



What Are Stablecoins?

2021



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There's a "stablecoin invasion" happening. Will this price-stabilized virtual currency be the next big thing to disrupt the crypto space?

Blockchain has the potential to disrupt [nearly every industry](#).

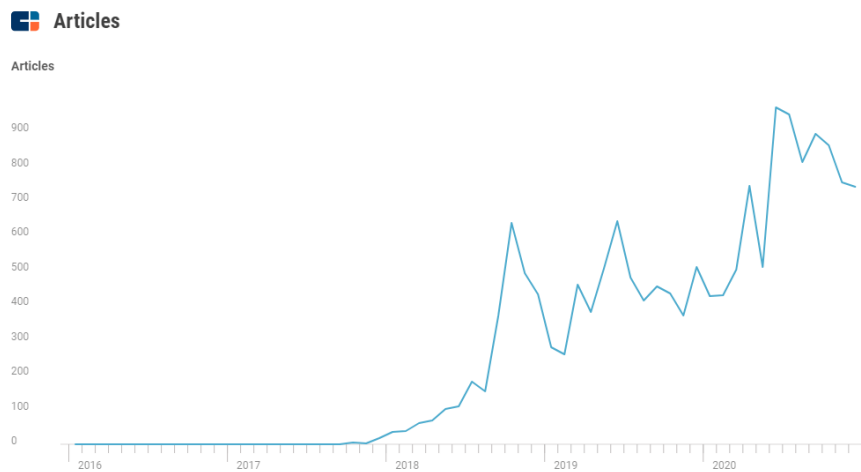
Among plenty of emerging use cases, the technology aims to create a new and improved payments system for the world — one that's secure, transparent, decentralized, fast, and uses cryptocurrencies (types of digital cash) as a means of exchange. *(Read our [What Is Blockchain](#) explainer for more.)*

But the value of most cryptocurrencies, especially bitcoin, fluctuates on a daily basis. And while the virtual currencies aim to facilitate more secure transactions, their values are increasingly centered around speculation.

Crypto investors have become millionaires overnight, only to lose much of their wealth just weeks later. While this can be exciting to witness, it also shows bitcoin's massively unreliable nature — especially as a currency for goods and services.

Recently, there has been a so-called “stablecoin invasion.” At least 200 stablecoins have been released or are in development globally. Additionally, two USD-backed stablecoins, the Paxos Standard (PAX) and Gemini Dollar (GUSD), have been approved and regulated by the New York State Department of Financial Services.

Financial services incumbents are also eyeing the opportunity — JPMorgan, for example, has piloted and launched its own stablecoin. Meanwhile, a recent survey of central banks found that two-thirds of respondents are actively researching the potential impact of stablecoins on financial stability.



News coverage of stablecoins has continued to grow since taking off in 2018.

In this explainer, we dive into stablecoins, from what they are to why they're emerging as a potential disruptor across the crypto space. We analyze the different types of stablecoins, as well as their applications and limitations.

What are stablecoins?

Today, there are 180 currencies across the world that are recognized by the United Nations, from the US dollar to the European Euro to the Japanese Yen, and more.

Across global economies, these currencies are often used to buy goods and services. Despite inflation, fluctuating exchange rates, and other factors, the value of most of these currencies is subject to very little change on a day-to-day basis.

This allows several economies to rely on the use of these government-issued currencies to operate. In other words, you can buy a loaf of bread from your favorite baker and pay \$3.50 for it today knowing that it's highly unlikely that it would drastically drop to 99 cents tomorrow.

Stablecoins – in the form of digital money – aim to mimic traditional, stable currencies.

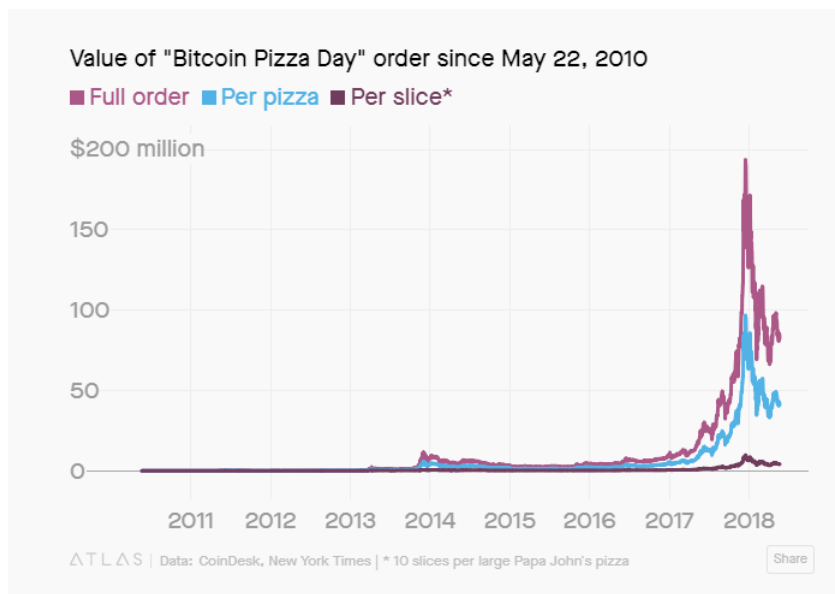
In general, a stablecoin is a cryptocurrency that is collateralized by the value of an underlying asset. What that underlying asset may be varies from coin to coin, which we'll dive into later in this piece.

Many stablecoins are pegged at a 1:1 ratio with certain fiat currencies, such as the US dollar or the Euro, which can be traded on exchanges. Other stablecoins can be pegged to other kinds of assets, such as precious metals like gold, or even to other cryptocurrencies.

Why use stablecoins?

Stablecoins are not subject to the extreme price volatility that other cryptocurrencies are affected by.

In 2010, for example, a programmer purchased pizza for 10,000 bitcoin (~\$30). By 2018, that same order cost \$82M – all as a result of bitcoin's drastic change in price.



Source: Quartz

As a result, some businesses are skeptical of crypto as a valid means of payment. Microsoft, for example, first started accepting bitcoin as a payment in 2014, only to put a temporary halt on it in 2018 due to volatility. Online gaming platform Steam was forced to do the same. While other businesses are beginning to accept crypto, from Overstock to Shopify, widespread adoption is still far away.

Stablecoins, on the other hand, leverage the benefits of cryptocurrencies – such as transparency, security, immutability, digital wallets, fast transactions, low fees, and privacy – without losing the guarantees of trust and stability that come with using fiat currency (like the US dollar or Euro).

Initially, early crypto holders used stablecoins as a safe haven in the event of a market decline or crash. For instance, if the price of bitcoin began to drop rapidly, a holder could convert their bitcoin to a stablecoin within a matter of minutes on a single platform, avoiding potentially massive losses.

Without this option, the crypto holder would have had to move their capital back into a fiat currency. However, many cryptocurrency exchanges either do not allow fiat on the platform or take a large fee from the transfer into fiat.

But stablecoins are showing promise in other emerging applications. They could benefit a plethora of industries and individuals that need to make international payments quickly and securely, from migrant workers that need to send money back to their families, to big businesses looking for a cheaper and more efficient way to provide payments to overseas suppliers.

In both scenarios, people need not worry about sending a speculative asset like bitcoin, which could suddenly decrease in value.

People in underbanked communities, for example, can transact using this form of digital currency, especially if they live in areas where economic uncertainty is a regular concern. This technology allows for the use of a global currency that is, in theory, not subject to localized laws and conditions.

Stablecoins also present major advantages across the financial services ecosystem as a whole.

By enabling a decentralized system that is secure and stable, everything from cross-border lending to financial planning could benefit. With decentralized lending, for example, stablecoins could help ensure a reliable environment for peer-to-peer (P2P) transactions to take place without needing to use a volatile cryptocurrency like bitcoin to transact.

There are several emerging use cases, but before diving further, we need to understand the different types of stablecoins.

Types of stablecoins

There are 4 main categories that stablecoins can fall into.

TYPES OF STABLECOINS



Fiat-Collateralized



Commodity-Collateralized



Crypto-Collateralized



Non-Collateralized

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FIAT-COLLATERALIZED STABLECOINS

The most common type of stablecoins are collateralized – or backed – by fiat currency like USD, EUR, or GBP.

Fiat-backed stablecoins are backed at a 1:1 ratio, meaning 1 stablecoin is equal to 1 unit of currency (like a dollar). So for each stablecoin that exists, there is (theoretically) real fiat currency being held in a bank account to back it up.

When someone wants to redeem cash with their coins, the entity that manages the stablecoin will take out the amount of fiat from their reserve and it will be sent to the person's bank account. The equivalent stablecoins are then destroyed or taken out of circulation.

Fiat-collateralized stablecoins are the simplest structure a stablecoin can have, and simplicity has big advantages. It's easy to understand for anyone new to cryptocurrencies, which can allow for more widespread adoption of this new technology.

As long as the economy of the country a stablecoin is pegged to stays stable, it is guaranteed that the value of a properly collateralized coin will not fluctuate either. This means even if the entire cryptocurrency economy collapsed and the price of Bitcoin went down to \$0, it would not affect a fiat-backed stablecoin at all.

Types of fiat-collateralized stablecoins

The most popular stablecoin is Tether (USDT), which is currently the third-largest cryptocurrency by market capitalization and has the highest daily trading volumes of any cryptocurrency, including Bitcoin.

#	Name	Price	24h	7d	Market Cap	Volume	Circulating Supply	Last 7 Days
3	Tether USDT	\$1.00	+0.04%	-0.13%	\$24,907,692,041	\$97,420,922,981 97,454,962,152 USDT	24,916,394,865 USDT	
1	Bitcoin BTC	\$33,350.98	-6.34%	-7.37%	\$620,742,430,907	\$58,505,787,992 1,754,042 BTC	18,610,262 BTC	
2	Ethereum ETH	\$1,363.21	+2.43%	+10.99%	\$155,956,069,765	\$41,715,517,053 30,600,340 ETH	114,401,284 ETH	
8	Litecoin LTC	\$139.87	-2.76%	-5.67%	\$9,300,087,189	\$6,228,329,272 44,438,532 LTC	66,355,230 LTC	
15	Uniswap UNI	\$11.27	+3.28%	+22.43%	\$3,214,563,910	\$5,205,635,738 463,954,233 UNI	286,499,212 UNI	

Source: CoinMarketCap

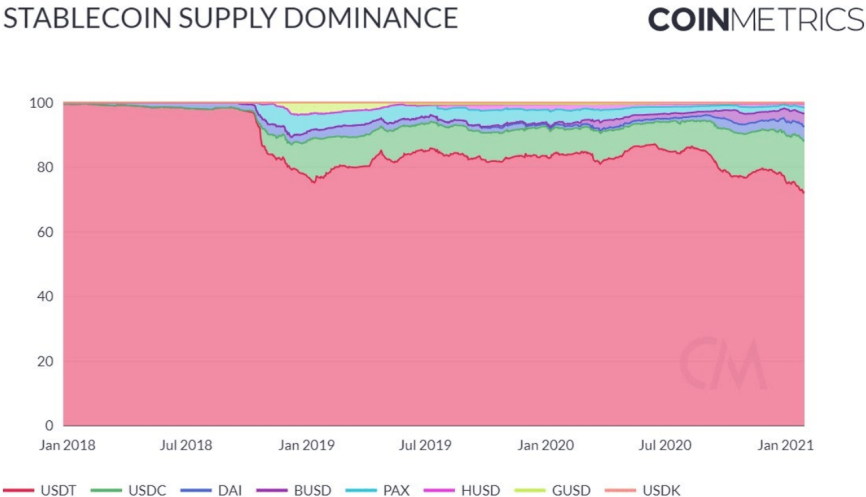
Tether represents the majority of global stablecoin supply and set a new record in January 2021 by issuing 2B tokens in just 1 week.

However, the cryptocurrency has been surrounded by plenty of controversy. Suspicions have arisen that Tether has issued more USDT than is actually backed by its USD reserves. The US Department of Justice has investigated Tether and crypto exchange Bitfinex, which share management teams, for potential market manipulation. In 2019, the New York Attorney General also launched an inquiry into an apparent misuse of Tether cash reserves.

For this reason, many new fiat-collateralized stablecoins have risen up in an attempt to take Tether's place.

One such example is USD Coin (USDC), which is also backed by the US dollar and is managed by a consortium including crypto finance company Circle and exchange Coinbase. Each month, a report is published attesting to the actual USD reserves that back up the supply of USDC.

USDC is steadily chipping away at Tether's hold on stablecoin market share. In January 2021, Tether dipped below 75% market share for the first time, while USDC surpassed 15%.



Source: CoinMetrics

USDC's reputation as a regularly audited and stable asset has helped it become a critical component in Decentralized Finance (DeFi), a broad range of decentralized financial services that rely on blockchains and smart contracts. Furthermore, in December 2020, payments giant Visa announced a partnership with USDC parent Circle to issue corporate credit cards using USDC as currency.

Two USD-backed stablecoins have been approved and regulated by the New York State Department of Financial Services — further proof this stablecoin invasion is beginning to take off. The Paxos Standard (PAX) and the Gemini Dollar (GUSD) became the world's first regulated cryptocurrencies in September 2018.

There are numerous other fiat-collateralized stablecoins. In Singapore, payments processor Xfers recently launched the XSGD stablecoin, which is backed 1:1 by the Singapore dollar. In Europe, tokenization platform Stasis' EURS token is collateralized by the euro. There's even a stablecoin in Mongolia called Candy, which is backed by the Mongolian tugrik.

COMMODITY-COLLATERALIZED STABLECOINS

Commodity-collateralized stablecoins are backed by other kinds of interchangeable assets, such as precious metals. The most common commodity to be collateralized is gold — however, there are also stablecoins backed by oil, real estate, and various precious metals.

Holders of commodity-backed stablecoins essentially hold a tangible asset that has real value — something most cryptocurrencies do not have. These commodities even have the potential to appreciate in value over time, which gives increased incentive for people to hold and use these coins.

In the case of commodity-collateralized stablecoins, anyone in the world could conceivably invest in precious metals like gold, or even real estate in Switzerland. Some of these kinds of assets have generally only been reserved for the wealthy, but stablecoins open up new possibilities of investments to average individuals globally.

Digix Gold (DGX), for example, is an ERC-20 token (built on the Ethereum network) backed by physical gold, where 1 DGX represents 1 gram of gold. This gold is stored in a vault in Singapore and gets audited every 3 months to ensure transparency. The creators of DGX claim they have “democratized access to gold.” DGX holders may even redeem the physical bars of gold – they just have to go to the vault in Singapore to do so.



Tiberius Coin (TCX) is backed by not one commodity, but by a combination of 7 precious metals commonly used in technology hardware. The idea is that as these metals are increasingly used to make technology such as solar panels and electric cars, TCX coins will go up in value.

SwissRealCoin (SRC) is another example, which is backed by a portfolio of Swiss real estate. Token holders can even democratically vote on the investment choices.

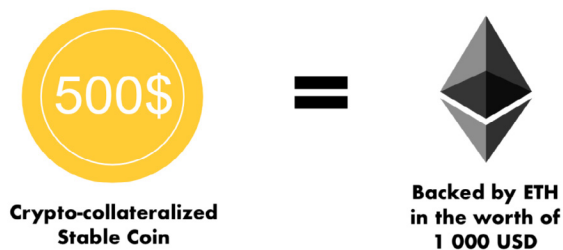
CRYPTO-COLLATERALIZED STABLECOINS

These are stablecoins backed by other cryptocurrencies.

This allows crypto-backed stablecoins to be much more decentralized than their fiat-backed counterparts, since everything is conducted on the blockchain.

To reduce price volatility risks, these stablecoins are often over-collateralized so they can absorb price fluctuations in the collateral.

For example, to get \$500 worth of stablecoins, you would need to deposit \$1,000 worth of Ether (ETH). In this scenario, the stablecoins are now 200% collateralized, and can withstand a price drop, let's say, of 25%. This would still mean the \$500 worth of stablecoins are collateralized by \$750 worth of ETH.



Source: Crypviz

And if the price of the underlying cryptocurrency drops low enough, the stablecoins will automatically be liquidated.

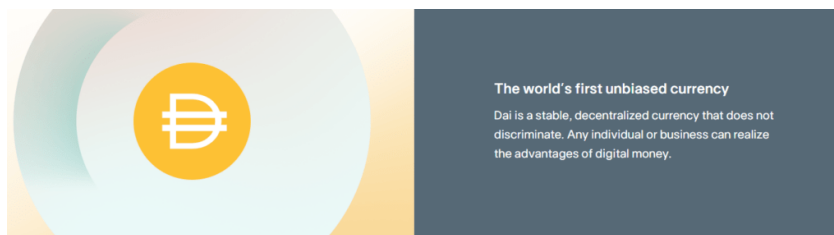
Crypto-collateralized stablecoins are decentralized, allowing processes to be even more trustless, secure, and completely transparent. There is no single entity controlling your funds. Additionally, they are often backed by multiple cryptocurrencies in order to distribute risk.

They also enjoy far more liquidity, meaning they can be quickly and cheaply converted into their underlying asset.

Crypto-backed stablecoins are the most complex form of stablecoin, which means they have not gained as much traction yet as they continue to work out their kinks.

The most popular and promising example of a crypto-collateralized stablecoin is Dai.

Created by MakerDAO, Dai is a stablecoin that has a face value pegged to USD, but is actually backed by ETH that is locked up in smart contracts.



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1  ≈ \$1

Like USDC, Dai has become crucial to many DeFi applications. By nature of being decentralized, anyone can generate, buy, or sell Dai. Developers in particular can easily build decentralized apps, or dapps, on top of the Ethereum blockchain using Dai as a stable medium of exchange.

NON-COLLATERALIZED STABLECOINS

Non-collateralized stablecoins are not backed by anything, which might seem contradictory given what stablecoins are.

The US dollar used to be backed by gold, but that ended decades ago, and dollars are still perfectly stable because people believe in their value. The same idea can apply to non-collateralized stablecoins.

These types of coins use an algorithmically governed approach to control the stablecoin supply. This is a model known as seignorage shares.

As demand increases, new stablecoins are created to reduce the price back to the normal level. If the coin is trading too low, then coins on the market are bought up to reduce the circulating supply. In theory, prices of these stablecoins would remain stable as they are driven by market supply and demand.

This is the most decentralized and independent form of stablecoin, as it isn't collateralized to any other asset.

However, non-collateralized stablecoins require continual growth to be successful. In the event of a crash, there is no collateral to liquidate the coin back into, and everyone's money would be lost.

An early and popular example of a non-collateralized stablecoin was Basis, which aimed to algorithmically adjust supply in order to keep its prices stable. Even after securing over \$100M in its initial coin offering (ICO), the initiative was forced to shut down in 2018 due to regulatory constraints.

One active example of a non-collateralized stablecoin comes from Ampleforth, which launched its AMPL token in late 2018. Ampleforth's algorithms adjust AMPL supply on a daily basis according to demand in an effort to avoid the volatility of fixed-supply cryptocurrencies.

Real-world applications

Stablecoins have many potential real-world uses. Here are just a few examples.



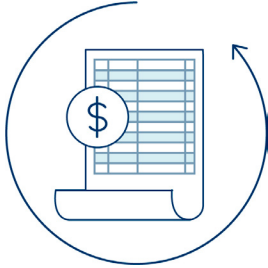
A day-to-day currency

Stablecoins could be used just like any other currency for mainstream commerce, but with the added benefits of being a digital currency that's legally backed and secure.

We may finally be able to pull out our smartphone and use a digital wallet to pay for our morning coffee with cryptocurrency like many crypto-enthusiasts have dreamed of.

Stablecoins are also especially beneficial for overseas payments, since there doesn't have to be any conversion of different fiat currencies. A person in India could receive USD-backed stablecoins without converting them into rupees and losing a massive percentage to fees.

Stablecoins show promise as a universal medium of exchange for e-commerce, alongside a wide variety of other digital activities, such as alternative loan issuance for those who aren't able or qualified to receive loans from a bank. These emerging use cases could help usher crypto away from speculative trading toward more everyday applications.



Streamlining recurring and P2P payments

Stablecoins also allow the use of smart financial contracts that can be enforceable over time.

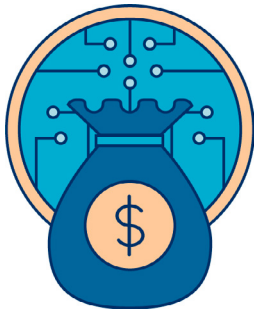
Smart contracts are self-executing contracts that exist on a blockchain network, without requiring any third party or central authority to enact it. These automatic transactions are traceable, transparent, and irreversible, making them ideal for salary and loan payments, rent payments, and subscriptions.

An employer can set up a smart contract that automatically transfers stablecoins to their employees at the end of each month, for example. This is especially beneficial for businesses that have employees all over the world, as it reduces the exorbitant fees and days-long process of transferring and exchanging fiat currency from, say, a bank account in New York to a Chinese bank account.

Using stablecoins, this process could take mere minutes and require just a small fraction of the usual transaction fees.

In another scenario, a smart contract could be set up between a landlord and her tenant to automatically transfer payment for rent on the first of each month, without worrying about high fluctuations in price like you would with non-stable cryptocurrencies.

The same idea can apply for automatic payments of loans (i.e. with decentralized lending), monthly subscriptions such as gym memberships, or even recurring donations to nonprofit organizations.



Fast and affordable remittances for migrant workers

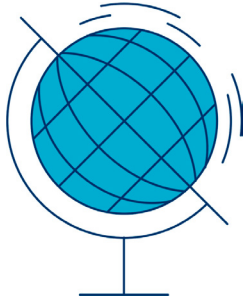
Stablecoins have the potential to change millions of families' lives in developing countries as well.

In today's world, migrant workers have to send remittances through businesses like Western Union to get money back to their families and loved ones. This is a slow and costly process, where families end up losing a big chunk of their funds to high fees.

Cryptocurrency offers a solution to this problem, with fast transactions and low fees, but there's still the problem that a cryptocurrency like bitcoin could drop in value by 20% in just one day.

Stablecoins, however, could provide a better alternative. Workers and their families across the globe could use digital wallets to receive stablecoins from anywhere in the world almost instantly — with low fees, and without price volatility.

Seeing how the global remittances market is estimated to be worth **nearly \$800B**, according to CB Insights' Industry Analyst Consensus, this is a massive use case for stablecoins.



Protection from local currency crashes and market volatility

In the event of a fiat currency crashing in value, local citizens could exchange their crashing currency for USD-backed, EUR-backed, or even gold-backed stablecoins quickly before they lose even more of their savings, thus protecting them from further drops in value.

Take, for example, the hyperinflation that is currently occurring in Venezuela. The inflation rate is hovering around 6500%, according to the IMF. Meanwhile, the price of basic foods has surged almost 1800% year-over-year, as of October 2020.

Most Venezuelans can no longer afford food because their savings have become increasingly worthless and continue to drop in value by the day.

Barring any local capital controls, stablecoins could offer a viable solution to people going through such crises by allowing them to quickly exchange their dropping currency holdings into a stable currency, thus protecting them from further drops in value.

Stablecoins could also offer protection amid global market volatility. The uncertainty of the Covid-19 economic crisis, for instance, drove demand up for stable digital assets, especially as more volatile cryptocurrencies like Bitcoin saw massive short-term value declines in response to initial lockdowns. The value of all issued stablecoins saw 300% growth in 2020 alone.



Improved cryptocurrency exchanges

Very few cryptocurrency exchanges out there currently support fiat currencies due to strict regulations. But the use of stablecoins allows exchanges to get around this problem and offer crypto-fiat trading pairs, by simply using a USD-backed stablecoin instead of actual dollars.

This will greatly help in the adoption of cryptocurrency trading as a whole, as it makes the process of joining and obtaining cryptocurrency easier for newcomers, as they can continue to think in terms of dollars or euros, instead of constantly fluctuating bitcoin values.

It will also reduce Bitcoin's massive influence over the market, as currently most exchanges require traders to hold BTC before they can exchange it for other types of crypto.

Limitations

While stablecoins present many advantages, they also have their limitations.

Tether provides an example of how a stablecoin can go wrong. Fiat-backed stablecoins are centralized, meaning they are run by a single entity. This requires trust that this entity is actually backing up their stablecoins with real fiat.

To solve this trust problem, stablecoins should provide regular audits from third parties to ensure transparency. This will help ensure that they are trustworthy and can help keep their reputation high.

Fiat-backed stablecoins are also constrained by all of the regulations that come with fiat currency, compromising the efficiency of the conversion process and the potential efficacy of the digital asset. For example, Facebook's Libra currency promised a stablecoin backed by a basket of global fiat currencies, thus broadening the coin's appeal and utility. However, it has received so much regulatory blowback that the project's management has since dropped its multi-currency aim, distanced itself from Facebook, and rebranded altogether.

By nature of being more regulated, stablecoins may also have less liquidity than regular cryptocurrencies.

This is especially true for commodity-backed stablecoins. If you ever wanted to get your real bars of gold, for example, it could take months and an expensive trip to the vault.

Moreover, there's always the risk that the underlying asset crashes in value.

Think about Black Wednesday in the UK, or the 1998 Ruble crisis that occurred in Russia. If such an event occurs to the fiat a stablecoin is pegged to, it would be disastrous for that stablecoin as well.

Crypto-backed stablecoins also come with their own set of issues.

Being pegged to other cryptocurrencies makes them much more vulnerable to price instability in comparison to fiat- or commodity-backed stablecoins.

They are tied to the health of a particular cryptocurrency (or combination of cryptocurrencies), which means if that crypto takes a deep nosedive, the stablecoin ultimately will as well. In the event of a price crash, they will be auto-liquidated into the underlying crypto asset, where they are no longer stable at all.

This is another disadvantage to crypto-collateralized stablecoins: they're difficult to understand and are the most complex form of stablecoins, which introduces much higher risk of things going wrong in the complicated processes.

Finally, even where stablecoins offer potential to protect or streamline financial services, they face potential limitations from local governments. For instance, in a country with high inflation rates, the government may look to block stablecoins pegged to foreign currencies in order to protect local currencies.

Looking ahead

While it is impossible to predict what the future has in store in the constantly changing world of blockchain, stablecoins could help bring cryptocurrencies as a whole to the mainstream.

Already, financial services players – from bank incumbent JPMorgan to payments network Visa – are giving nods to stablecoin technology through partnerships and internal R&D. Further, stablecoins are making inroads with regulatory bodies like the US Office of the Comptroller of the Currency (OCC), which published new guidance in January 2021 for banks to use public blockchains and stablecoins for bank functions.

Each form of stablecoin comes with its own unique set of benefits and drawbacks, and none of them are perfect. Yet the value and stability they could provide to businesses and individuals globally – by enabling universal access to established national currencies, streamlining payments and remittances, and supporting emerging financial applications – could be disruptive.

It's still too early to determine success, and the many emerging stablecoins out there will have to experiment with these new concepts to see what works and what doesn't. Widespread adoption of digital currencies more broadly will depend on whether or not crypto can appeal to everyday users and use cases. Stablecoins offer a major step toward this.

Additional reading

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- [*Patent Analytics*](#) to see where innovation is happening next
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