



What Are Stablecoins?

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.

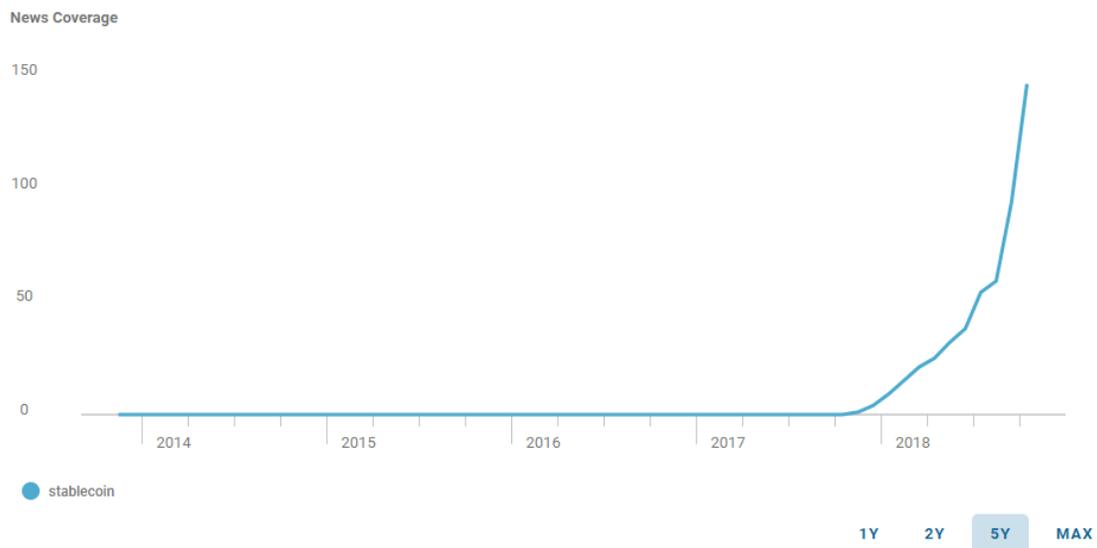
Crypto investors have become millionaires overnight, only to lose much of their wealth just weeks later. While this can be exciting to witness, it also shows bitcoin's massively unreliable nature — especially as a currency for goods and services.



This is where stablecoins come into play.

Stablecoins – cryptocurrencies that are increasingly gaining traction – are much more fixed than normal cryptocurrencies. This is because their values are pegged to other assets such as the US dollar or gold.

News Coverage



As a result, stablecoins enjoy the many benefits of being a cryptocurrency (transparency, security, privacy, etc.) without the extreme volatility that comes with most other types of digital coins.

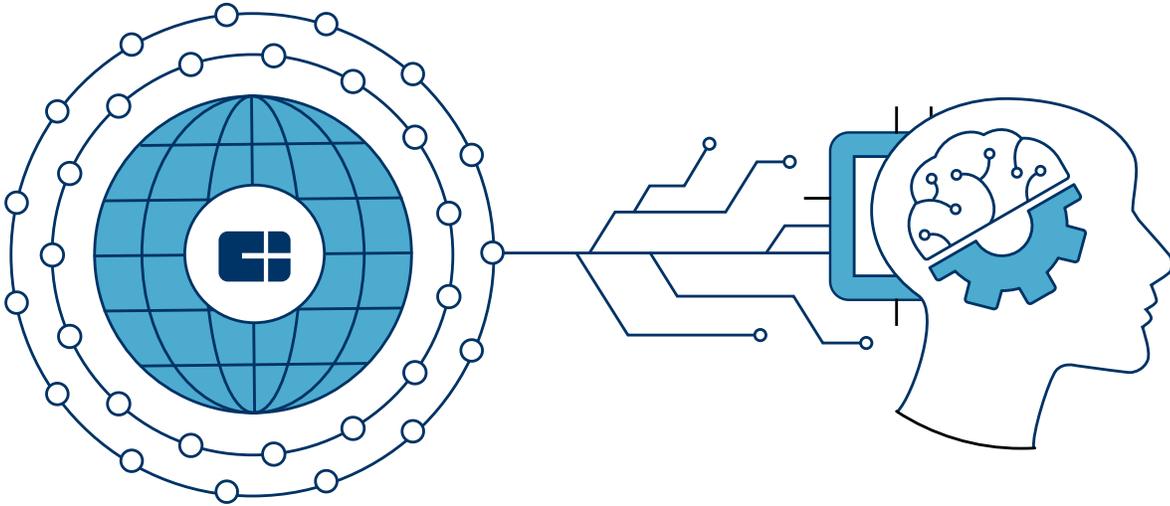
Stablecoins were created to be used the way cryptocurrencies were intended – as a simplistic, stabilized, scalable, and secure means for transactions. After all, most businesses, understandably, aren't interested in accepting a currency like bitcoin that might tank in value the very next day.

Recently, there has been a so-called "stablecoin invasion." At least 57 stablecoins have been released or are in development globally, **according** to a recent report. In addition, the Paxos Standard (PAX) and Gemini Dollar (GUSD) are two USD-backed stablecoins that have been approved and regulated by the New York State Department of Financial Services.

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.

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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 to 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.

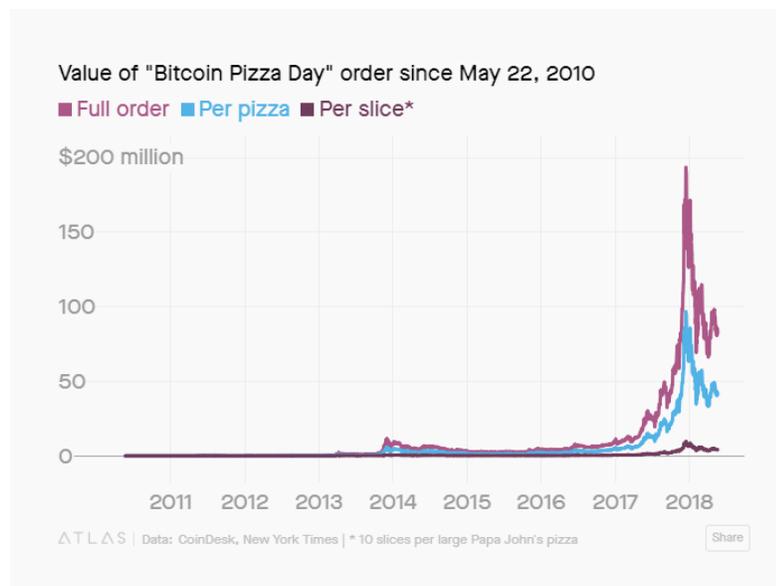
Many stablecoins are pegged at a 1:1 ratio with certain fiat currencies, such as the US dollar or the Euro, which can be traded on exchanges. Other stablecoins can be pegged to other kinds of assets, such as precious metals like gold, or even to other cryptocurrencies.

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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). Earlier this year, 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 earlier this year due to volatility. 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).

They have the potential to bring benefits to 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 that could suddenly decrease in value, much like bitcoin, which saw a ~60% drop since January of this year.

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 P2P transactions to take place without needing to use a volatile a cryptocurrency like Bitcoin to transact.

Broadly, this could transform those involved with applications across the cryptocurrency space, such as traders, investors, and blockchain-based businesses.

They could provide crypto holders, for example, with a safe haven in the event of a market crash, as they can move their funds from highly volatile cryptocurrencies into stablecoins – in a matter of minutes – without having to move their capital back into fiat (many cryptocurrency exchanges do not allow fiat on the platform, or will take a large fee from the transfer into fiat).

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

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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 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 the coin will not fluctuate either. This means even if the entire cryptocurrency economy collapsed and 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 9th largest cryptocurrency by market capitalization and has the highest daily trading volumes of any cryptocurrency, just after Bitcoin.

Cryptocurrencies ▾		Exchanges ▾		Watchlist		USD ▾	Next 100 →	View All
#	Name	Market Cap	Price	Volume (24h)	Circulating Supply	Change (24h)	Price Graph (7d)	
1	Bitcoin	\$107,865,399,705	\$6,207.76	\$4,855,531,725	17,375,900 BTC	-2.46%		
9	Tether	\$1,693,919,243	\$0.992673	\$3,183,653,690	1,706,421,736 USDT *	0.76%		
2	Ethereum	\$19,746,457,837	\$191.35	\$1,736,827,663	103,197,952 ETH	-8.38%		
4	Bitcoin Cash	\$8,228,021,861	\$471.31	\$1,059,740,052	17,457,888 BCH	-10.58%		
6	EOS	\$4,404,206,471	\$4.86	\$997,141,570	906,245,118 EOS *	-9.44%		
3	XRP	\$19,029,505,935	\$0.473306	\$505,513,083	40,205,508,733 XRP *	-8.92%		

Tether, however, has been surrounded by plenty of controversy lately. Suspicions have arisen that Tether has issued more USDT than is actually backed by its USD reserves, as the company has yet to agree to release a transparent audit.

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

One such example is **TrueUSD (TUSD)**, which is the second most popular stablecoin currently, also backed 1:1 to USD. TrueUSD actually never touches your funds – instead it enables users to exchange USD directly with an escrow account, allowing complete legal protection for token holders and guarantees their TUSD is actually backed by USD.

There's a plethora of other fiat-collateralized stablecoins out there. In the UK, the London Block Exchange released **LBXPeg**, the first cryptocurrency to be tied to the value of GBP. There's even a stablecoin in Mongolia called **Candy**, which is backed by the Mongolian tugrik.

Earlier this year, crypto finance company Circle announced the release of its USD Coin (USDC), backed by the US dollar. USDC is accepted across various exchanges, including Coinbase, Poloniex, and Bit-Z.

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

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 baskets of 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. 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.

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.

The screenshot shows the MakerDAO website header with the logo and navigation links: Products, Learn, Foundation, and Community. The main heading is "Stability for the blockchain". Below it, the text reads: "Dai is an asset-backed, hard currency for the 21st century. The first decentralized stablecoin on the Ethereum blockchain." There are two buttons: "Buy DAI" and "How it works". At the bottom of the screenshot, there is a visual representation of the peg: "1 DAI = \$1".

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. This means even if the US dollar and the entire crypto market crashes, this form of stablecoin would survive and stay stable.

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.

One such example of a non-collateralized stablecoin is **Basis**, which algorithmically adjusts supply in order to keep its prices stable. It refers to itself as "a stable cryptocurrency with an algorithmic central bank."



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Real-world applications

Although still in its early stages, 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.



Streamlining recurring and P2P payments

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

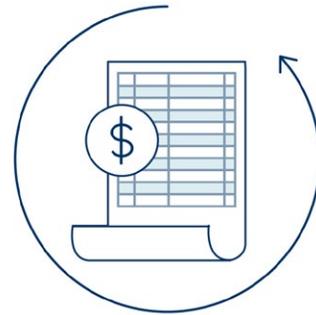
Smart contracts are self-executing contracts that exist on a blockchain network, without requiring any third party or central authority to enact it. These automatic transactions are traceable, transparent, and irreversible, making them ideal for salary and loan payments, rent payments, and subscriptions.

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 (ie. 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.



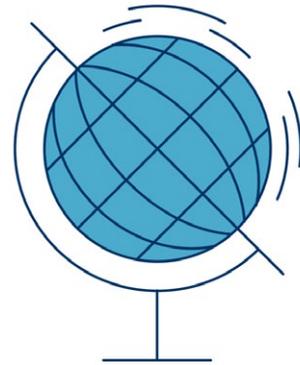
Seeing how global remittances totaled \$613B in 2017 alone, this is a massive use case for stablecoins.

Protection from local currency crashes

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. On average, prices of goods have been doubling every few weeks.

The IMF predicts that by the end of 2018, the inflation rate will reach 1,000,000%. Most Venezuelans can no longer afford food because their savings have become increasingly worthless and continue to drop in value by the day.



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.

Improved cryptocurrency exchanges

Very few cryptocurrency exchanges out there currently support fiat currencies due to strict regulations. But the use of stablecoins allow 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 in 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.

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Limitations

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

The aforementioned 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.

Since Tether has yet to ever provide a transparent audit to its reserve, a lot of people suspect Tether is only holding a fraction of the USD it claims to have. As a result, Tether's market cap has dropped more than \$1B in October 2018 alone.

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. This means they 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 make 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 nose dive, 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.

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Looking ahead

Cryptocurrencies are still in their infancy, and this is even more true with stablecoins. This new form of digital currency is still taking form and has a long way to go before potentially reaching maturity.

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.

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 – could be disruptive.

But, 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.