

Bitcoin's Third Halving: A Thesis for Institutional Investment

An in-depth Report by Messari
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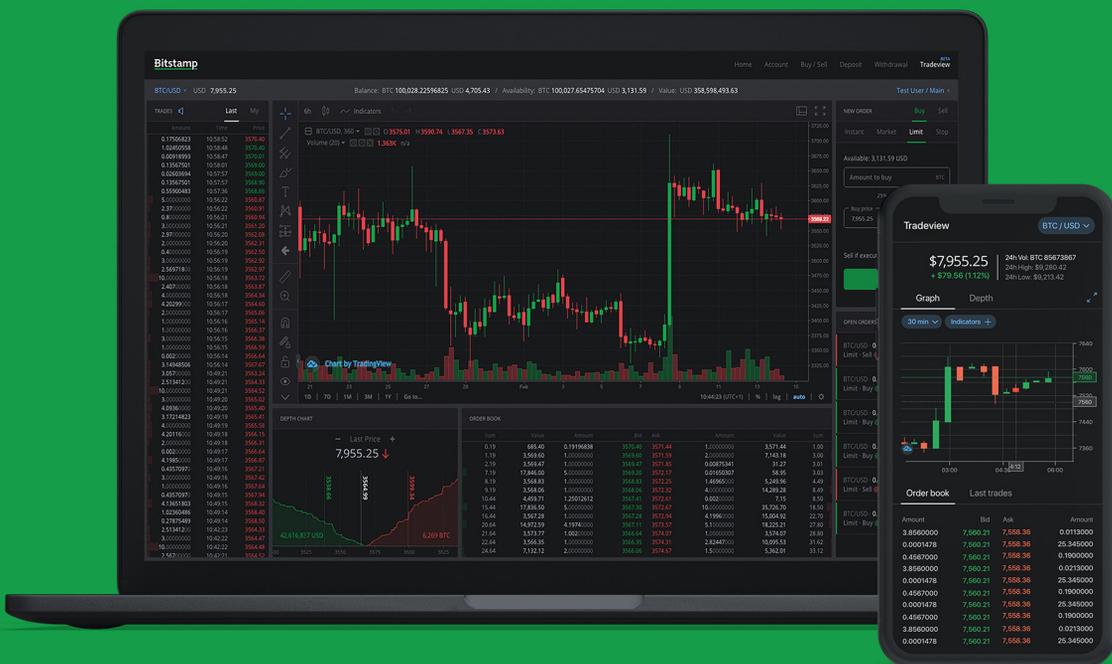
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Introduction

For an event that generates as much hype as it does, the halving comes and goes without much really happening. On May 11, 2020 at 3:23 EST a block was mined in the same fashion as the previous 629,999 blocks before it. The only difference being that the block's miner received half as much bitcoin as they would have just one block before.

The price did not skyrocket. Hash rate did not drop precipitously. The Bitcoin network continued to function. Business as usual.

Now that the halving has passed, Bitcoin's annual issuance rate stands at 1.8% bringing it to parity with gold and building on the store of value narrative. The importance of this cannot be understated as we find ourselves in a world where inflation seems right around the corner and traditional stores of value are being brought into question. This was made clear in a message embedded in the final block before the halving - "NYTimes 09/Apr/2020 With \$2.3T Injection, Fed's Plan Far Exceeds 2008 Rescue" an ode to genesis block forever defining Bitcoin's raison d'être as an outright rejection of the legacy financial and monetary system.

In our previous report, we outlined the important narratives and investment theses behind the halving. Here, we review what happened in this halving and compare it to the prior two halvings. Next, we explore Bitcoin's evolution from obscure open-source project to a legitimized institutional investment and explain how it may play an increasingly important role in the broader macroeconomic environment.

Buying the hype

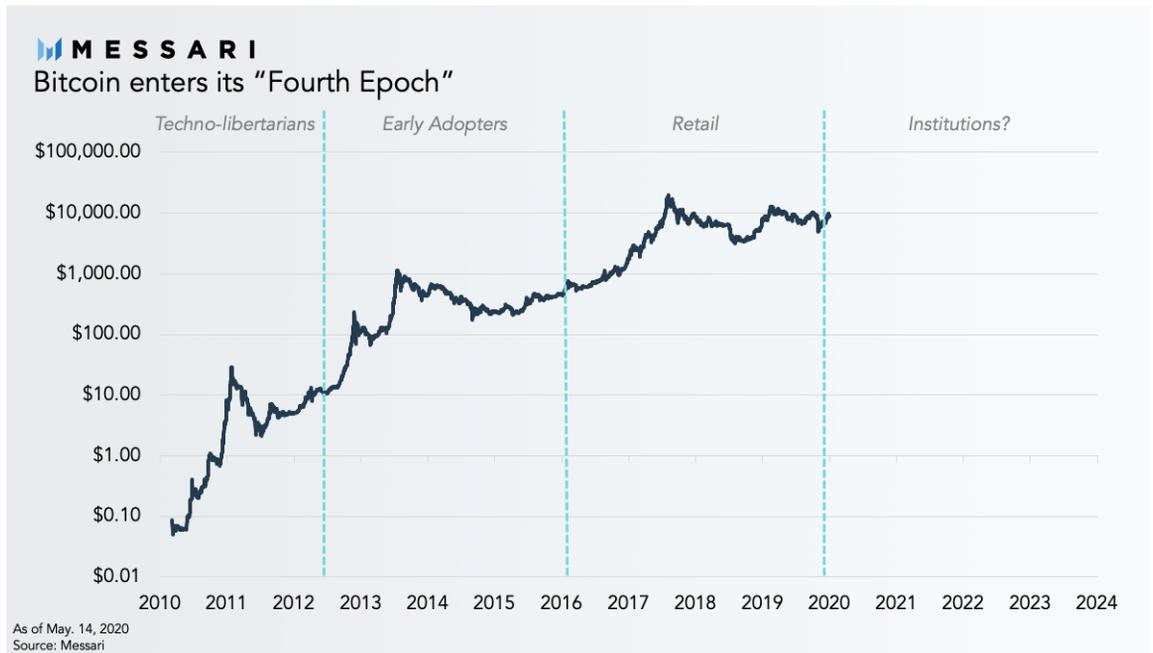
The halving has a number of fundamental implications for the Bitcoin network but the majority of discussion tends to focus on price. The months leading up to this halving saw increased market volatility and the largest-pre halving price increase on record.



This rally of course came shortly after one of the single-worst sell offs in Bitcoin's history as macro concerns crept into the market earlier in the year. This rally could have simply been the market returning to prior levels. Zooming out to a longer time horizon, returns for this halving were lower than in previous years.



Nevertheless, what gets investors excited about the halving is not the returns leading up to it, but those that come afterwards.



While subsequent returns from the last two halvings were driven by early adopters and retail, this "epoch" will be marked by Bitcoin garnering attention from large institutions that have the power to truly move markets.

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The image shows a smartphone displaying the Bitstamp trading app. The screen features a candlestick chart for Bitcoin, with a price of \$7,560.00. Below the chart is an order book with columns for 'Order book', 'Last trader', and 'Price'. The app interface is dark-themed with green and red highlights for price movements.

Part 1: The institutionalization of Bitcoin

Bitcoin was initially envisioned as a peer-to-peer electronic cash system where users could pseudonymously transact. More than a decade after its creation, this vision has evolved to resemble something closer to digital gold. Bitcoin is now seen by many as an inflationary hedge or an insurance policy against fiat money. Rather than acting purely as a payment system, Bitcoin has matured into a global settlement system with a native asset designed to retain value during inflationary periods, just as gold and real estate have in the past. Unlike with payments systems, most of the demand for these types of assets come from institutions allocating capital to preserve and grow their wealth rather than individuals.

We believe that as we enter Bitcoin's "fourth epoch" its place as a store of value asset will be solidified by participation from financial institutions. A commitment to deploy capital from these players is a long-term belief in Bitcoin's value proposition. Therefore, measuring the pace at which institutions enter the space is a valuable trend to follow.

Investable Products

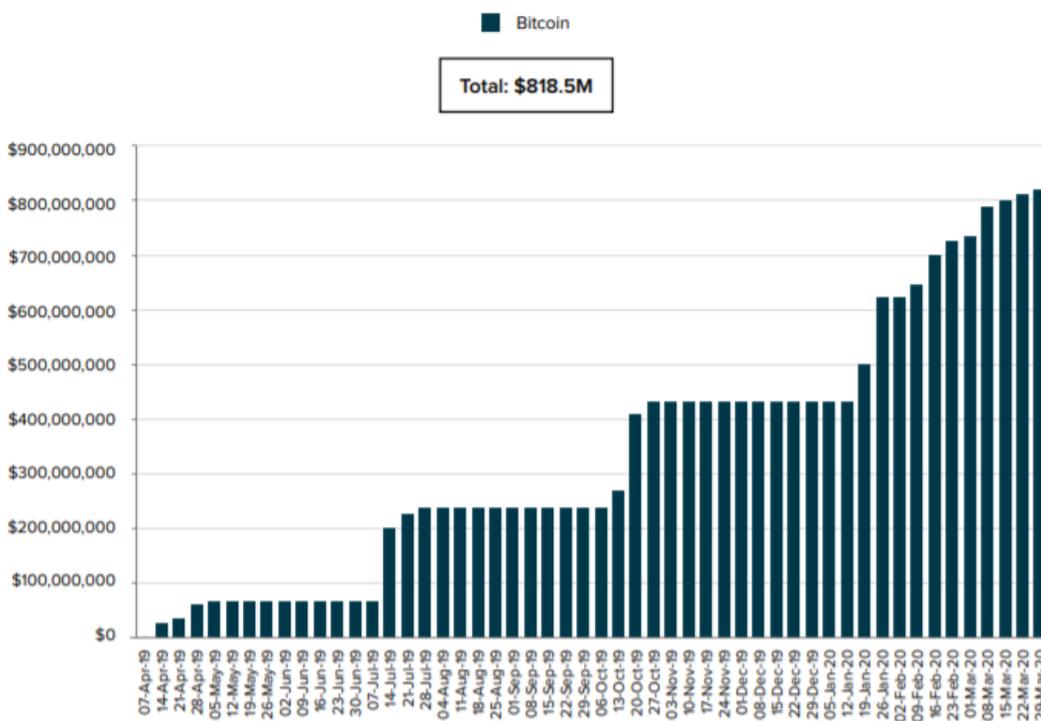
Part of what makes bitcoin valuable lies in its ability to be self custodied. The popular "not your keys, not your coins" ideology espoused by hardcore bitcoiners demonstrates their unwillingness to cede the right to fully control their assets. However for many institutions this is neither feasible nor practical due to regulations and reluctance to subject themselves to the risk that comes with it. For these reasons and more, there are a variety of investment products built to offer exposure to Bitcoin through vehicles that look more familiar to the traditional investment world. While they may run contrary to its core ethos, these products have an important role to play in providing institutions access to Bitcoin.

One of the oldest Bitcoin products is the Grayscale Bitcoin Trust (GBTC), a fund that holds bitcoin. It is like an exchange traded fund (ETF), but initial shares are only available to accredited investors while secondary trading open to any investor. GBTC allows investors to deposit bitcoin in order to create shares or purchase shares with cash.¹

¹ Ryan Selkis, [Sidedoor ETFs](#) Messari, Jan. 3, 2019.

Looking at Grayscale’s Q3’19 investor report, the most recent period where in-kind transactions were broken out, we see that 80% of flows were from in-kind Bitcoin deposits. With \$2 billion currently under management we estimate that approximately \$400 million of the fund is from new Bitcoin purchases and new additions have been steadily increasing.²

FIGURE 14: GRAYSCALE BITCOIN TRUST CUMULATIVE WEEKLY INFLOWS – T12M
 APRIL 1, 2019 THROUGH MARCH 31, 2020



Source: Grayscale Investments

Another product that is more structurally similar to an ETF is the CoinShares ETP, which tracks the price of bitcoin and is publicly traded on the Nasdaq in Stockholm and has over \$500 million in AUM, highlighting interest across the European markets.³ There are a number of other funds including the Canadian 3iQ, Swiss 21 Shares Bitcoin ETP, and Wisdom Tree Bitcoin fund that have not grown as large as their counterparts but still represent alternative vehicles for interested investors.

² Digital Asset Investment Report Q1 2020 Grayscale Investments, Mar. 31, 2020

³ XBT Provider, [Crypto Exchange Traded Products](#) CoinShares, May 14, 2020.

Futures

Outside of structured products that give investors exposure to the spot price of bitcoin, another popular vehicle for investors has been futures. The perpetual swap, pioneered by BitMEX has become the most liquid contract with volumes surpassing spot. To date, most futures trading occurs on offshore crypto native exchanges such as BitMEX, Binance, and Huobi but increasingly we are seeing more trading occur on the CME which is indicative of professional investors.



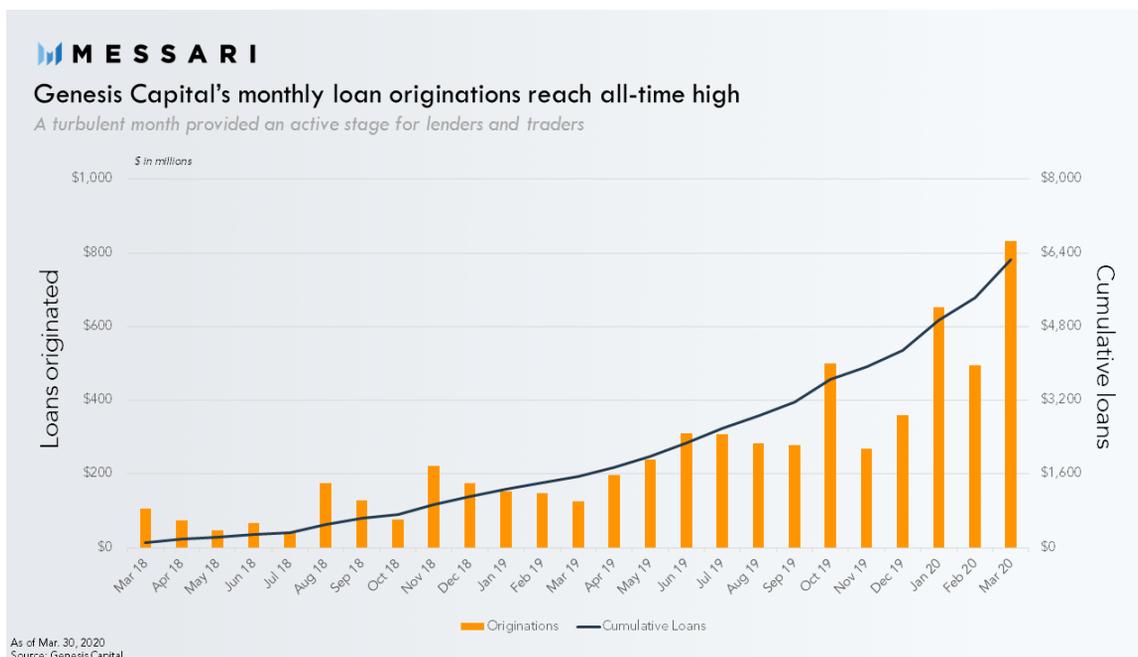
Source: Skew

Over the last month, open interest on CME skyrocketed from \$100 million to \$500 million, the third most of any Bitcoin futures exchange. Unlike the nine-figure AUM of Grayscale or CoinShares' products, this \$500 million open interest doesn't directly translate to long positions since it takes into account short positions as well. Due to the market's long-bias, futures often trade at a substantial premium to spot, which can create a highly profitable arbitrage trade by shorting futures and buying spot.

With this kind of trading opportunity, the futures markets attract savvy investors who may not necessarily want to be long bitcoin but recognize a profitable trade. Even though this additional open interest may not be inherently long bitcoin, it is bringing in more professional investors who are now comfortable trading in these markets. This increased involvement will continue to make the markets more efficient which should have the reflexive impact of bringing more capital into the space.

Lending

Another critical piece of a well-functioning market is robust lending activity. The ability to borrow bitcoin or use it as collateral to draw down on cash is vital for a number of businesses including market makers, exchanges, and miners. One of the largest lenders, Genesis Capital, releases quarterly reports that shed insight into the growth of the lending markets. In their Q1'20 report, the firm disclosed that it had originated over \$2 billion of loans, doubling the previous all-time high in Q4'19.⁴



In a recent report crypto credit service Credmark estimated that there were \$8 billion in loans originated over the past year.⁵ This has led to a number of new entrants looking to capture a portion of this rapidly growing market.

Some recent examples include:

- **November 2019:** blockchain.com announces institutional lending business with \$120 million originated that month.⁶
- **November 2019:** Celsius reports they have issued a total of \$4.25 billion in loans.⁷
- **January 2020:** Matrixport reveals \$100 million in loans outstanding⁸
- **March 2020:** BitGo announces lending business with \$150 million in loans outstanding.⁹
- **March 2020:** Babel reports \$380 million in loans outstanding as of February.¹⁰

⁴ Matt Ballensweig, Roshun Patel, Leon Marshall [Digital Asset Lending Snapshot](#) Genesis Capital, Apr. 30, 2020

⁵ [The Crypto Credit Report](#) Credmark, Dec. 31, 2019.

⁶ Frank Chaparro [As credit concerns loom in crypto, Blockchain.com secretly builds multi-million dollar loan desk](#) The Block, Nov. 14, 2019

⁷ [Celsius Hits \\$4.25 Billion in Originated Crypto Loans](#) Celsius Network, Nov. 12, 2019

⁸ Celia Wan [\\$500 million in crypto spot trades in less than a year: A deep dive into the rise of Jihan Wu's Matrixport](#) The Block, Jan 27, 2020

⁹ Bradley Keoun [BitGo Reveals Bitcoin Lending Push; \\$150M Booked So Far](#) CoinDesk, Mar. 5, 2020

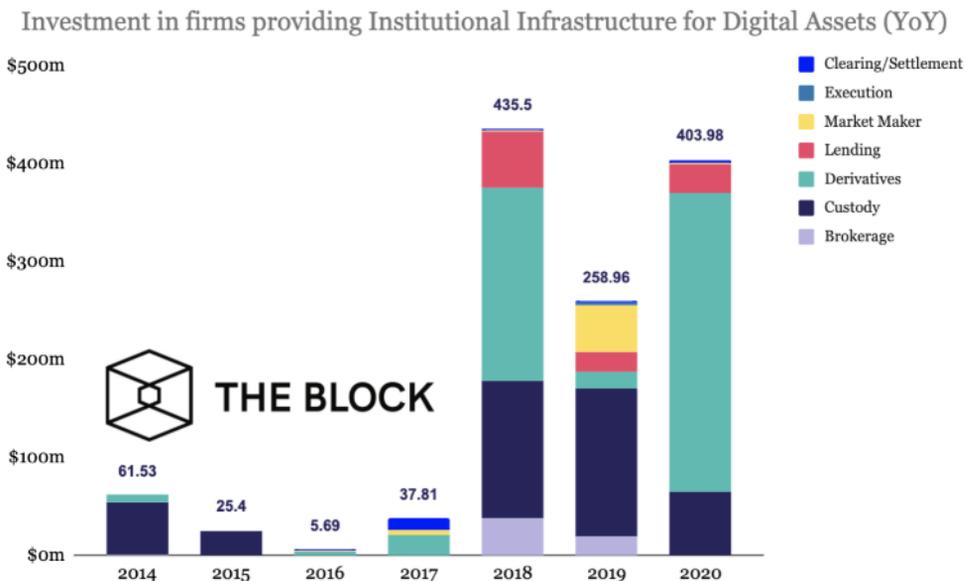
¹⁰ Wolfie Zhao [Crypto Lender Babel Hits \\$380M in Outstanding Loans](#) CoinDesk Mar. 5, 2020

Infrastructure

Regulated investment vehicles, futures markets, and lending are all key pieces to the institutionalization of bitcoin, but they wouldn't be possible without the infrastructure behind them serving as the plumbing of the system. Behind every exchange traded product, derivative, or loan are the companies providing the means for these markets to operate efficiently. This includes exchanges, market makers, custodians, prime brokers, and a host of other participants.

Each of these companies requires funding to get off the ground, so tracking venture investment in institutional infrastructure provides insight into the growth of these service providers.

Investment in firms that offer exclusively Institutional Products & Services



Prior to 2018, venture investment was scarce in the institutional space because there simply wasn't enough demand. That all changed when Bitcoin's market capitalization increased from \$15 billion to over \$300 billion in less than a year. Many new businesses were created to facilitate the subsequent increase in trading activity.

Bitcoin's market infrastructure has evolved at a remarkable pace over these last few years as quality teams received an influx of new capital from established VCs inside and out of crypto. More than one-third of the \$435 million raised was a result of the massive \$182 million Series A in Bakkt: a bitcoin futures exchange created by the parent company of the New York Stock Exchange. In 2020, numbers are skewed once again by Bakkt as they received \$300 million in fresh funding but other than that, deals are on pace to remain consistent year over year.

The herd is here

Since its inception, Bitcoin has existed on the fringes of the financial world. Whether it's the perceived lack of regulation, the volatility, or lack of "tangible" backing, most professional investors have kept their distance from Bitcoin. Historically high net worth individuals and family offices disclosed small allocations to Bitcoin but few large investors discussed it as a viable asset class.

In perhaps the biggest endorsement from a large investor, hedge fund titan Paul Tudor Jones made the case for Bitcoin in a recent letter to investors. In the letter he outlined his view on what he called "The Great Monetary Inflation (GMI)" and why he has up to 2% of his fund allocated to Bitcoin as a hedge against inflation. Many see the endorsement from one of Wall Street's most successful investors as a signal that Bitcoin is no longer a fringe investment. For professional investors, it often just takes someone else going first before the rest follow.

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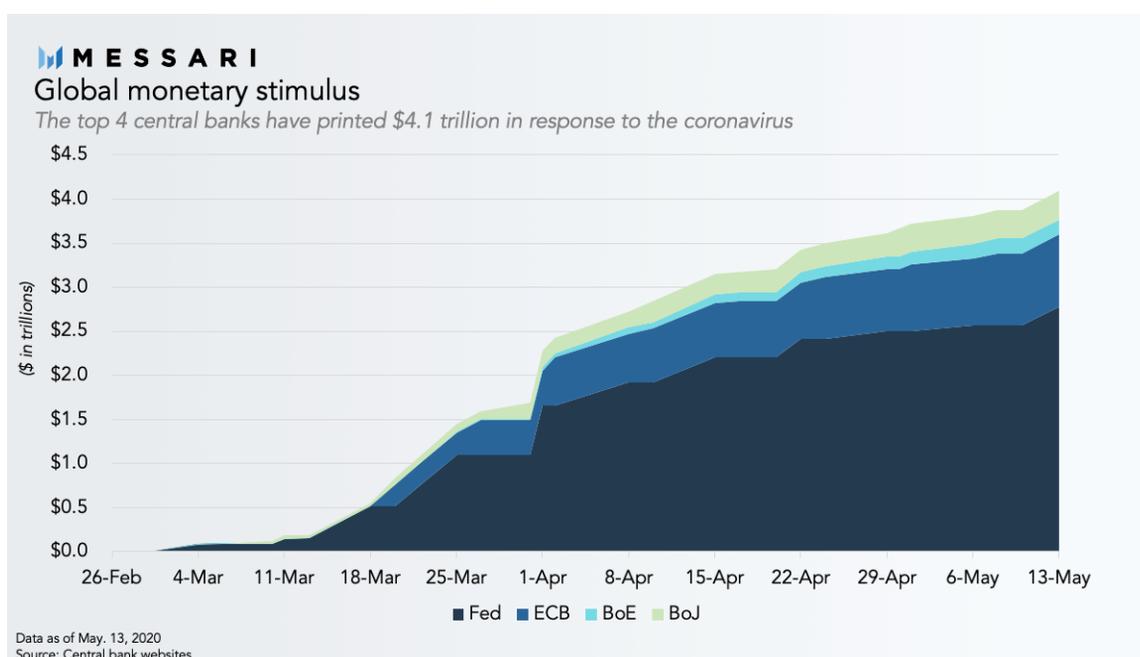
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Part 2: Bitcoin as an emerging macro asset

Covid-19 has caused one of the most dramatic global economic slowdowns in history. Amidst widespread lockdowns, households, businesses, and municipalities find themselves under severe financial stress with unemployment reaching levels not seen since the Great Depression. In response, governments have injected trillions of dollars in fiscal stimulus, expanding fiscal deficits to levels typically only seen in times of war. In parallel, central banks have inflated money supplies at historic rates and eased credit conditions to their limits. The top four central banks alone have printed a combined \$4.1 trillion over the past three months.



With this as the economic backdrop, Bitcoin underwent its third halving, which reduced its annual issuance rate to parity with gold: the original non-sovereign store of value. You couldn't have scripted it any better than that if you tried.

Annual Issuance Rate	1 st Halving					2 nd Halving				3 rd Halving		
Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Gold	1.7%	1.7%	1.7%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%
Bitcoin	211.6%	59.7%	32.7%	15.0%	12.1%	10.0%	7.0%	4.4%	4.1%	3.9%	2.5%	1.8%

Note: Annual Issuance rate reflects prior years issuance. Thus, Bitcoin's 2021 annual issuance is what is expected for 2020

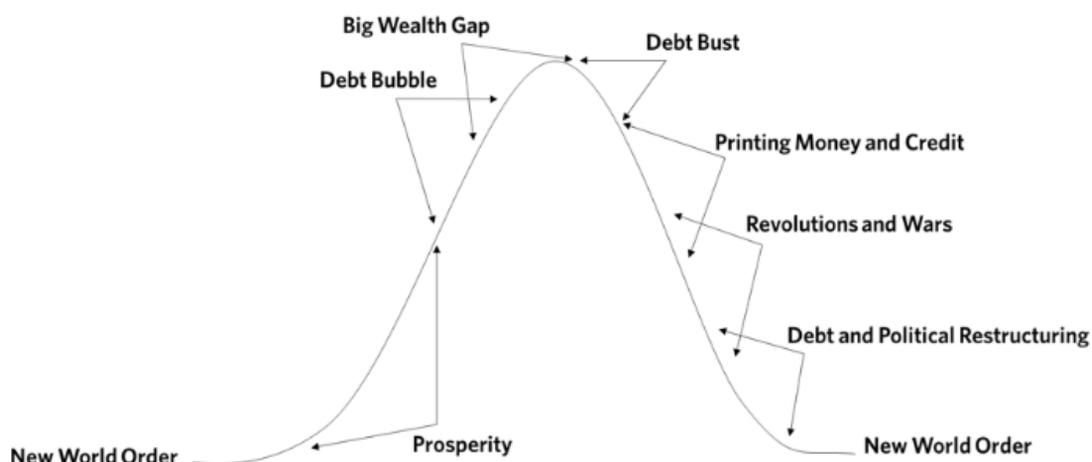
In this section we will focus on money, credit, and how Bitcoin fits into this emerging macroeconomic picture. Much of it will focus on the United States Dollar given that it is the world's reserve currency and accounts for more than half of the world's international transactions, savings, and borrowing. The remainder of this section will discuss emerging markets currencies.

Central banking and emergency monetary policy

Money moves in cycles. As countries need more money and credit than they currently have to deal with problems like debt and war, they naturally move away from hard money, so that they have more flexibility to print money. This phenomenon takes place over long periods of time of about 50 to 75 years, called long-term debt cycles.¹¹

Within long-term debt cycles there are short-term cycles that typically last about eight years. Central banks manage these shorter-term cycles by tightening credit conditions when times are good, and loosening credit conditions when times are bad. This has the effect of incentivizing and disincentivizing spending and leads to upturns and downturns in economic activity because central banks do this imperfectly.¹²

Over time large debts accumulate as policymakers tend to loosen credit conditions, due to its near-term benefits (more credit → more spending → more growth) and the political pressures of encouraging growth. This eventually gets to the point where debt burdens become too much to bear and traditional monetary policies reach their limits in stimulating the economy. At this point policymakers can deal with debt burdens through austerity, debt restructurings, taxation, or money printing. However, because printing money is the most politically palatable of the four (it is the least transparent and understood), it is the most common way of dealing with debt crises.

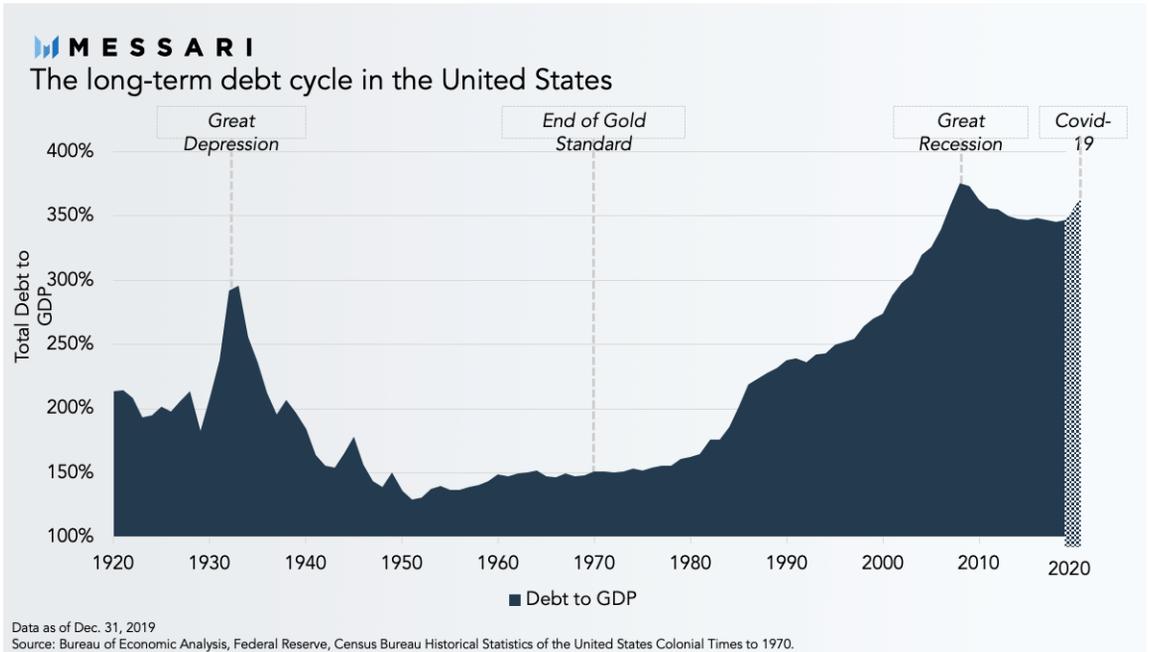


Source: Ray Dalio (New World Order)

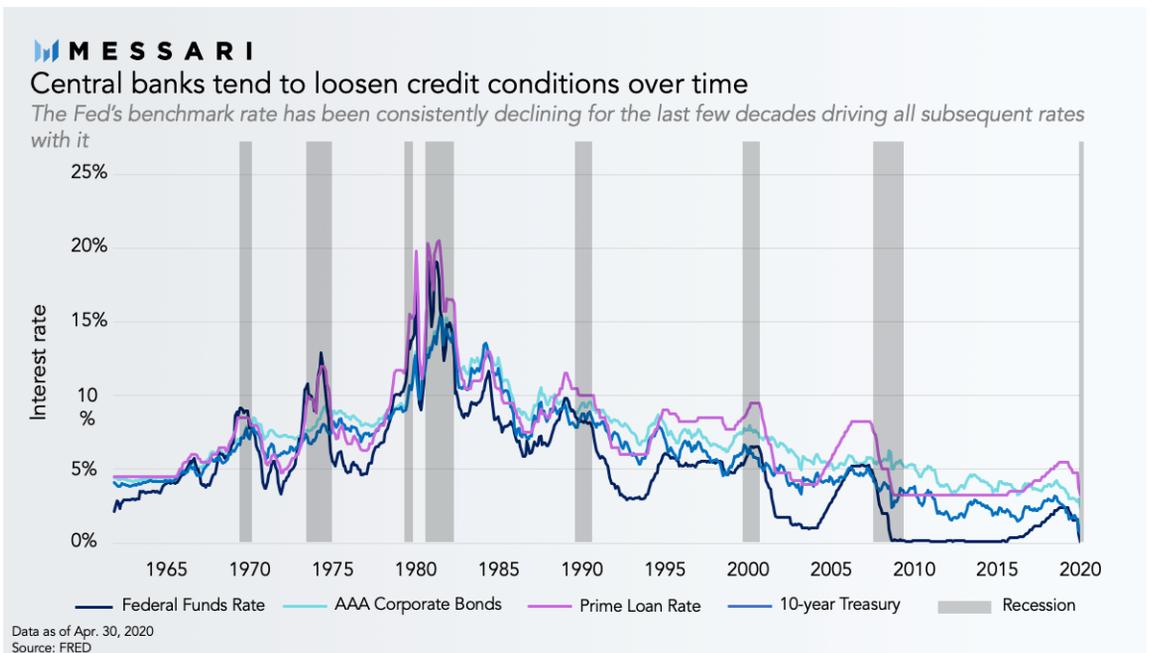
¹¹ Ray Dalio, [The Changing World Order](#)

¹² Ray Dalio, Principles for Navigating Big Debt Crises

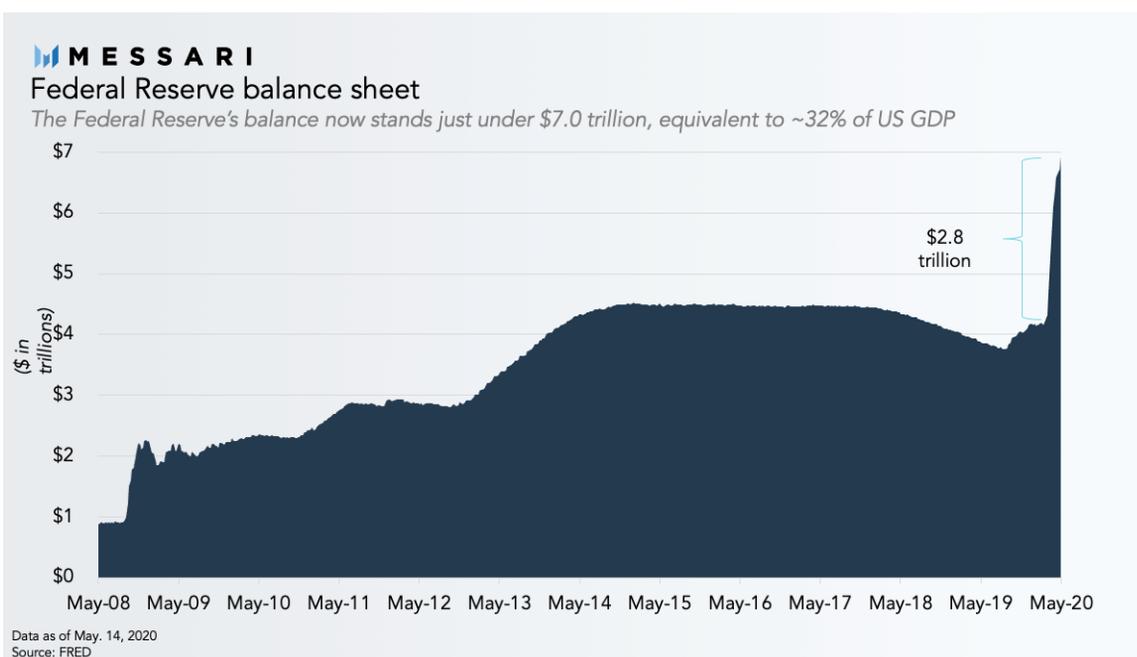
This is the situation the United States finds itself in today.



The United States is currently near the end of a long-term debt cycle that began in the years following the Great Depression - the end of its last long-term debt cycle. As the Federal Reserve (Fed) fought recessions over the past few decades, it has taken interest rates gradually down to zero.



With the onset of Covid-19 the Fed found itself with limited ability to stimulate the economy through traditional monetary policy, which is forcing it to resort to more creative measures. After cutting interest rates a mere 150 basis points compared to the ~500bps it typically does to fight a recession, the Fed began quantitative easing and launched a table set of emergency lending facilities. While many of these actions are familiar from the 2008 financial crisis, some are unprecedented, with the Fed immersing itself far deeper into credit markets than it has before.¹³ All said, the Federal Reserve has printed \$2.8 trillion in the past 2 months, and economists polled by Reuters, expect the Fed's balance sheet to rise well over \$10 trillion this year.



Fiscal stimulus and modern monetary theory

Fiscal stimulus

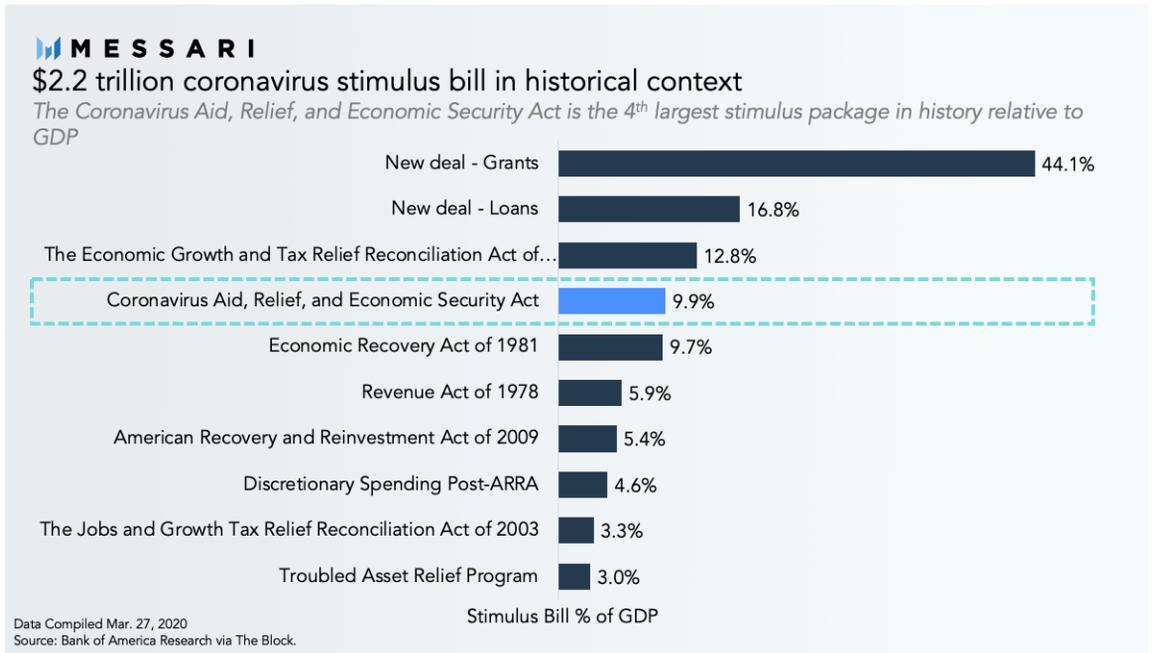
What's different about our current crisis versus other crises over the past century, is that it is an economic shutdown, not an economic slowdown. In order to prevent the spread of the coronavirus, many countries have shut down wide swaths of their economies. Many businesses have been left with zero sources of income during these lockdowns, forcing them to layoff employees and tap their cash reserves to stay afloat. This is particularly problematic as many businesses and households came into this crisis with low savings. The median small business has a 27-day cash buffer and most Americans do not have enough cash on hand to meet a \$1,000 emergency expense.^{14,15}

¹³ Qiao Wang, [Chronology of Federal Reserve actions](#), Messari, May. 1, 2020

¹⁴ Diana Farrell, Chris Wheat, [Cash is King: Flows, Balances, and Buffer Days](#), JP Morgan, Sep. 2016

¹⁵ Adrian D. Garcia, [Bankrate's January Financial Security Index survey](#), Bankrate, Jan. 2019

To fill these holes in household, business, and municipalities' financial positions, governments have deployed massive amounts of fiscal stimulus in the form of loans, tax breaks and direct payments. The United States flagship \$2.2 trillion stimulus bill amounted to ~10% of 2019 GDP, the largest ever in nominal terms and 4th largest in relative terms. It has since approved another \$484 billion bill and is in discussions around another multi-trillion dollar coronavirus relief package.



The United States came into this crisis with a 5% and growing fiscal deficit. As tax revenues decrease and coronavirus related spending increases, the US fiscal deficit is expected to rise to 17.9% in 2020 and 9.8% in 2021, according to the Congressional Budget Office (CBO).¹⁶ The CBO projects the US Treasury will borrow nearly \$6 trillion through 2021. This would push Federal Debt to GDP to 108%, surpassing its all-time high reached during World War II.

¹⁶ Phil Swagel, "[CBO's Current Projections of Output, Employment, and Interest Rates and a Preliminary Look at Federal Deficits for 2020 and 2021](#)", Congressional Budget Office, Apr. 24, 2020

United States federal debt held by the public



With the amount of borrowing the US Treasury will need to do, the Fed will need to absorb the majority of new treasury issuance. Already before the coronavirus, the Treasury ran out of both domestic and foreign buyers, which led to the repo crisis late last year. Foreign buyers virtually stopped buying treasuries in 2014 as the US dollar strengthened. Domestic buyers stopped buying after being flooded with treasuries from the US government's large and increasing fiscal deficits over the past few years. Primary dealer banks, who buy treasury securities directly from auction, hit their post-crisis regulatory limits for the amount of cash they must hold on hand. The result was a shortage of dollars in the US financial system that caused repo rates to spike to extreme levels.¹⁷ The Fed stepped in as a buyer of last resort to absorb new treasury issuance.

Modern Monetary Theory

At the core of Modern Monetary Theory (MMT) is the idea that a government can print all the money it needs to finance its spending so long as it does not cause inflation. Governments operating under this theory can control inflation through changing fiscal policy, raising taxes when money needs to be extracted from the economy, and printing money when the government runs a deficit. With MMT, money becomes a tool governments can use to manage their economies.

¹⁷ Lyn Alden, "[The Curious Case of QE](#)", Jan. 30, 2020

Although pure MMT forgoes the pretense of governments borrowing money from their central bank to fund deficits, QE that is never reversed is effectively the same. The Fed has yet to unwind its balance sheet from the first round of QE that began 12 years ago, and it's unlikely to do it anytime soon with the current crisis it's facing. Assuming the Fed buys all the new issuance over the next two years, it could own more than a third of the US treasury market by 2021. MMT for all intents and purposes is here.

Yet, the Fed's relationship with the US Treasury does end with just quantitative easing. Many of the emergency lending facilities involve the Fed purchasing securities it is not permitted to under the Federal Reserve Act. This limits its purchasing and lending activities to securities with a government guarantee. The Fed gets around these limitations through the creation of US Treasury funded special purpose vehicles (SPVs). The way these work is, the Treasury makes an equity investment into each SPV, putting it in a position of "first loss" while the Fed lends to the SPV at up to a ten to one debt-to-equity ratio. The Treasury owns the SPVs while the Fed hired Blackrock to manage the administration of them. The effect is the "merging" of the Fed and the US Treasury, giving the US executive branch access to the printing press in the process.¹⁸

All in all the above actions provide the US government with much greater ability to influence the US money supply.

Bitcoin and the emerging macroeconomic picture

The trillion-dollar question is whether all of the aforementioned monetary and fiscal actions will result in inflation or if the deflationary pressures of the crisis are too much to overcome. Further relevant is whether the merging of the US treasury and the Fed will cause a politicization of the money supply that erodes confidence in the independence of the Fed. This is where Bitcoin's promise of scarcity and political independence come into play.

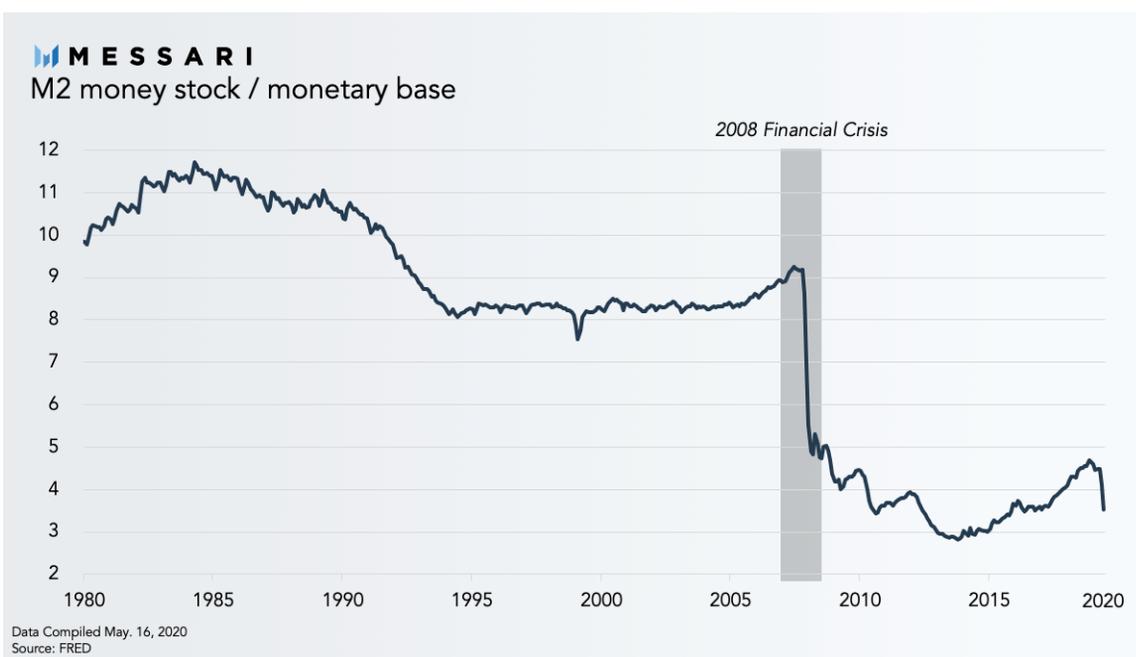
Inflation vs deflation

All things equal, creating more of a currency should reduce that currency's purchasing power relative to other assets. This includes all assets ranging from stocks and bonds to commodities and other currencies. This is known as monetary inflation and it is relevant when evaluating other store of value assets, especially as central banks around the world debase their currencies at historic rates. However, monetary inflation is not the only type of inflation, and usually not the type most relevant to the everyday person.

¹⁸ Jim Bianco, [The Fed's Cure Risks Being Worse Than the Disease](#), Bloomberg, Mar. 27, 2020

The type of inflation most relevant to the everyday person is the value of currency relative to a basket of goods and services. This is known as consumer price inflation, and consumer price inflation occurs when too much money chases too few goods, thus bidding up prices. Consumer price inflation (referred to as inflation for the remainder of this section) is often caused by poorly executed monetary and fiscal policies that put too much money into an economy. When inflation becomes too high people spend money more quickly in order to reduce the amount of time spent holding their depreciating currency. This is when consumers begin to lose confidence in their currencies and seek alternative stores of value.

Extreme monetary and fiscal policies are not guaranteed to cause inflation. Whether or not depends on where the money is spent, how much of it is spent, what other inflationary or deflationary forces are at play, and whether people have confidence in the currency.¹⁹ These factors explain why the QE of the 2010s did not cause consumer price inflation. Much of the money printing went towards shoring up banks' balance sheets who were loaded up with toxic assets that rendered many banks insolvent. Due to post-crisis regulations requiring greater cash on hand, the introduction of interest on excess reserves that incentivized holding cash at the Fed, and decreases in confidence that reduced lending, broad money supplies did not rise noticeably. Much of the new money created through quantitative easing was never re-lent to the real economy, dampening the money multiplier of the increased monetary base.



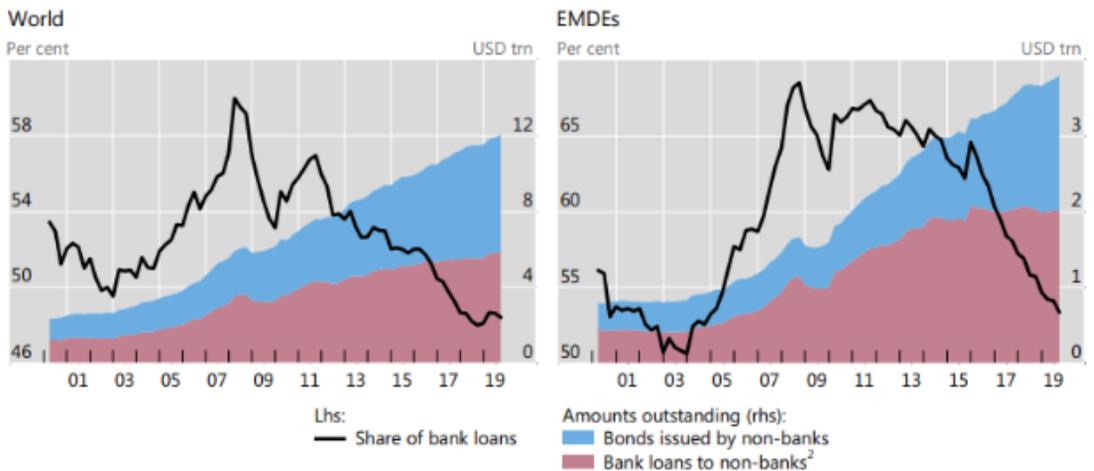
¹⁹ Lyn Alden, [Quantitative Easing, MMT, and Inflation/Deflation: A Primer](#), May. 5, 2020

The QE of the financial crisis also battled against debt defaults and asset price declines which destroyed credit, secular deflationary forces from technology and offshoring, which reduced production costs over time, and increasing wealth inequality which reduced the velocity of money (1,000 people are more likely spend a combined \$1 million than a single person with \$1 million). The result was that the broad money supply never increased dramatically, and consumer price inflation hovered around 2%.

In the short-term many of the deflationary pressures that were also present in the 2008 crisis are likely to win out in our current crisis. Governments can prevent liquidity problems, by handing out money for people to pay their bills, but they cannot prevent solvency issues that stem from a lack of income to service obligations. There's little evidence from countries that have beaten the virus that economic activity will quickly snap back once lockdowns are lifted, and the uneven and asynchronous nature of the lockdowns may dampen chances of global recovery. The economic uncertainty will likely cause individuals and businesses to continue tightening their budgets in order to deal with a lower income environment. They will also deleverage, as expected near the end of a long-term debt cycle, which will reduce spending and prices.

This initial deflation could be exacerbated by the large amount of dollar denominated debt issued by non-US entities. This figure currently stands over \$12 trillion, which equates to ~68% to the US broad money supply. As global growth and world trade slow there may simply not be enough dollars circulating around to service these debts. This could be especially troubling for emerging markets with large amounts of dollar denominated debts and low foreign exchange reserves to defend their currencies as the world scrambles for dollars. Emerging markets alone account for \$3.5 trillion of \$12 trillion non-US dollar denominated debt figure. While the Fed has already stepped in to provide dollar liquidity to foreign central banks, it may only temporarily relieve the US dollar shortage. The Fed is not giving away free money to central banks via these facilities, it is acting as the lender of last resort and actually creates even more debt.²⁰ In totality this dollar shortage issue could lead to a massive short squeeze of the US dollar in the coming years, causing emerging market currency crises in the process. Cryptocurrencies like Bitcoin and stablecoins could become attractive options for those looking to escape inflation in their native countries.

²⁰ Qiao Wang, "[Tale of ten bubbles](#)", Messari, Apr. 9, 2020



Source: Bank for International Settlements

Nevertheless, the current crisis may not be entirely deflationary, especially in the long-term as the Fed appears willing to do anything in its power to prevent such a deflationary scenario. In the short-term consumer staples price levels may rise significantly due to global and local supply chain issues that reduce productive capacity, and social distancing measures that keep consumers at home and buying more essentials than normal. This is already evident in the latest CPI report that saw grocery prices rise 2.6% over the past month, its largest one-month increase since 1974.²¹

The longer-term discussion centers around the way new money enters the economy, and there are reasons to believe the fiscal and monetary stimulus in this crisis will create different results than 2008. Unlike in 2008, banks are in strong shape due to post-crisis regulations, meaning new cash entering the system need not be hoarded to shore up balance sheets. With government incentives, much of the treasury debt monetization this time is being put in the hands of households and businesses through direct payments and loans.

With the unprecedented and increasing amount of spending to these groups, M2 money supply is expanding at its fastest pace since World War II. Further, there are only a few times in history when M2 money supply growth exceeded real output growth over a 5-year span by the same or a faster pace than is currently the case: the inflationary periods of the 1970s – 80s and the late 1940s.²²

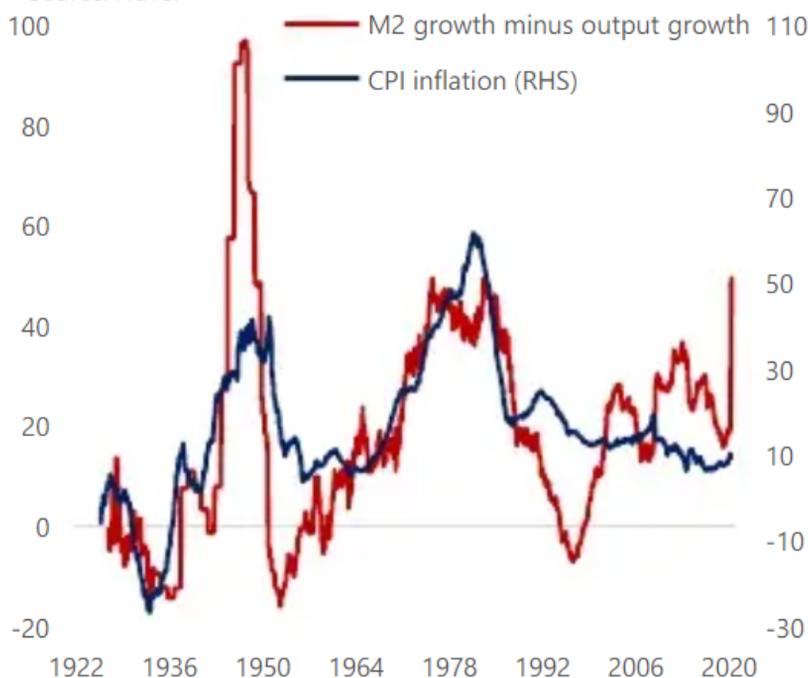
²¹ Bureau of Labor Statistics, [April Consumer Price Index](#), May. 12, 2020

²² Paul Tudor Jones, Lorenzo Giorgianni, [May 2020 BVI Letter - Macro Outlook](#), May. 2020

US CPI inflation vs. (M2 growth - real GDP growth)

5y/5y, % (annual series before 1958; monthly series thereafter).

Source: Haver



Source: Haver via May 2020 BVI Letter

The secular trend of globalization is also likely to reverse in the coming years, at least concerning the offshoring of strategic industries. The United States' inability to manufacture its own medical supplies to fight the virus is just the tip of the iceberg. It's unclear how this happens in practice, but there will be significant political pressures to repatriate industries back to the US. This will put pressure on the costs of many products and services that have benefitted from decades of cheap overseas labor. In 2017, the Bank for International Settlements estimated that global inflation would have been ~1% higher without the supply-chain efficiencies enabled by globalization.²³

Finally, some of the deflationary forces of technology could reverse over the coming years as well. Many companies such as Uber have provided consumers with low prices, not because of their low cost base, rather because of their funding which has effectively subsidized their services. If the WeWork debacle is any indicator, or the absurdity of the entire food delivery industry²⁴, investors' appetite for perpetually money losing businesses may be lower in a post-virus world where income and balance sheets matter more. This could have an inflationary effect on prices.

If the central bank driven monetary debasement alone isn't enough to boost demand for store of value assets like Bitcoin in the 2020s, all the above inflationary forces on consumer prices could be the tipping point.

²³ Raphael Auer, Claudio Borio and Andrew Filardo, [The globalisation of inflation: the growing importance of global value chains](#), Bank for International Settlements, Jan. 2017

²⁴ Ranjan Roy, [Doordash and Pizza Arbitrage](#), May. 17, 2020

Why Bitcoin

What's been described throughout this section could be equally applicable for other inflation hedge assets like Gold and Silver that have thousands of year track records successfully maintaining purchasing power, especially in times of instability. Why then does Bitcoin matter, with its mere 11-year history characterized by extreme volatility and infamous price bubbles? What differentiates Bitcoin from other politically neutral, scarce monetary stores of value?

The answer lies in Bitcoin's sovereignty, its secular tailwinds, and its upside.

Bitcoin's "Patient Zero", Wences Casares, said it best when he articulated how Bitcoin is sovereign in his seminal essay "The case for a small allocation to Bitcoin". When describing why Bitcoin is revolutionary despite all its components having existed for years prior to Bitcoin's invention he wrote:

"The only thing that changed, that may potentially be revolutionary, is that all of those components were combined in a new, creative and intelligent way to create the first potentially sovereign computer platform. Up until that moment, all computer platforms belonged to a person, to a company or to a government and those platforms had to obey the will of their owners and the rules of the jurisdiction where they resided. A sovereign only obeys its own rules, no one can impose rules on a sovereign. Kings and Queens used to be sovereign, then nation states became sovereign and now, for the first time, a humble computer platform has the aspiration to be sovereign. That is potentially revolutionary."²⁵

This concept of sovereignty underpins many of the properties that make Bitcoin unique.

Take Bitcoin's most famous property of its 21 million coin fixed supply. Bitcoin is the only monetary asset in the world with absolute scarcity. This absolute scarcity is assured by a massive, global ecosystem of independent and diverse participants that run Bitcoin full nodes and uphold Bitcoin's social contract.²⁶ Anyone who's familiar with the Bitcoin community, knows the 21 million hard cap is non-negotiable. This is why despite all the clones, many of which also promise limited supplies, there is only one cryptocurrency that does so credibly; and that is Bitcoin.

²⁵ Wences Casares, [The case for a small allocation to Bitcoin](#), Kana & Katana, Mar. 1, 2019

²⁶ Hasu, [Unpacking Bitcoin's Social Contract](#), Dec. 3, 2018

Bitcoin's sovereignty also allows the Bitcoin blockchain to serve as a global, politically neutral, digital infrastructure for transferring and storing value. Unlike those of fiat monetary systems, no one can be prevented from using the Bitcoin blockchain for transferring value, which is especially important in times of rising geopolitical tensions. Similarly no one can be prevented from storing value in bitcoins like they can be from storing national currencies in banks, which can be restricted and/or expropriated. Unlike the monetary metals like Gold and Silver bitcoins can be sent across the world in just hours and can be securely stored by individuals with just a seed phrase. This can be done in any amount from the smallest of values to the largest of values, providing a major upgrade over the heavy metals.

Bitcoin also has many secular tailwinds in its favor, such as the coming digitization of money and the coming into power of younger generations. The global economy has been digitizing for years, yet the monetary system has largely stayed the same throughout this period. Catalyzed by Bitcoin and the recognition of the benefits of blockchain technology, many countries and companies around the world have begun researching, testing, and launching their own digital currencies. The most prominent of these projects are China's Digital Currency Electronic Payment (DCEP), which began testing this year, and Facebook's Libra, which recently unveiled its revised plan to launch a global stablecoin payments infrastructure. When these projects launch, they will have the combined effect of exposing billions of people to cryptocurrency related technologies. This will increase people's comfort with and understanding of cryptocurrencies, get more people creating and using cryptocurrency wallets, and provide on-ramps into decentralized cryptocurrencies like Bitcoin. This activity will be further supported by younger generations who express more openness toward cryptocurrencies.²⁷

Finally there's just simply more upside in Bitcoin than more established store of value assets like gold. There are many people, usually unacquainted with Bitcoin, who suggest that Bitcoin is overvalued based on its \$170 billion market capitalization. This usually stems from misguided comparisons to company valuations or criticisms of Bitcoin's lack of intrinsic value. It's important to understand Bitcoin is not a company. It is a money. Not only are monies valued in the trillions of dollars, but they also have very little if any intrinsic value. The total value of above-ground gold, which has limited industrial use, is more than \$10 trillion. The total value of all the base fiat money in the world, which only has value because governments say they do, is worth nearly \$20 trillion dollars.

²⁷ Marie Huillet, "[Millennials 3 Times More Likely to Invest in Crypto Than Gen X: Survey](#)", CoinTelegraph, Jul. 23, 2019

The total value of the global narrow money supply which includes demand deposits and checking accounts in addition to base money is worth ~\$40 trillion. None of this even considers the trillions of dollars in wealth stored offshore and the unquantifiable amount of wealth invested in stocks, bonds, and real estate for store of value purposes.

MESSARI
Bitcoin and gold
The uphill climb to trillions

Gold Holdings Breakdown	Market Value (in billions)	Bitcoin Price Equivalent	Multiple to Current Price
Private Investment	\$2,329	\$126,745	13.7x
Central Bank Holdings ¹	\$1,854	\$100,872	10.9x
Jewelry	\$5,080	\$276,415	29.9x
Other ²	\$1,535	\$83,536	9.0x
Total	\$10,799	\$587,568	63.5x

Data Compiled: May. 15, 2020.

Source: Messari, World Gold Council.

Note: Market values calculated by multiplying per ounce gold price by 32,150.75 (conversion to metric tonnes), then multiplying the product by the amount of tonnes per category.

1. Also includes international monetary institutions and national monetary authorities.

2. Includes gold used in fabrication other than of gold jewelry (industrial applications) and gold which cannot be accurately accounted for.

There are few opportunities with as much asymmetric upside as Bitcoin if it were to become successful. To reach gold's current market cap alone Bitcoin would need to rise 63x from its current levels.

Closing thoughts

“Looking at the current environment, with disruptions to supply, demand, health and liquidity tensions, we could build an ensemble of the Spanish flu, the Fukushima earthquake and components of the 2008 crisis, for example. But given the very specific contexts of each event, we may run into endless combinations of the lessons learnt from these events...So forecasting is difficult for a large number of reasons, including our limited understanding of the processes that will produce the future, their imprecise nature, the lack of historical precedent, the unpredictability of people’s behavior and the role of randomness, and these difficulties are exacerbated by today’s unusual circumstances.” - Howard Marks²⁸

No one can predict the future, but everyone can make a prediction. While we’ve laid out our best guess on what to look out for in the months and years ahead, the truth is no one really knows, but Bitcoin’s strong fundamentals and resilience in the face of economic uncertainty should only serve to make it more attractive to professional investors.

Disclaimers

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