

BIG NUMBERS ALONE MAKE NO PROPER MONETARY POLICY



Christian Schermann
U.S. Economist

IN A NUTSHELL

- Aggressive interest rate cuts, liquidity provisions and quantitative easing worked well.
- Buying facilities rather serve as a backstop.
- Based on a diminishing marginal effect from Large Scale Asset Purchases (LSAP), the Fed might do more for longer to support the recovery, yield curve control could also help.
- The massive provision of liquidity does not yet convert into higher inflation, structural factors, like disrupted supply chains, must be watched, however.

Remember the heady days of March 2020? The U.S. Federal Reserve (Fed), under Chair Powell, aggressively lowered interest rates to 0%-0.25% from 1.5%-1.75% in two ad-hoc meetings. Powell also announced that the Fed would aggressively return to buying U.S. Treasuries and mortgage-backed securities (MBS).¹ Even Chair Powell at times seemed a touch overwhelmed by the situation, commenting: "We are going to use our tools – all of our tools in a strong way to – to try to support the economy."² The Fed went on to introduce a whole phalanx of monetary-policy measures to counter the looming fallout from the pandemic. These ranged from securities buying and short-term liquidity provisions to more complex lending facilities. So, what to make of all this monetary activism four months into the crisis? Are we really observing a full-scale usage of all tools by the world's premier central bank? Or has the Fed so far been mainly relying on words, only occasionally following up with actions? What light does the data shed on the current stance of monetary policy?

The economic shock caused by lockdown measures has been unprecedented in modern times. In response, the first unconventional building block of the Fed's monetary strategy was so called Large Scale Asset Purchases (LSAP). These are more commonly known as Quantitative Easing (QE). They involve the Fed actively buying huge amounts of U.S. Treasuries and MBS through its open market operations. The first time the Fed deployed this tool was toward the end of the Great Financial Crisis in November 2008.

After two extensions of the initial program, the securities holdings of the Fed increased by roughly 3.7 trillion U.S. dollars (USD) to about 4.2 trillion USD – or roughly 24% of gross domestic product (GDP) – by October 2014.³ Three years later, in October 2017, the Fed decided to reduce its holdings of U.S. Treasuries and MBS, a process then called normalization, or tapering. Financial markets promptly rebelled against this move. Slowly, and somewhat furtively, the Fed gave up on its reduction plans and started to moderately increase its holdings again.

In looking at the implications of more recent measures, a good reference point for our analysis is January 2020, just before the Covid-19 crisis arrived on U.S. shores. At that time, the Fed's security holdings accounted for approximately 18% of nominal GDP. The latest figures impressively illustrate the decisiveness that followed Powell's words: the holdings of U.S. Treasuries and MBS expanded to almost 29% of nominal GDP. Or in other words: by about 2.3 trillion USD in just four months. That is equivalent to the expansion that took place over four years in the aftermath of the Great Financial Crisis.

In our view, such decisiveness was necessary. The distortions that occurred in markets in March, especially in the market for U.S. Treasuries (we reported in the April issue) gave the Fed few other options. As the Bank for International Settlements (BIS) commented: "[...] government bond markets experienced uncharacteristic turbulence, sometimes selling off sharply in risk-off episodes when they

¹ <https://www.federalreserve.gov/mediacenter/files/FOMCpresconf20200315.pdf>

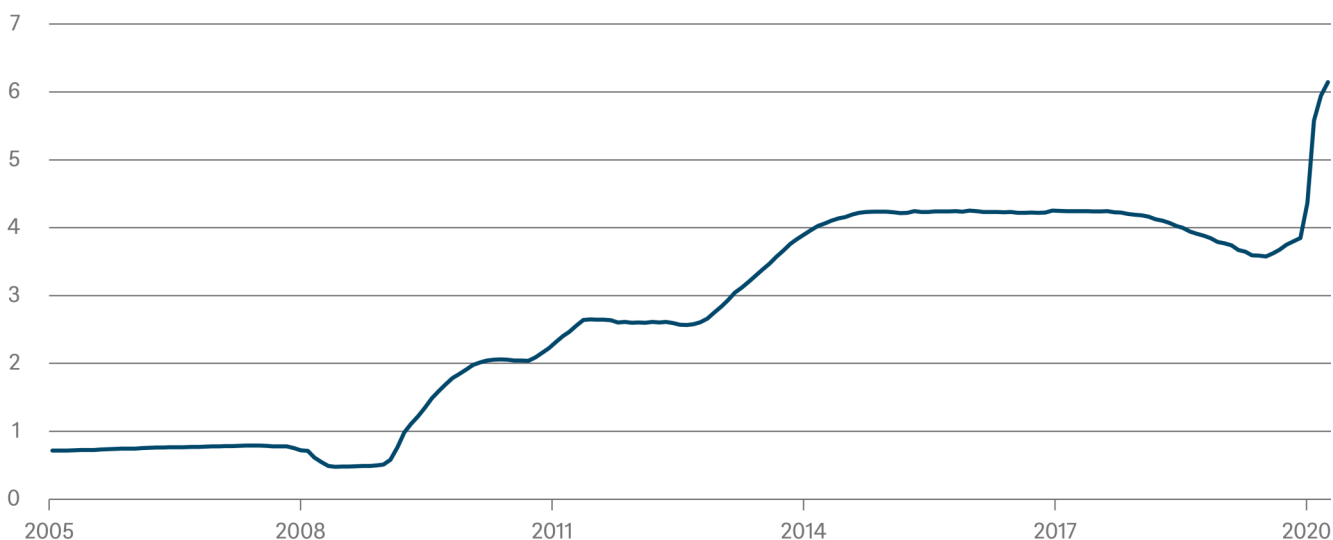
² <https://www.federalreserve.gov/mediacenter/files/FOMCpresconf20200303.pdf>

³ QE2 starting in November 2010 and QE3 starting in September 2012

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CHART 1: THE FED AGGRESSIVELY EXPANDED ITS LSAP HOLDING DURING THIS CRISIS

trillion U.S. dollars



■ Securities held outright

Sources: Federal Reserve Board and Haver Analytics as of 7/17/20

would normally attract safe haven flow."⁴ The Fed's LSAP operations have been successful in calming markets and restoring liquidity.

In some ways, however, that was the easy bit. The U.S. economy now enters a phase that cautiously could be described as the beginning of a recovery. However, remember that the virus is still out there. This leads to the question of how QE can continue to provide support in the months ahead? In terms of mechanics, the Fed describes the main purpose of LSAP as putting "[...] downward pressure on longer-term interest rates [...]" in order to stimulate economic activity by generating attractive financial conditions.⁵ The key word behind those mechanics would be financial conditions. Such metrics generally try to describe the "[...] financial conditions in money markets, debt and equity markets [...]" as the Federal Reserve of Chicago puts it.⁶ In other words, measures of financial conditions gauge the effectiveness of monetary policy.

Deriving a metric that summarizes the stance of monetary policy once the policy rate hits the Zero Lower Bound (ZLB) is not a trivial task, however. The monetary stimulus, as a combination of rates at the ZLB and asset purchases, is not directly observable. Our preferred methodology to overcome this problem would be the so called shadow short rate (SSR) as provided through the Reserve Bank of New Zea-

land.⁷ This concept mathematically derives a theoretical policy rate which is based on the evolution of the whole yield curve, therefore accounting for the impact of QE once the true policy rate is at the ZLB (see Chart 2).⁸

We take three major insights from Chart 2. First, the Fed was by far more aggressive in this crisis in terms of speed. Second, from the historical path of the shadow short rate we can imagine the Fed is willing to do more to support a recovery. And third, we could observe an effect that economists call "diminishing marginal utility": while the Fed brought as many U.S. Treasuries and MBS since March 2020 as it did in almost four years after the financial crisis, the shadow short rate is, however, just 1% below zero, instead of 2%-3% as historical values would suggest. One reason for this could be the higher valuation of U.S. Treasuries per se. While started in the 70s, since the financial crisis, the 10-year yield followed a volatile but downward trend. Our interpretation would be, the lower the yield, the less impact has additional buying on the SSR, and therefore on financial conditions. And the Fed already adjusted its operations accordingly: they basically floored the amount of buying in June "[...] at least at the current pace [...]" instead of announcing a maximum or a specific value as they used to do.⁹ This insight could serve as an indication that the Fed not just has to signal the willingness to do more – it

⁴ <https://www.bis.org/publ/bisbull02.htm>

⁵ https://www.federalreserve.gov/monetarypolicy/bst_openmarketops.htm

⁶ <https://www.chicagofed.org~/media/publications/nfci/nfci-faqs-pdf.pdf>

⁷ <https://www.rbnz.govt.nz/research-and-publications/research-programme/additional-research/measures-of-the-stance-of-united-states-monetary-policy/comparison-of-international-monetary-policy-measures>

⁸ <https://www.rbnz.govt.nz~/media/ReserveBank/Files/Publications/Research/additional-research/leo-krippner/5892888.pdf>

⁹ See, e.g. <https://www.federalreserve.gov/newsevents/pressreleases/monetary20130501a.htm> compared to <https://www.federalreserve.gov/newsevents/pressreleases/monetary20200315a1.htm> or <https://www.federalreserve.gov/newsevents/pressreleases/monetary20200610a1.htm> for the quote we refer to in the text.

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CHART 2: BY HISTORICAL STANDARDS, THE SHADOW SHORT RATE (SSR) INDICATES MORE NEEDS TO BE DONE TO SUPPORT THE RECOVERY



Sources: Federal Reserve Board, Haver Analytics and LJK Limited as of 7/17/20

simply has to do more to attain a similar effect as in the aftermath of 2008. The exact amount and duration of buying is determined by how long the economy is suffering.

And the longer the crisis lasts, the higher the risk of lasting damage to the economy: the likelihood increases that businesses go bankrupt. Along the almost conventional QE-type of measures, the Fed introduced not less than fourteen different lending facilities. These enable the central bank to provide liquidity to all kinds of potential borrowers. The most prominent one these days is the Main Street Lending Program, with its three facilities.¹⁰ In light of the overall liquidity provision, however, the facilities play a minor role at the moment. They only amount to 2% of what the Fed is holding in U.S. Treasuries and MBS. This illustrates very well the power of words in monetary policy: without the need for any real action as yet, the Fed's loan facilities mainly serve as a backstop. Their mere existence has been enough to reassure nervous market participants.

However, every medicine has its side-effects. The aggressive buying of the Fed has raised concerns that such a massive injection of liquidity could eventually kick-start inflation. And indeed in this crisis, we are not just observing a material increase in the monetary base – basically the other side of the Fed's balance sheet – as a consequence of QE but also an increase of the broader measure of the stock of "real" money, called M2.¹¹ In basic economic theory, the monetary base and the stock of money is related by the so called money multiplier. The money-multiplier ratio indicates how much money is created by commercial banks by utilizing their reserves, e.g. providing credit to households and

businesses. The worrisome part in normal times would be that money in M2 is relatively quickly available for economic activity and therefore could be interpreted as an increase of aggregate demand. With aggregate supply limited – it adjusts somewhat more slowly as capacity first needs to be built up – the consequence would be higher prices for goods and services, pushing up inflation.

As stated, in normal times this would be worrisome. But right now, the economy faces special circumstances. The increase in the broader stock of money, deposits and cash to be precise, most likely reflects risk-averse behavior of businesses and households as well as generous government transfers, especially toward the latter. Businesses increased their cash holdings in credit lines with their banks (Commercial & industrial loans increased substantially in April and May, see Chart 4) and households saved a big share of their fiscal policy-boosted income (the savings rate jumped to 33% in April from 7%-8% in the months before the crisis). Actually, it can be observed that households already started to consume out of those savings (the savings rate declined somewhat to 23.2% in May) and that businesses started to pay back their loans (see Chart 4). Taken together, both trends should moderate the path of M2 in the months ahead. While these observations give some comfort, still somewhat higher inflation could be expected. Currently, lots of pent-up demand is meeting a somewhat lower supply capacity in certain sectors. In parts, this effect is already mildly visible in inflation (CPI prices¹² for food, personal or medical care services are somewhat elevated for instance) but as households face an uncertain

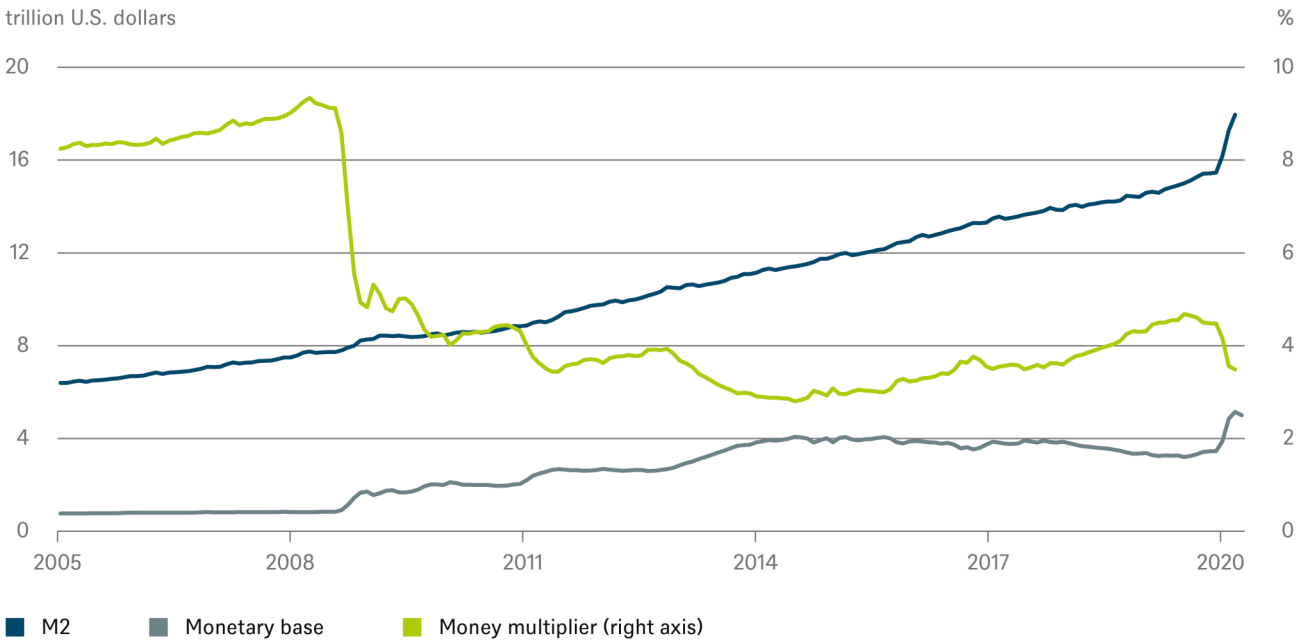
¹⁰ <https://www.federalreserve.gov/monetarypolicy/policytools.htm>

¹¹ According to the U.S. definition, M2 consists of notes and coins, demand deposits, savings and time deposits

¹² <https://www.bls.gov/cpi/>

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CHART 3: THIS TIME IS DIFFERENT – MONEY STOCK M2 INCREASED BECAUSE OF RISK-AVERSION AND CASH PREFERENCE



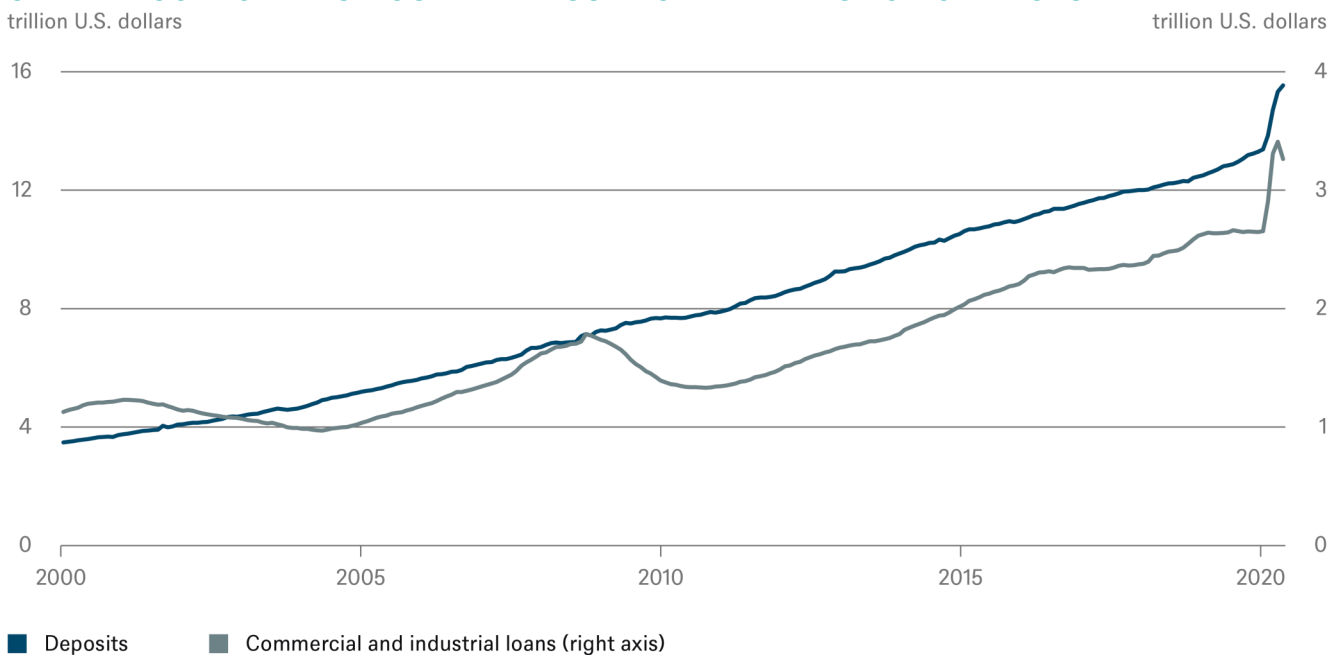
Sources: Federal Reserve Board, DWS Investment GmbH and Haver Analytics as of 7/17/20

future, higher prices should tame excess demand relatively quickly. This assumes that aggregate production capacity has not yet been hurt to a degree where we could expect major impasses.

So far, the Fed has done a decent job in fighting the crisis. Massive liquidity injections as well as lending backstops fueled the confidence of markets. It seems that the strategy of acting aggressively was right. One reason for the decisive action may well be that the Fed is acutely aware of the diminishing marginal utility of Quantitative Easing. There-

fore, we believe LSAP purchases will go on for quite some time as they support the recovery by providing favorable financial conditions. While recently, the pace of buying was reduced somewhat, we can easily imagine that the Fed would do more, if and when circumstances require additional steps. One obvious way to increase the effectiveness of such purchases would be a strategy that targets U.S. Treasuries with a longer duration. Sort of this strategy was already deployed in 2011/2012 (Maturity Extension Program¹³) and we could well see its renaissance: a more

CHART 4: CORPORATES MOST LIKELY USED CREDIT LINES TO HOARD CASH



Sources: Federal Reserve Board and Haver Analytics as of 7/17/20

¹³ https://www.federalreserve.gov/monetarypolicy/bst_openmarketops.htm

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straight forward formulation of the part of the yield curve that will be in focus gets pretty close to what is commonly known as yield curve control. For the fiscal part of the story, it seems, there is still room for improvement. While the various lending facilities mostly served as a backstop until now, a proper definition of their terms and conditions seems necessary to avoid uncertainties like the once we have experienced on forgiveness of loans from the Paycheck Protection Program (PPP). As hybrid structures somewhere between

fiscal and monetary politics, those vehicles obviously are not shielded from political haggling. Staying with fiscal policy – another round of support for households as well as state and local governments may ultimately be required. In such a scenario, Fed liquidity would keep businesses running and fiscal money would keep households consuming. And both would hopefully stay in place long enough for the Covid-19 pandemic to be fully contained throughout the country.

OVERVIEW: KEY ECONOMIC INDICATORS

	2019		2020				2021			2022
	Q4	Q1	Q2F**	Q3F	Q4F	Q1F	Q2F	Q3F	Q4F	Q1F
GDP (% qoq, annualized)	2.1	-4.8	-39.9	29.8	16.9	5.3	3.4	2.4	1.9	2.0
Core inflation (% yoy)*	1.6	1.3	0.7	0.3	0.1	0.4	2.2	2.8	2.6	2.5
Headline inflation (% yoy)*	1.6	1.7	1.6	1.4	1.2	1.2	1.6	1.9	2.1	2.0
Unemployment rate (%)	3.5	4.4	11.1	11.5	8.6	7.1	6.4	6.1	5.8	5.5
Fiscal balance (% of GDP)	-5	/	/	/	-18.2	/	/	/	-8.3	/
Federal funds rate (%)	1.5-1.75	0.0-0.25	0.0-0.25	0.0-0.25	0.0-0.25	0.0-0.25	0.0-0.25	0.0-0.25	0.0-0.25	0.0-0.25

* PCE Price Index

** Forecast

*** End of period

GLOSSARY

A **balance sheet** summarizes a company's assets, liabilities and shareholder equity.

The **Bank for International Settlements (BIS)** is the international organization of central banks.

A **central bank** manages a state's currency, money supply and interest rates.

Duration is a measure expressed in years that adds and weights the time periods in which a bond returns cash to its holder. It is used to calculate a bond's sensitivity towards interest-rate changes.

The **federal funds rate** is the interest rate, set by the Fed, at which banks lend money to each other, usually on an overnight basis.

The **financial crisis** refers to the period of market turmoil that started in 2007 and worsened sharply in 2008 with the collapse of Lehman Brothers.

Fiscal policy describes government spending policies that influence macroeconomic conditions. Through fiscal policy, the government attempts to improve unemployment rates, control inflation, stabilize business cycles and influence interest rates in an effort to control the economy.

The **gross domestic product (GDP)** is the monetary value of all the finished goods and services produced within a country's borders in a specific time period.

Inflation is the rate at which the general level of prices for goods and services is rising and, subsequently, purchasing power is falling.

Liquidity refers to the degree to which an asset or security can be bought or sold in the market without affecting the asset's price and to the ability to convert an asset to cash quickly.

M2 is a money-supply measure that includes physical money, bank deposits as well as other less liquid funds like savings that can quickly be converted to money.

Monetary policy focuses on controlling the supply of money with the ulterior motive of price stability, reducing unemployment, boosting growth, etc. (depending on the central bank's mandate).

A **mortgage-backed security (MBS)** is a special type of asset-backed security where the holder receives interest and redemption payments from pooled mortgage debtors, secured by the underlying mortgages.

In economics, a **nominal** value is not adjusted for inflation; a real value is.

Quantitative easing (QE) is an unconventional monetary-policy tool, in which a central bank conducts broad-based asset purchases.

Treasuries are fixed-interest U.S. government debt securities with different maturities: Treasury bills (1 year maximum), Treasury notes (2 to 10 years), Treasury bonds (20 to 30 years) and Treasury Inflation Protected Securities (TIPS) (5, 10 and 30 years).

The **U.S. dollar (USD)** is the official currency of the United States and its overseas territories.

The **U.S. Federal Reserve**, often referred to as "**the Fed**", is the central bank of the United States.

Valuation attempts to quantify the attractiveness of an asset, for example through looking at a firm's stock price in relation to its earnings.

Volatility is the degree of variation of a trading-price series over time. It can be used as a measure of an asset's risk.

Yield is the income return on an investment referring to the interest or dividends received from a security and is usually expressed annually as a percentage based on the investment's cost, its current market value or its face value.

A **yield curve** shows the annualized yields of fixed-income securities across different contract periods as a curve. When it is inverted, bonds with longer maturities have lower yields than those with shorter maturities.

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