eurozone GDP  
(source: the annual consolidated balance sheet of the Euro system, ECB)*

The huge expansion of the money supply through these financial vehicles is unprecedented. However, unlike the 2007-2008 financial crisis, this is not a credit crisis, this is an income crisis, for both individuals and businesses. Like the previous crisis, the central banks' response has been to flood the market with stimulus in the hopes of restoring credit and liquidity. The banks now must also restore demand and income. This is not a problem that the easing of monetary conditions can achieve easily. No matter how much liquidity is restored to corporations, the banks cannot force consumer demand to rise.

## POLITICAL STUDIES FORUM

Through the vaccination programmes employed by world governments, people have started to return to pre-pandemic levels of spending. The United States particularly has been leading in the race to herd immunity through the substantial use of vaccines. As such, its economy is forecasted to grow by over 5% in 2021. However, this has not happened throughout the rest of the world.

The repeated lockdowns have forced people to reassess their consumer needs and at the same time companies have pulled back supply which triggers a long-term impairment to the global economy. While the stock market (and other equities) has returned to pre-Covid levels, the uncertainty of consumer spending still looms large. As such, we have a possible problem: lower supply leading to higher prices and lower demand leading to job losses.



*Chart no. 2 - MZM (formerly M3) money stock at the Federal Reserve – billions of dollars (source: St. Louis Federal Reserve Bank)*

The financial markets have been flooded with money thanks to the central banks' interventions and are now highly inflated and decoupled from the real economy. There is a looming possibility that the first sign of easement from the banks (or an indication of raising key rates) could cause a reconciliation between the financial economy and the real economy. Such a reconciliation would exacerbate an already slow-to-recover global economy.

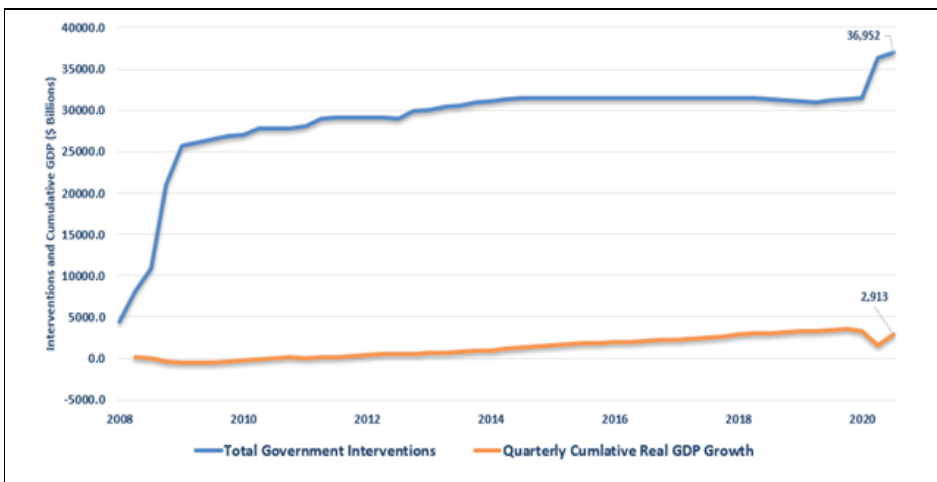


## POLITICAL STUDIES FORUM

In Europe, the PEPP and TLTROs are facing expansion even as vaccines are touted to be ready. The ECB's president Christine Lagarde has outlined a clear preference for the financial vehicles to "remain the main tools for adjusting our monetary policy." (Kyriakopoulou, 2020)

Current Federal Reserve chairman Jerome Powell, speaking at the Bay Area Council Business Hall of Fame Awards Ceremony in November 2020 stated that "We're not going back to the same economy, we're going back to a different economy" and that "The recovery is incomplete," warning of near-term risks surrounding the resurgence of Covid-19 infections. He ended the conversation saying, "We have a long way to go."

Are the central banks' hands tied to conduct the global economy from now on? Both Keynesians and Monetarists supported a free market economy. However, the stimulus that started in 2007-2008 has been put into overdrive in 2020 and there seems to be no end in sight, as well as nothing to show for it regarding real GDP growth.



*Chart no. 3 - Cumulative Federal Reserve stimulus vs. real GDP growth (source: St. Louis Federal Reserve Bank)*

## POLITICAL STUDIES FORUM

The Federal Reserve has provided over \$36 trillion into the United States economy and during the same timeframe, the amount of GDP growth has been minimal -- for every \$12 of stimulus there has been \$1 of real economic growth. Since 2009, the United States central bank's balance sheet has increased by 438%. During that same timeframe, the stock market (S&P 500) grew by 199% and real GDP by just 21%.

Remember that MZM (depreciated M3 money stock, includes all US dollars available for spending) has risen tremendously in 2020. Over 21% of all US dollars in existence were printed in 2020. Though the stock market may seem to be doing fine, there are a growing number of companies that are kept alive only by low borrowing costs thanks to almost zero rates, and a record number of companies have negative equity (liabilities exceeding assets).

The Federal Reserve is now in a position that every time it wants to step back, to tighten financial conditions, the market forces them back in by selling off stocks. The central bank cannot remove itself from the stock market, it cannot remove itself from the economy thanks to its need to prop up Treasury notes and the debts it has created are only going to rise. If deficits simply do not matter anymore, then why do governments bother with taxes? This question would be put to the test if it were not for the pressing need to keep up with the required stimulus constantly. Moreover, the seemingly infinite printing of currency and then having the government spend most of it is outright destroying the healthy part of the economy itself.

This in turn is distorting the face of the economy itself, thus bringing about two economies: one supported by currency creation and the other, the "regular" value added economy. The ensuing pressure brought about by the colossal fiscal aid shared by the central banks has reduced growth and output rates, and even made unprofitable and unsustainable businesses stay afloat thanks to nearly-free money (because of the interest rates). The outcome will prove dire for employment numbers in the long run, whereas when these businesses fail, the employees will have to look somewhere else for work. This may have a knock-on effect through pressure on wages.

A paper co-authored by Christina Romer, the former chair of Barack Obama's Council of Economic Advisors, noted that each dollar in government

## POLITICAL STUDIES FORUM

spending leads to anywhere between \$2 and \$3 in lost economic activity. Another study by Harvard economist Martin Feldstein came to the same conclusion, noting that it “may exceed \$2 per \$1 of revenue” (Feldstein, 1999). In other words, to move (velocity) a dollar, you must actively destroy at least two to three dollars.

While central banks have been doing the printing, the “new” money was not distributed into the hands of the people, but put into asset-buying programmes, with the most ubiquitous of them being the stock market (and the bond market). The Federal Reserve has bought over \$3 trillion worth of assets - which could be described as “nationalization”. Bond yields have started to pick up as of late, and investors and analysts have speculated over how far the Federal Reserve would allow the yields to rise; however, the communication out of the Fed is rather clear: bond yields are not going to be allowed to rise to the point where they would jeopardize the attempt to buy full employment or to the point where they would entail the triggering of a major selloff.

As such, with the Federal Reserve (and other central banks) determined to keep the bond market (which is now almost all nationalized) under control, the risks of suffering big losses continue to be low. However, this also leads to the question of why central banks are still trying to stimulate the economy if the messages are of an imminent recovery. The press releases are all about the fact that the economy is back on track, and that the pandemic recovery is assured. The problem is that because the recovery is happening right now, why are central banks offering financial assistance (fiscal aid)? Because the outcome of that aid, inflation, has not shown itself fully yet. But economists and governments have accepted and even expect a certain amount of inflation. The new Biden administration has passed stimulus bills shortly after taking office, even though the United States economy is forecasted (by the Atlanta Fed) to grow by 5.4%.

In November of 2019, 4 months before the ECB put into place its financial vehicles to spur the coronavirus-stricken European economy, it was already looking for a replacement to fiat currency. The Policy Department for Economic, Scientific and Quality of Life Policies of the European Parliament

requested and published *The Future of Money*, a compilation of papers regarding digital alternatives for fiat currency based on cryptocurrencies. (ECON Committee, 2019).

The publication goes to great lengths to establish the idea of a central bank issued digital currency (CBDC), and goes into detail about privacy, distribution, method of integration into other fields and so on. It stipulates that a CBDC would compete with “regular” bank deposits as medium of exchange. The issuance of a CBDC against a 30% GDP issuance of government bonds could raise GDP by 3% due to various reductions in monetary transaction costs, real interest rates and distortionary taxes. It could also substantially improve the central bank’s ability to stabilise the business cycle - by injecting or stimulating currency as needed. During a virtual panel hosted by the ECB on November 12th, 2020, Christine Lagarde (ECB President) said “my hunch is that it will come” when talking about a digital currency issued by the ECB. “We’re not racing to be first,” Lagarde said. “We are moving ahead diligently, not incautiously. We will be prudent.”. (Weber, 2020)

China’s central bank, The People’s Bank of China (PBOC) has already drafted legislation regarding the introduction of a digital yuan currency. It has already tested (Huang, 2020) a digital yuan payment system based on digital currency tokens in the Shenzhen residential area in October 2020, in which 50 000 shoppers were given digital wallets with 200 yuan to spend at more than 3 000 stores. There are plans to roll out the tests in 28 cities including major metropolitan areas such as Beijing, Shanghai, Guangzhou, and Tianjin and further plans to enhance security and easier transfers.

This has raised alarms in the US, Europe and Japan as Beijing could become the dominant force behind new technologies and frameworks, thus leaving the SWIFT banking system behind. The current aim of the People’s Bank of China is to introduce the digital yuan by the start of the 2022 Winter Olympics in Beijing. The description of what a digital currency is, its inner-workings, advantages, and disadvantages as well as the various implications of digital currencies are not within the scope of this article. However, the economical feats that a digital currency can achieve warrants further discussion. Unlike Bitcoin or other distributed ledger cryptocurrencies, the central bank issued

## POLITICAL STUDIES FORUM

digital currencies would be single permissioned ledger - which means it would give the issuer, the central bank, much greater control over the monetary system than it has right now.

This can lead to the influencing of certain economic sectors and is a future boon to the centrally led economy of China wherein any and all payments would be made visible to the government. A digital Yuan could provide the Chinese government with a real-time image of the economy providing greater ease for the regime to centrally manage and plan its fiscal and monetary policies.

Of course, financial surveillance is the first major implication of a digital cashless society. There would be no more anonymous cash usage. Every single digital token can be tracked and as such, there can be little to no tax avoidance. This can also lead to data mining and the loss of “spending privacy”, whereby the central bank has access to every individual’s full spending records. It is not a coincidence that China is the current global leader in CBDCs.

China is a huge investor in both Africa and Central Asia, where it could provide influence and involvement through its new currency. It is not difficult to imagine that immediate access to a digital yuan would make it soar across Central Asia and Africa, thus increasing its use. All thanks the confidence bestowed upon it by the Chinese government.

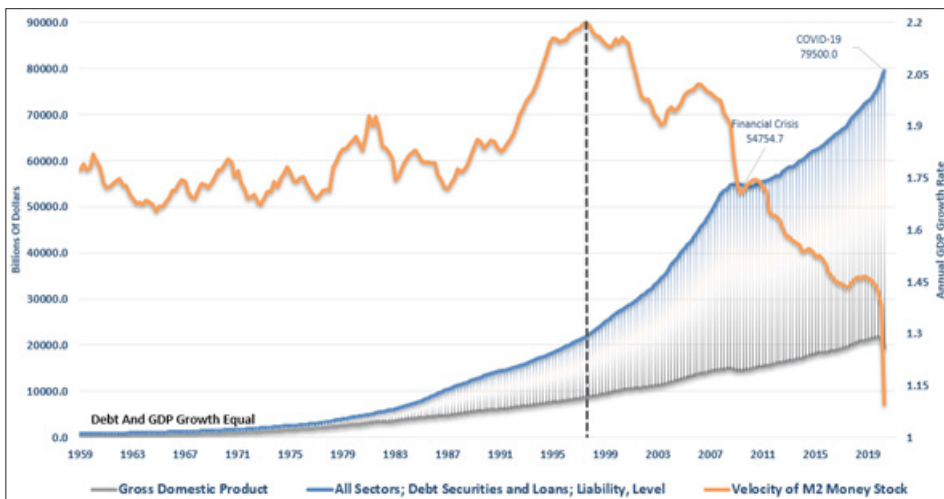
Moreover, during a QE period, the central bank buys equities and securities. It cannot directly finance consumers; the commercial banks do through various credit financial vehicles. However, through a CBDC the central bank can issue tokens (money) or credit directly to private individuals or commercial entities by simply typing them into their digital accounts.

Would this open up Keynesians to perfect market manipulation during times of crisis? Or will this herald the death of fiat currencies through negative interest rates (thus forcing consumers to spend)? Even though it rained as the central reserve currency for over one hundred years, the British Pound lost that role to the United States dollar in very little time. Could the same swift change take place with a digital currency? Only time will tell.

## The velocity problem and liquidity trap

We might think that the current problem started with the Quantitative Easing that took place in 2007-2008, however, it had been brewing for far longer. The United States economy has grown from 1950 to 1980 at an average of about 7.7% annually. Although debt grew as well during this time, the economic growth was higher, thanks to lower levels of debt and an economy focused on production and manufacturing. However, the economy slowly shifted to a 70% consumption-based GDP, which is very susceptible to any kind of interest rate hike. Even a 1.5 to 2% rate rise can stall the economy, and the Federal Reserve has reacted by quickly lowering rates and increasing bond purchases.

This problem manifested itself in 1998, whereby the lowering of interest rates failed to stimulate economic growth or inflation as the debt burden detracted from it. Throughout the 2000s monetary velocity has kept declining leading to a deflationary period that could only be counteracted by the increase in money supply. But this has led to almost no change in nominal GDP and lukewarm real GDP growth.



*Chart no. 4 - Total debt compared to GDP and monetary velocity  
(source: St. Louis Federal Reserve Bank)*

While the Federal Reserve has repeatedly spoken out (Huang, 2020) about changing its stance about inflation (thus wanting to create it), monetary velocity slowed considerably. This is a signature characteristic of a *liquidity trap* (Svensson, 2003). The Federal Reserve is providing huge amounts of liquidity into the system and there is no ensuing inflation, but velocity has slowed to a crawl - this means that people are hoarding cash because they expect an adverse event (such as insufficient aggregate demand, deflation, or war).

The Fed mentions a liquidity trap and uses it as an explanation for today's low inflation in an article published in 2014 (Arias and Wen, 2014). In the article, the authors state that QE during 2008 to 2013 equates to a 40.29% increase in money supply (M0), which should (based on linear regression of the inflation rate on money growth) have increased inflation by 4.3% per year, totalling to a 40% change from 2008 to 2013. They note that it did not happen. The liquidity trap has taken full effect -- the money supply is being absorbed by excess demand for money (hoarding it) from investors who do not spend it thanks to the opportunity costs of holding cash being better than any interest, because interest rates are already at zero. Of course, the correct monetary policy during a liquidity trap would be to not further increase money supply but to raise the nominal interest rate (while selling assets from the Fed balance sheet). As such, investors would switch from cash to interest-bearing assets.

The same conditions are now being felt throughout Europe as well. The ECB's chief economist Philip Lane warned that a lower phase of lower inflation would be "costly and risky" (Canepa and Koranyi, 2020). The G10 countries are all projected to increase their balance sheets with additional QE throughout 2021, because, quite frankly, there is nothing left. No other lever to pull to prevent a global economic recession (or worse). This has led to a distorted economy -- one that no longer reflects the open market, the free market that Adam Smith touted, but a market that is never free to complete its cycles, to level itself out, to self-regulate. If you never allow any recession to happen, for whatever political reason, the markets stop being free and, in time, become led by the central banks and their unsafe monetary policies.

## **Findings**

The central banks' response to the coronavirus pandemic has been almost identical: the injection of liquidity into the economy. This has been done at unprecedented levels, with the aid of financial vehicles employed to purchase assets from the financial markets. As such, the Federal Reserve, the ECB, and other central banks balance sheets have swelled up with bonds, stocks, and other investment-grade assets available for purchase. In turn this has led to the distortion of the free-market system but there has been little of the expected subsequent inflation.

We are now in a liquidity trap thanks to the slowdown of monetary velocity. The liquidity has been paramount to the avoidance of a recession during the height of the Covid-19 lockdowns. However, the unprecedented nature of the size of the stimulus (over \$20 trillion in the case of the United States) has potentially devastating effects over not just the US economy, but of the entire world (since the US dollar serves as the world's reserve currency).

## **Conclusion**

We believe that if the current economic model is to be believed, the Keynesian method of monetary expansion will prove to be a boom for a global consumption-led economy. Stimulus money will finance incomes and supply-side businesses will rise to meet the new market demands. At that point, the stimulus can end, rates can rise, and the central banks' balance sheets can be sold off.

However, the analysis of the current over-supply of liquidity and the subsequent liquidity trap paints a different story. With enough stimulus and enough time after the pandemic, monetary velocity will increase, and it will lead to an eventual rampant inflation. There has been no GDP growth to even come close to the amount of increase in monetary supply. All that money has to go somewhere, and inflation is where it is headed. How much of that inflation will be mitigated by consumption and increased productivity is unknown at this time and may form the basis of further research.



The free market is in a wildly distorted position right now (thanks to the central banks' balance sheets buying everything up), but that will ease off in time (by the banks' sale of said assets). Digital currencies backed by central banks and governments could reshape the way we look at the economy and the monetary supply. But this matter would therefore require further research.

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