

# Central Bank Digital Currencies Highlight Bitcoin's Value Proposition

# Central Bank Digital Currencies Highlight Bitcoin's Value Proposition

Bitcoin's growing popularity, the digitization of payment systems, and the demand for stablecoins have prompted countries to explore central bank digital currencies (CBDCs). In the wake of COVID-19, CBDCs have also been discussed as a way to improve stimulus distribution. CBDCs are sometimes viewed as synonymous to, or as replacements for, digital currencies like Bitcoin, but they represent a meaningful departure from the decentralized protocols inherent to many cryptocurrencies. CBDCs attempt to upgrade payment infrastructure while Bitcoin is an attempt to upgrade money. If CBDCs gain traction, they may actually bolster the value proposition for Bitcoin and other digital currencies. As the discussion around CBDCs intensifies, it's important to understand what they are, how they would work, and what the implications are for investors.

*"Quantitative easing is a tool that central banks, like us, can use to inject money directly into the economy. Money is either physical, like banknotes, or digital, like the money in your bank account. Quantitative easing involves us creating digital money." - Bank of England<sup>1</sup>*

## What are they?

Since Bitcoin's introduction in 2008, countless digital assets have come to market, many attempting to resolve and improve upon challenges in our existing financial system. One such innovation is the introduction of stablecoins, digital currencies designed to maintain their value by tying themselves to a stable underlying asset such as a fiat currency. Stablecoins reduce the volatility inherent in digital currencies by allowing users, often traders, to hold their wealth without an intermediary and avoid the need to convert from a digital currency into fiat currency. To date, there has been strong demand for stablecoins because they can function outside of the existing financial system, be transferred globally, and maintain a peg to an asset like the US dollar. It's worth noting that if the asset(s) underlying a stablecoin becomes more volatile, that stablecoin will also become more volatile.

1. Source: Bank of England. What is quantitative easing? <https://www.bankofengland.co.uk/monetary-policy/quantitative-easing>



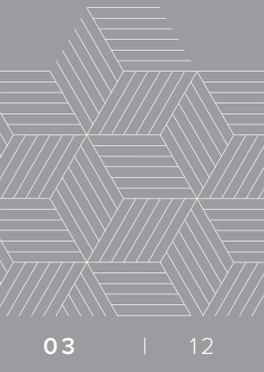
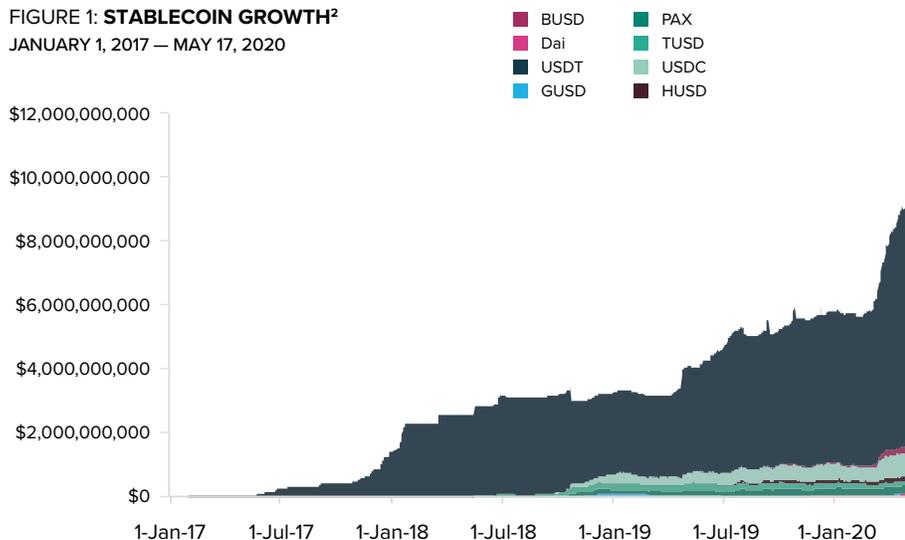


Figure 1 below shows the growth in US dollar stablecoin demand, recently surpassing \$10 billion in aggregate supply. Demarcated on the graph by their respective issuers, these assets are differentiated from fiat by delivering 24/7 settlement, less regulatory overhead, and generally lower barriers to entry in comparison to traditional banking services.

FIGURE 1: **STABLECOIN GROWTH**<sup>2</sup>

JANUARY 1, 2017 — MAY 17, 2020



The development of stablecoins has been supported by large corporations as well as national economies. In the summer of 2019, Facebook announced plans to launch a stablecoin called Libra for its 2.7 billion users, sparking reactions from central banks that their monetary sovereignty was being undermined.<sup>3</sup> The announcement of the Libra project, along with strong demand for stablecoins, has accelerated central banks' interests in issuing their own digital currencies.

In contrast to Bitcoin and other decentralized digital currencies, CBDCs are issued and tracked by central banks. CBDCs are intended to be digital versions of fiat currencies and represent many of the same features. If successful, CBDCs could streamline benefits distribution and provide automated Know Your Customer (KYC) and Anti-Money Laundering (AML) controls through a centrally managed digital ledger.

In January 2020, a survey by the Bank of International Settlements showed that nearly all central banks of advanced economies were actively analyzing the potential impact of stablecoins, and over 80% of respondents are working on a CBDC.<sup>4</sup> The Fed, ECB, BoE, and BoJ are all actively exploring the space. In fact, in the same month, the World Economic Forum announced a global consortium for designing governance around digital currencies and stablecoins.<sup>5</sup>

2. Source: Coinmetrics

3. Source: Wall Street Journal. Facebook Unveils Cryptocurrency Libra in Bid to Reshape Finance. June 18, 2019. Jeff Horwitz, Parmy Olson <https://www.wsj.com/articles/facebook-unveils-crypto-wallet-based-on-currency-libra-11560850141>

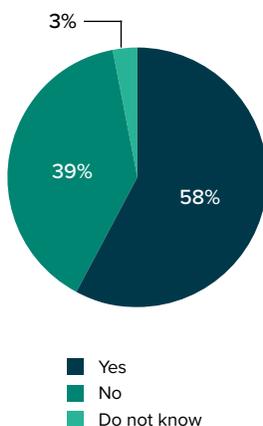
4. Source: BIS. Impending arrival – a sequel to the survey on central bank digital currency. Codruta Boar, Henry Holden, Amber Wadsworth. January 2020. <https://www.bis.org/publ/bppdf/bispap107.pdf>

5. Source: World Economic Forum. Governing the Coin: World Economic Forum Announces Global Consortium for Digital Currency Governance. January 24, 2020. <https://www.weforum.org/press/2020/01/governing-the-coin-world-economic-forum-announces-global-consortium-for-digital-currency-governance/>

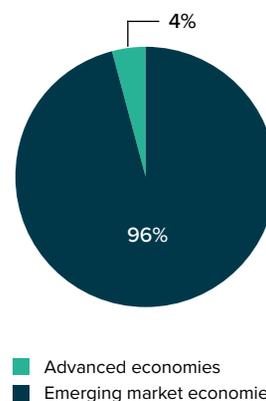


FIGURE 2: **CENTRAL BANK SURVEY ON CBDCs<sup>6</sup>**  
JANUARY 2020

Are you analyzing the potential impact on monetary and financial stability of stablecoins?



Central banks that responded "no".



## How would they work?

In January 2020, former CFTC Chair, Christopher Giancarlo, launched The Digital Dollar Project, an initiative that may provide a glimpse into the goals of a US-dollar-based CBDC.<sup>7</sup> A digital dollar could be distributed directly to end users, used in cross-border transactions and offshore securities settlement, and used to support stable international monetary conditions. Implementation details aren't available, but the potential issuance of CBDCs raises a number of challenges.

If CBDCs are issued as bearer assets, they could pose a threat to commercial banks because depositors would have the ability to transact and store the currency outside of the banking system. This scenario would alter the deposit to lending ratios, reduce continuous funding for commercial banks, and impede traditional lender profitability.<sup>8</sup>

The introduction of CBDCs would necessitate upgraded financial infrastructure, which might include merchant payment solutions, digital asset custody, exchange services, and wallets for users. Operationally, this sort of change would also require new policy and management practices at several different levels, including oversight of hundreds of millions of users' digital wallets.<sup>9</sup> This would represent a significant shift in managing the control, movement, and accounting of money. As CBDCs bring control and

6. Source: BIS. Impending arrival – a sequel to the survey on central bank digital currency. Codruta Boar, Henry Holden, Amber Wadsworth. January 2020. <https://www.bis.org/publ/bppdf/bispap107.pdf>

7. Source: The Digital Dollar Project. January 2020. <https://www.digitaldollarproject.org/issue-briefing>

8. Source: BIS. Central bank digital currencies. March 2018. <https://www.bis.org/cpmi/publ/d174.pdf>

9. Source: Federal Reserve. Digital Currencies, Stablecoins, and the Evolving Payments Landscape. Governor Lael Brainard. October 16, 2019. <https://www.federalreserve.gov/newsevents/speech/brainard20191016a.htm>



surveillance of both issuance and transfer of money under government watch, the potential implications of this centralization deserve careful scrutiny.

An important feature of the Bitcoin network is its censorship resistance and decentralization, meaning users are able to transact and store Bitcoin without the risk of their payments being blocked or their funds being stolen, arbitrarily seized, or confiscated. In all likelihood, most CBDCs would sit on the opposite side of the spectrum: every transaction would be screened, and funds could be frozen at will. If China succeeds in launching their version of a CBDC, called Digital Currency Electronic Payment (DCEP), later in 2020, it will provide their authorities with unprecedented surveillance capabilities.<sup>10</sup> The value proposition for governments is clear, but it may raise concerns around privacy, especially from citizens in democratic societies who may not welcome this level of oversight.

## What are the implications for investors?

The interest in developing and implementing CBDCs may be accentuating Bitcoin's role in the global digital economy. Whether or not CBDCs are successfully introduced, they already strengthen the case for non-sovereign digital currencies, like Bitcoin, by forcing institutions to consider adopting digital currency infrastructure, while also educating users on digital bearer assets and the characteristics of good money. Bitcoin is unique not only because it is digital, but because it is scarce and available for anyone to use.

CBDC initiatives tend to focus on the payment advantages over legacy systems, but don't highlight how a CBDC would maintain its value in an environment characterized by monetary inflation. If a central bank successfully digitizes its currency, it would still have the ability to dictate and implement monetary policy. In fact, with logic encoded into a CBDC, it would be easier for a central bank to issue new currency and even set effective rates on assets held in personal custody. In sharp contrast, Bitcoin's monetary policy is fixed, a feature widely known by its users.

Figure 3 emphasizes not only why CBDCs should not be confused with Bitcoin, but also that they may not represent a meaningful departure from the status quo. Just as with fiat, policy makers will decide how a CBDC is used. Bitcoin can be thought of as an apolitical alternative.

<sup>10</sup> Source: Reuters. China's proposed digital currency more about policing than progress. Brenda Goh, Samuel Shen. November 1, 2019. <https://www.reuters.com/article/us-china-markets-digital-currency/chinas-proposed-digital-currency-more-about-policing-than-progress-idUSKBN1XB3QP>



FIGURE 3: **BITCOIN VS. CBDC**

	<b>Bitcoin</b>	<b>CBDC</b>
<b>Monetary Policy</b>	Fixed and understood by its users. Only 21M Bitcoin will be created. Bitcoin cannot be debased.	Determined by policy makers. CBDCs are susceptible to monetary inflation.
<b>Geography</b>	Global. Accessible to anyone in the world with Internet.	Determined by policy makers. International settlement may mirror current practices.
<b>Storage</b>	Anyone can securely receive and store value with a Bitcoin private key.	Determined by policy makers. Users could be at risk of seizure if they don't meet requirements.
<b>Transfer</b>	Anyone can transfer value with a private key and Internet access.	Determined by policy makers. Users could be at risk of censorship if they don't meet requirements.
<b>Hours of Operation</b>	99.9% uptime since inception.	Determined by policy makers. Automated monitoring may allow 24/7 uptime.

CBDCs would likely increase a government's ability to oversee transactions. This will require buy-in from all participants, be it citizens, merchants, or corporations. Because of this requisite participation, CBDCs may even lack the liquidity and acceptance of current forms of cash. A CBDC might reduce user freedoms without providing monetary policy assurances – a combination which may hinder widespread adoption.

An important driver of Bitcoin's adoption is the freedom and assurances it provides to its users. No one has to ask permission to use Bitcoin – it's permissionless. Bitcoin allows anyone to store and transfer value without the risk of debasement, censorship, or seizure. CBDCs may censor non-ordained addresses, and central banks will continue to control the monetary policy. On the surface it seems like a digital dollar might displace Bitcoin's growth because they are both digital, but it actually fails to address these principal concerns.

Bitcoin was invented so that users don't have to trust central banks to administer monetary policy or trust third parties to hold and transfer money.<sup>11</sup> Instead, users are asked to trust the code and incentive mechanisms that make Bitcoin secure, reliable, and open for all to use. With public trust in governments waning, this paradigm may prove to be a tailwind for Bitcoin.<sup>12</sup>

11. Source: Nakamoto Institute. Bitcoin open source implementation of P2P currency.

<https://satoshi.nakamotoinstitute.org/posts/p2pfoundation/1/>

12. Source: Pew Research Center. Public Trust in Government. April 11, 2019.

<https://www.people-press.org/2019/04/11/public-trust-in-government-1958-2019/>



## Take Away

CBDCs are a popular subject of analysis, particularly as the People's Bank of China gears up to launch their CBDC in 2020 and as legacy banking infrastructure hinders stimulus distribution in the wake of the COVID-19 pandemic. CBDCs have the potential to streamline payments, but may compete with commercial banking, further politicize financial services, and fail to gain widespread adoption. Bitcoin isn't waiting for CBDCs – it is rapidly gaining mindshare on its own. But if CBDCs are successfully launched, the infrastructure and education that would accompany the use of these bearer assets could serve as a gateway for further adoption of Bitcoin and other digital currencies. Moving fiat currencies to digital infrastructure would highlight that Bitcoin is special not because it is digital, but because Bitcoin is a scarce, uncompromising, apolitical currency that is open for anyone to use.



## About Grayscale Investments®

Grayscale Investments is the world's largest digital currency asset manager, with more than \$3.7 Billion in assets under management as of May 18, 2020. Through its family of 10 investment products, Grayscale provides access and exposure to the digital currency asset class in the form of a traditional security without the challenges of buying, storing, and safekeeping digital currencies directly. With a proven track record and unrivaled experience, Grayscale's products operate within existing regulatory frameworks, creating secure and compliant exposure for investors.

For more information, please visit [www.grayscale.co](http://www.grayscale.co) and follow [@GrayscaleInvest](https://twitter.com/GrayscaleInvest).



## Important Disclosures & Other Information

©Grayscale Investments, LLC. All content is original and has been researched and produced by Grayscale Investments, LLC (“Grayscale”) unless otherwise stated herein. No part of this content may be reproduced in any form, or referred to in any other publication, without the express consent of Grayscale.

This report is for informational purposes only and does not constitute an offer to sell or the solicitation of an offer to sell or buy any security in any jurisdiction where such an offer or solicitation would be illegal. There is not enough information contained in this report to make an investment decision and any information contained herein should not be used as a basis for this purpose. This report does not constitute a recommendation or take into account the particular investment objectives, financial situations, or needs of investors. Investors are not to construe the contents of this report as legal, tax or investment advice, and should consult their own advisors concerning an investment in digital assets. The price and value of assets referred to in this research and the income from them may fluctuate. Past performance is not indicative of the future performance of any assets referred to herein. Fluctuations in exchange rates could have adverse effects on the value or price of, or income derived from, certain investments.

Investors should be aware that Grayscale is the sponsor of Grayscale Bitcoin Trust (BTC), Grayscale Bitcoin Cash Trust (BCH), Grayscale Ethereum Trust (ETH), Grayscale Ethereum Classic Trust (ETC), Grayscale Litecoin Trust (LTC), Grayscale Horizen Trust (ZEN), Grayscale Stellar Lumens Trust (XLM), Grayscale XRP Trust (XRP) and Grayscale Zcash Trust (ZEC) (each, a “Trust”) and the manager of Grayscale Digital Large Cap Fund LLC (the “Fund”). The Trusts and the Fund are collectively referred to herein as the “Products”. Any Product currently offering Share creations is referred to herein as an “Offered Product”. Information provided about an Offered Product is not intended to be, nor should it be construed or used as investment, tax or legal advice, and prospective investors should consult their own advisors concerning an investment in such Offered Product. This report does not constitute an offer to sell or the solicitation of an offer to buy interests in any of the Products. Any offer or solicitation of an investment in a Product may be made only by delivery of such Product’s confidential offering documents (the “Offering Documents”) to qualified accredited investors (as defined under Rule 501(a) of Regulation D of the U.S. Securities Act of 1933, as amended), which contain material information not contained herein and which supersede the information provided herein in its entirety.

The Products are private investment vehicles. Shares of Grayscale Bitcoin Trust (BTC) and Grayscale Digital Large Cap Fund, which are only offered on a periodic basis, are publicly quoted under the symbols: GBTC and GDLC, respectively. Except for Grayscale Bitcoin Trust (BTC), the Products are not subject to the same regulatory requirements as exchange traded funds or mutual funds, including the requirement to provide certain periodic and standardized pricing and valuation information to investors. The Products are not registered with the Securities and Exchange Commission (the “SEC”) (except for Grayscale Bitcoin Trust (BTC)), any state securities laws, or the U.S. Investment Company Act of 1940, as amended. There are substantial risks in investing in one or more Products. Any interests in each Product described herein have not been recommended by any U.S. federal or state, or non-U.S., securities commission or regulatory authority, including the SEC. Furthermore, the foregoing authorities have not confirmed the accuracy or determined the adequacy of this document. Any representation to the contrary is a criminal offense.

Certain of the statements contained herein may be statements of future expectations and other forward-looking statements that are based on Grayscale’s views and assumptions and involve known and unknown risks and uncertainties that could cause actual results, performance or events to differ materially from those expressed or implied in such statements. In addition to statements that are forward-looking by reason of context, the words “may, will, should, could, can, expects, plans, intends, anticipates, believes, estimates, predicts, potential, projected, or continue” and similar expressions identify forward-looking statements. Grayscale assumes no obligation to update any forward-looking statements contained herein and you should not place undue reliance on such statements, which speak



only as of the date hereof. Although Grayscale has taken reasonable care to ensure that the information contained herein is accurate, no representation or warranty (including liability towards third parties), expressed or implied, is made by Grayscale as to its accuracy, reliability or completeness. You should not make any investment decisions based on these estimates and forward-looking statements.

### Certain Risk Factors

Each Product is a private, unregistered investment vehicle and not subject to the same regulatory requirements as exchange traded funds or mutual funds, including the requirement to provide certain periodic and standardized pricing and valuation information to investors. There are substantial risks in investing in a Product or in digital assets directly, including but not limited to:

- **PRICE VOLATILITY**  
Digital assets have historically experienced significant intraday and long-term price swings. In addition, none of the Products currently operates a redemption program and may halt creations from time to time or, in the case of Grayscale Bitcoin Trust (BTC) and Grayscale Digital Large Cap Fund, periodically. There can be no assurance that the value of the common units of fractional undivided beneficial interest (“Shares”) of any Product will approximate the value of the digital assets held by such Product and such Shares may trade at a substantial premium over or discount to the value of the digital assets held by such Product. At this time, none of the Products is operating a redemption program and therefore Shares are not redeemable by any Product. Subject to receipt of regulatory approval from the SEC and approval by Grayscale, in its sole discretion, any Product may in the future operate a redemption program. Because none of the Products believes that the SEC would, at this time, entertain an application for the waiver of rules needed in order to operate an ongoing redemption program, none of the Products currently has any intention of seeking regulatory approval from the SEC to operate an ongoing redemption program.
- **MARKET ADOPTION**  
It is possible that digital assets generally or any digital asset in particular will never be broadly adopted by either the retail or commercial marketplace, in which case, one or more digital assets may lose most, if not all, of its value.
- **GOVERNMENT REGULATION**  
The regulatory framework of digital assets remains unclear and application of existing regulations and/or future restrictions by federal and state authorities may have a significant impact on the value of digital assets.
- **SECURITY**  
While each Product has implemented security measures for the safe storage of its digital assets, there have been significant incidents of digital asset theft and digital assets remains a potential target for hackers. Digital assets that are lost or stolen cannot be replaced, as transactions are irrevocable.
- **TAX TREATMENT OF VIRTUAL CURRENCY**  
For U.S. federal income tax purposes, Digital Large Cap Fund will be a passive foreign investment company (a “PFIC”) and, in certain circumstances, may be a controlled foreign corporation (a “CFC”). Digital Large Cap Fund will make available a PFIC Annual Information Statement that will include information required to permit each eligible shareholder to make a “qualified electing fund” election (a “QEF Election”) with respect to Digital Large Cap Fund. Each of the other Products intends to take the position that it is a grantor trust for U.S. federal income tax purposes. Assuming that a Product is properly treated as a grantor trust, Shareholders of that Product generally will be treated as if they directly owned their respective pro rata shares of the underlying assets held in the Product, directly received their respective pro rata shares of the Product’s income and directly incurred their respective pro rata shares of the Product’s expenses. Most state and local tax authorities follow U.S. income tax rules in this regard. Prospective investors should discuss the tax consequences of an investment in a Product with their tax advisors.



- **NO SHAREHOLDER CONTROL**  
Grayscale, as sponsor of each Trust and the manager of the Fund, has total authority over the Trusts and the Fund and shareholders' rights are extremely limited.
- **LACK OF LIQUIDITY AND TRANSFER RESTRICTIONS**  
An investment in a Product will be illiquid and there will be significant restrictions on transferring interests in such Product. The Products are not registered with the SEC, any state securities laws, or the U.S. Investment Company Act of 1940, as amended, and the Shares of each Product are being offered in a private placement pursuant to Rule 506(c) under Regulation D of the Securities Act of 1933, as amended (the "Securities Act"). As a result, the Shares of each Product are restricted Shares and are subject to a one-year holding period in accordance with Rule 144 under the Securities Act. In addition, none of the Products currently operates a redemption program. Because of the one-year holding period and the lack of an ongoing redemption program, Shares should not be purchased by any investor who is not willing and able to bear the risk of investment and lack of liquidity for at least one year. No assurances are given that after the one year holding period, there will be any market for the resale of Shares of any Product, or, if there is such a market, as to the price at such Shares may be sold into such a market.
- **POTENTIAL RELIANCE ON THIRD-PARTY MANAGEMENT; CONFLICTS OF INTEREST**  
Products and their sponsors or managers and advisors may rely on the trading expertise and experience of third-party sponsors, managers or advisors, the identity of which may not be fully disclosed to investors. The Products and their sponsors or managers and advisors and agents may be subject to various conflicts of interest.
- **FEES AND EXPENSES**  
Each Product's fees and expenses (which may be substantial regardless of any returns on investment) will offset each Product's trading profits.

#### **Additional General Disclosures**

Investors must have the financial ability, sophistication/experience and willingness to bear the risks of an investment. This document is intended for those with an in-depth understanding of the high risk nature of investments in digital assets and these investments may not be suitable for you. This document may not be distributed in either excerpts or in its entirety beyond its intended audience and the Products and Grayscale will not be held responsible if this document is used or is distributed beyond its initial recipient or if it is used for any unintended purpose.

The Products and Grayscale do not: make recommendations to purchase or sell specific securities; provide investment advisory services; or conduct a general retail business. None of the Products or Grayscale, its affiliates, nor any of its directors, officers, employees or agents shall have any liability, howsoever arising, for any error or incompleteness of fact or opinion in it or lack of care in its preparation or publication, provided that this shall not exclude liability to the extent that this is impermissible under applicable securities laws.

The logos, graphics, icons, trademarks, service marks and headers for each Product and Grayscale appearing herein are service marks, trademarks (whether registered or not) and/or trade dress of Grayscale Investments, LLC. (the "Marks"). All other trademarks, company names, logos, service marks and/or trade dress mentioned, displayed, cited or otherwise indicated herein ("Third Party Marks") are the sole property of their respective owners. The Marks or the Third Party Marks may not be copied, downloaded, displayed, used as metatags, misused, or otherwise exploited in any manner without the prior express written permission of the relevant Product and Grayscale or the owner of such Third Party Mark.

The above summary is not a complete list of the risks and other important disclosures involved in investing in any Product or digital assets and is subject to the more complete disclosures contained in each Product's Offering Documents, which must be reviewed carefully.

**PLEASE REVIEW IMPORTANT DISCLOSURES & OTHER INFORMATION AT THE END OF THIS REPORT.**



