

WHITEPAPER

Are digital currencies the evolving future of payments?



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The Digital Currency Debate

In less than a decade, digital currencies have gone from being the plaything of technophiles and libertarians to an emerging asset class that many call the future of money. Today, over [11,000 digital currencies](#) exist, with a combined market cap approaching [\\$2 trillion](#), according to Bloomberg.

Partly accelerated by the Covid-19 pandemic, the growth of digital currencies puts them on track to become global currencies in the next few years. Some financial services analysts changed course from believing that digital currencies, particularly Bitcoin, are doomed to fail - to a broader acceptance of cryptocurrency payments, validated by companies like Northern Trust that are starting to invest in this space.

Historically, the first digital currency (called e-gold) was created in 1996. Designed to circumvent the country-based banking system, e-gold had no central administrator and grew to a few million users before being shut down by the United States government in 2008. Digital currencies continued to bloom throughout the early 2000s, boosted by the advent of Bitcoin and surpassing the price of gold for the first time in 2017 as the most popular global asset class.

The growth of digital currencies has been accelerating since 2017 when no one was expecting Bitcoin's value to surpass gold. Central bank authorities now recognise that digital currencies will be native to the digital economy. It's the responsibility of our industry to continue to drive this change and urge the banking system to keep up with the times and make digital currencies mainstream in the next decade.

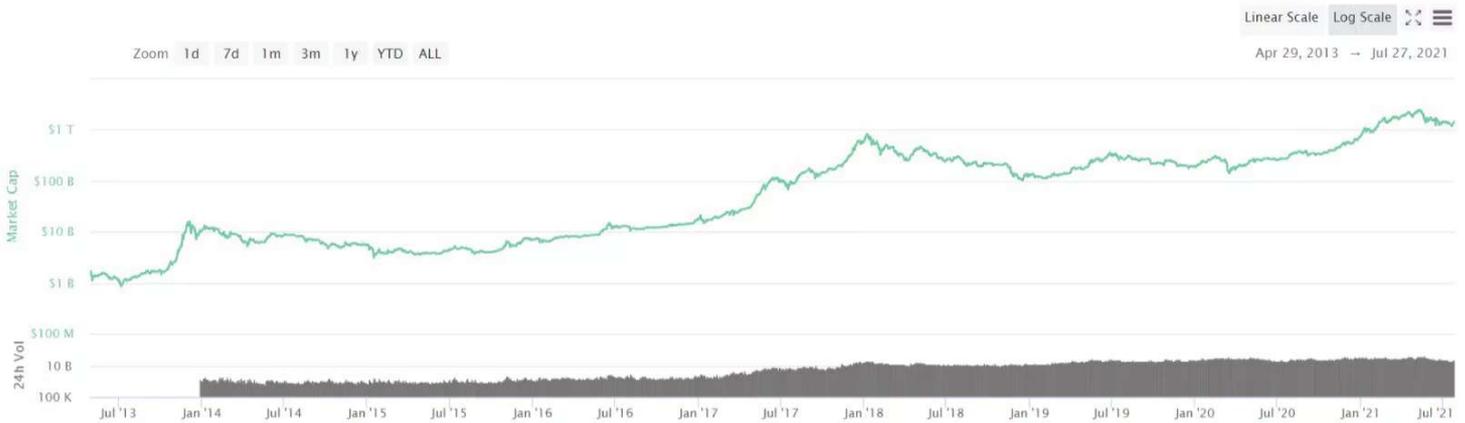
Kevin O'Connell

Chief Product Officer, Trust Payments



Much like the advent of all asset classes before them, digital currencies were made to follow the laws of supply and demand. Just as there is a finite supply of gold, a finite supply of digital currencies has also been determined over the last decade:

Total Cryptocurrency Market Cap



Total market cap of all crypto assets in the last decade, including stablecoins and tokens (Source: [Coinmarket](#))

Bitcoin's success has inspired the creation of alternative digital currencies, among the most popular being Ripple and Ethereum. This motivated national governments like the Bank of England to closely monitor developments in the digital currencies space, together with the technology that underpins them, known as the blockchain. Subsequently, this led to the creation of DigiGold, Royal Mint's digital gold offering, backed by actual gold. Meanwhile, other central banks such as China and Canada have used blockchain to create their own digital currencies.

The evolution of the crypto industry is advancing both thanks to and in contrast with the traditional financial system. On the one hand, the introduction of rules for identifying crypto users, the increasing interest in crypto from the government, and the imminent introduction of stablecoins such as Diem (Ex Libra) from Facebook and many others confirm that digital currencies will become more understandable, mainstream, and last longer. On the other hand, the momentum with which cryptocurrencies spread will significantly depend on how quickly they will be accepted by the banking and payment systems.

“We are currently at the tipping point of adoption of digital currencies, which is currently being partially held up due to the lack of understanding of the perceived risks involved from the banks, regulators and authorities. Once more education has happened on the risks and opportunities of digital currencies, we will see considerable growth in the adoption from larger institutions which give consumers comfort. The future of payments is in Digital Currencies, and it’s just a matter of when.”

Stephen Ford

Head of Crypto, Trust Payments

Common challenges of digital currencies

During their short existence, digital currencies, or cryptocurrencies, as they are commonly known, have experienced sharp price swings, extreme sensitivity to headlines, and a high level of experimentation from investors. Cryptocurrencies present a unique set of challenges that echo their quick evolution, raising, among others, questions about volatility, ease of use and security:

1. Volatility

Most digital currencies are pretty price volatile and only ideal for a small portion of the global population. Most financial institutions have been slow to implement this new asset class - this is not surprising considering the obstacles that it must face, including regulatory, legal, and compliance requirements. Doubts about the use of cryptocurrency and resistance by powerful nations to integrate, regulate, and legalise digital currencies systems will continue to drive continued price volatility.



2. Ease of use

The lack of mainstream technical credibility and narrow market understanding promote limited use cases for digital currencies. Though much easier than in the past, with the help of modern cryptocurrency exchange marketplaces, it is still moderately difficult to buy and sell digital currencies.



Digital currencies are also not easy to get hold of, whether that is through online exchanges or special offline bitcoin ATMs. It takes roughly 10 minutes to process a bitcoin transaction - the long processing time hinders use. However, NCR Corporation just bought LibertyX, a bitcoin ATM operator, which should help ease of use as NCR has a [16% global market share](#) of Point of Sale (PoS) software and is available in most countries over the world.

3. Security

The decentralised nature of digital currencies means they are not guaranteed in the same way as bank deposits or stock certificates, which can lead to further uncertainty.

From a security and fraud perspective, blockchain (the technology that underpins digital currencies) suffers from weaknesses introduced by “Smart Contracts” that systemically govern execution. A step in the right direction is being taken by the US Department of Homeland Security who sponsors the Common Weakness Enumeration database, helping identify and combat these weaknesses (<https://cwe.mitre.org/>).



4. Tax



In the United States, all states have separate regulatory entities that monitor cryptocurrency activity. The IRS considers digital currencies property, and their taxable value is based on how much value they gained or lost in a given period. The UK has regulated cryptocurrency and taxes crypto assets as capital gains, making it less appealing for the masses. Throughout the EU, although there are general guidelines and regulations regarding cryptocurrencies, regulation and, by extension taxation, is still up to individual countries, with Portugal, Malta, Slovenia and Germany seen as the places with the least tax on digital currency payments.

5. Increased scrutiny

Because some cryptocurrencies could be traded under pseudonyms or using more public identities, the market has been experiencing increased regulatory scrutiny. In the UK, the Financial Conduct Authority (FCA) reported a significantly high number of cryptocurrency firms failing to meet the UK money laundering rules, which resulted in an unprecedented number of crypto firms withdrawing their applications to register with the regulator.



6. Fixed supply



Digital currencies are only issued in a fixed supply that cannot meet a growing economy's needs, pushing its price up and making it more challenging to mine. The fewer coins are available to the general audience, the higher the value of the cryptocurrency becomes. Bitcoin, for example, has a maximum supply of 21 million coins, the last of which was forecast in 2017 to be mined around the year 2140 - with the assumption that the rate of mining halves every four years.

Key players enabling digital currencies

Cooperation agreements between central banks could play a central role in shaping international standards for sovereign digital currencies and regulating a digitised global financial system. In addition to the Bahamas, China, and Sweden (which have been digital currency piloting for the past few years), dozens of central banks have issued digital currencies.

Governments around the world perceive the adoption of digital currencies as something that could give them a competitive advantage in world trade. Central banks in Asia and Europe are in the final stages of adopting digital currencies for future payments and cross-border transactions.

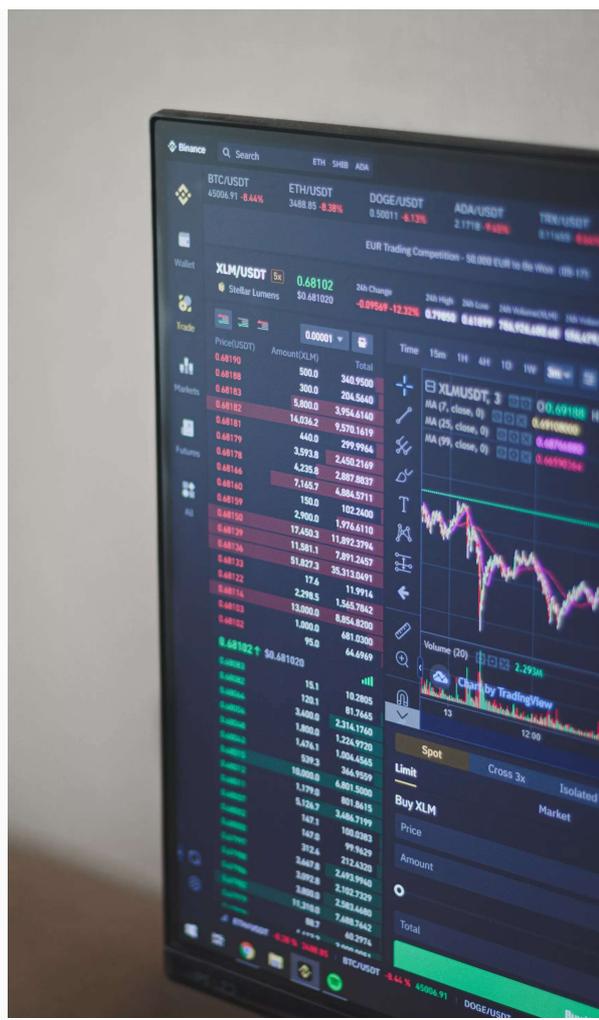
Central Bank Digital Currencies (CBDCs) differ from cryptocurrencies such as Bitcoin in that they are issued by national banks. DCEP, for example (a currency created and sanctioned by the Chinese government), relies on a two-tier infrastructure, with commercial banks and non-bank players such as Alibaba and Tencent acting as intermediaries between consumers and central banks. CBDC is the first place where we observe the adoption of distributed ledger technology (DLT) by central banks and governments.

Several governments are currently experimenting with CBDCs: the Bank of Thailand recently announced a project to develop a payment business with CBDC. China took a significant step forward last year with the introduction of the digital yuan, which is becoming its DCEP project for digital currency and electronic payments. An interesting example is South Korea, which has reportedly banned trading in bitcoin and other digital currencies but has said it does not intend to ban the exchange of cryptocurrencies.

In Switzerland, the Federal Council declared that CBDCs could be useful in wholesale but not in retail at the end of last year. In January 2020, a group of advanced economies - the central banks of Canada, the United Kingdom, Japan, Sweden, Switzerland and the European Central Bank - announced that they would work together under the auspices of the Bank for International Settlements (BIS) on digital central bank currencies. The BIS's efforts appear to be consistent with a cooperative approach that includes, among others, the ECB, the Bank of Japan, the US Federal Reserve, and the Swiss National Banks.

The US Federal Reserve is also considering supporting its own digital version of cash. Digital dollars could theoretically work like cash, without delays, processing fees, and onboarding requirements, which could also introduce Americans without bank accounts into the digital economy.

The emergence of digital currencies, driven by technological innovations such as blockchain technology, has shown that we are going through a disruptive change in the nature of money in financial markets. The rise of Bitcoin and other digital currencies could have profound consequences for the financial system and Central Bank practices. One of the biggest questions is whether a formal digital currency will be set up in the same way as cryptocurrencies.



Private companies driving digital currency wide adoption

Towards the end of 2014, PayPal made it possible for online vendors to accept bitcoin payments via partnerships with Coinbase, BitPay and GoCoin, and in 2016, Amazon purchased \$5 million worth of Bitcoin and announced plans to integrate it into its eCommerce platform.

In late 2014, Evercore began offering its client base access to Bitcoin and launched its investment thesis around digital currencies, backing new start-ups that would launch revolutionary new digital currency products. Soon after, in 2020, institutional investors began pouring into Bitcoin, most notably hedge funds like Citadel, which took on the financial risks associated with holding and trading the digital asset.

However, other investment banks like JP Morgan Chase were vocal against Bitcoin, as CEO Jamie Dimon called the currency “a fraud” and specifically mentioned the lack of interest in its development. JP Morgan Chase is now preparing to offer an actively managed bitcoin fund to certain private clients, thus becoming the latest bank to embrace cryptocurrency as an asset class despite the CEO's personal preferences.

Blockchain company Ripple has teamed up with more than 300 customers, including financial institutions such as Santander and Western Union, to improve the efficiency of international payments. Ripple's xCurrent (now RippleNet) provides banks and other financial institutions with a two-sided communication protocol that enables real-time messaging and billing. Another major player collaborating on distributed ledger technology for banks, R3, had its technology used by the Swiss central bank in a pilot project to process large transactions between financial institutions using digital currencies.

Lastly, in May 2021, Samsung announced that blockchain users would be able to manage and trade virtual assets from third-party wallets on Samsung Galaxy smartphones. This update would make it easier for blockchain users to access and process transactions.

Preparing your business to accept digital currencies

As digital currencies are on the cusp of widespread adoption, no single industry has truly embraced crypto payments. However, iGaming, retail and travel are the main verticals testing it out.

Digital currency adoption is currently directly linked to companies future-proofing their business and brands by covering all payments basics and making sure they are perceived as innovative. Large retailers like Overstock have fully embraced digital payments by partnering with payment providers to offer digital options and even accept returns at the daily currency exchange rate.

“Digital payments are slowly but surely becoming democratised. We believe the acceptance rate is 40% at best, but it’s becoming more commonplace to see Bitcoin and other digital currencies as a payment option at checkout.”

Kevin O'Connell

Chief Product Officer, Trust Payments

Here is what your business needs to consider before starting to accept digital currency payments:

Digital currency payment models

When considering offering this payment option at checkout, it's essential to weigh in the types of digital currency payments you'd like your business to support:

- a)** Pure Bitcoin payments (or equivalent digital currencies) where your business would partner with a cryptocurrency exchange platform to facilitate the transaction.
- b)** You can store the currency by using a wallet app that automatically uses a private key to sign the outgoing transactions for you.
- c)** You can accept digital currency payments, but these are converted to a fiat currency on purchase (a government-issued currency) or are backed by real-world assets that can be anything from fiat money, commodities or even another cryptocurrency (Stablecoins).

Price volatility

The second aspect to contemplate is pricing your goods and services in Bitcoin or other digital currencies while being aware of the currently still high volatility of cryptocurrencies. If you are accepting digital currency payments, price adjustments need to be made at the daily rate of the currency in fiat currencies like USD, EUR, GBP.

Your business model

Accepting digital currency payments highly depends on your type of business. For businesses often accepting settlements, this payment model is more suitable as they are able to use Stablecoins to transfer value - it's instant and at a lower cost than some of the traditional bank payment methods. For hospitality businesses, accepting this type of payment might be challenging, especially for growing businesses. All the employees, suppliers, rent and associated bills are to be paid in traditional currencies. In this situation, it makes sense for a small business to accept cryptocurrency payments only for large purchases rather than smaller, more frequent ones.

The benefits of getting started

The easiest way to get started with accepting digital currency payments is by working with payment gateways that would enable this payment option at checkout - just as it happens with traditional card payment providers like Visa, MasterCard or other payment options like PayPal or Klarna.

At Trust Payments, facilitating digital currency payments as part of our out-of-the-box solutions is on our immediate roadmap. We firmly believe that services like this will enable the widespread adoption of digital payment methods.

While adoption of digital payments is still in flux and continues to prove challenging, there are some clear advantages of preparing your business to accept digital currency payments:



1. Targeting and gaining the loyalty of new customers

This payment method is appealing to a different type of consumer - young and affluent with technical skills. Being amongst the early adopters of this payment technology in your vertical would make your business more appealing to these customers and help you earn their loyalty as the whole process is straightforward.



2. Increased regulatory acceptance and security

In the past, digital currencies may have experienced reputational issues, such as being used on the Dark Web for nefarious purposes. But with more adoption, there has been an increase in visibility for regulating digital currencies for anti-money laundering purposes, in turn minimising concerns around the lack of transaction traceability. The decentralised setup of digital currencies also protects merchants from fraudulent chargebacks - the transactions are final because no third party can reverse the charges.



3. Facilitating international payments

Businesses with models relying on pay-outs could considerably benefit from digital currency payment adoption - charities distributing donations, gaming companies distributing global winnings or companies with an international user base would benefit from not going through multi-currency conversion for refunds or purchases.



4. Lower transaction costs and faster payments

Compared to traditional payment methods like credit cards or bank transfers, digital currencies have lower transaction fees. Credit card companies often charge up to 4% per transaction, in addition to fees that occur every time a card is swiped. These fees add up quickly, especially for small businesses. Moreover, payments are processed in real-time instead of waiting a few days to clear, as it happens with traditional payment methods.



5. Boosts customer privacy

When you allow customers to pay with digital currencies, they also benefit from a certain degree of anonymity. This, of course, depends on the payment processor as some might require specific information, but the amount is usually limited. The blockchain technology on which digital currencies are built is also a reliable and secure way to transact. It ensures that sensitive information is encrypted during every transaction, so you never have to compromise privacy for this extra line of protection.



6. Enables transaction transparency

Because digital currencies are built on blockchain technology, there is a decentralised public ledger, and no one entity owns it. The sender and the receiver of a transaction can access information about it, and they can see when and how a transaction was processed.



7. Enabling transactions around the clock

Another advantage of empowering your business to work with digital currencies is that most payment systems are open 24 hours a day with no limitation on working hours for transaction times and time zones.

Future trends for digital currencies

We have already seen the normalisation of digital wallets and digital currencies in the financial sector. This trend has also accelerated during the COVID-19 pandemic due to changes in consumer habits, as large financial companies joined the race for the future of money and payment systems.

One consequence of the pandemic has been a lot of government spending, which gave a boost to many non-believers to invest in digital currencies to futureproof themselves. However, as the market is not yet mature, and more investors join in the race, the price of digital currencies is likely to rise.

There is no doubt that the payments ecosystem will expand rapidly, and central banks need to prepare for this expansion. Increasing competition across national borders between public and private payment instruments means increasing competition between nation-states and currency spaces. This competition extends beyond regulation, governance, and technology to the point of a general agreement on the benefits of cooperation and interoperability. It remains to be seen whether this competition will be led by the private sector as a proxy for central banks or as an extension of national policies.

If technology can be used to build low-cost cross-border payment systems and create digital currencies, the future move to a digital economy seems inevitable. Experiments with stable coins and tokens are already taking place on capital markets and are becoming more and more widespread. Many key players in this space believe that digital currencies are a game of patience and that the ultimate goal for the financial industry is to focus on adoption, technological innovation, and more currency education.

In 2021, the market is trying to maintain a balance between profit and risk in the use of digital currencies. Ultimately, the mass use of digital currency is something the world does not fear but aspires to.



About Trust Payments Group

Trust Payments is a global unified payments group for global pay-in, pay-out and customer journey technologies. Our mission is to help businesses to optimise their sales and customer experience through facilitating speedy and seamless payments, loyalty, and data management creating truly Converged Commerce. Our global technology platform connects to 50+ global banks to support multi-acquirer processing. The group holds an Authorised Payment Institution (API) License from the UK FCA, Principal Memberships with Visa and Mastercard, as well as money transmission and gaming vendor licences in the US.

Our trusted and robust technology solutions process £5bn+ in annualised volume for 20,000+ businesses across eCommerce, mobile and Point of Sale (POS) in 15 like-for-like settlement currencies. Partners, developers and merchants who work with us benefit from our 24 years of payments experience in Retail, Travel, Hospitality, Gaming, Education, Financial Services and Emerging Verticals.

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