

Stablecoins towards a trusted digital currency

Innovation Playbook



Introduction

Stablecoins: towards a trusted digital currency

The digitisation of commerce is accelerating at an unprecedented rate. The COVID-19 pandemic has been a catalyst for transforming the way people pay, leading to dramatic shifts in consumer behaviour and seismic changes in the global financial ecosystem.

At the same time, a revolutionary new development is reshaping the payments landscape. Trusted digital currencies will enable businesses and administrations to offer customers the flexibility and security they require when making payments, while helping central banks protect the sovereignty of national money. This playbook explores the latest developments in digital currencies and stablecoins, highlighting their current and future uses, and how these developments will impact on us all.

The impetus for digital currencies

Since the COVID-19 pandemic shook the world in the first quarter of 2020, we have seen an increased digitisation in businesses and society, an acceleration of digital payments, a boom in online retail and an increasing demand for omnichannel experiences. This trend is set to continue, while blockchain technology has unleashed new possibilities for creating digital currencies, with a new breed of crypto-asset emerging – stablecoins – that have the potential to transform how the economy works.

From less cash to stablecoins

In the euro area, the European Central Bank (ECB) reported that e-commerce volumes increased by almost one-fifth during the first lockdown to curb the pandemic (early 2020) and have stayed at that level subsequently. Digital solutions such as contactless and electronic payments are supporting the business recovery, injecting liquidity into the global economy and displacing cash. According to an ECB survey, 40% of respondents reduced their use of cash in 2020¹.

Now the next stage in this less cash revolution is gaining traction. A new wave of innovation is transforming not only how we pay but what we pay with. One could say that the era of the stablecoin is dawning.

Stablecoins take advantage of the same type of peer-to-peer blockchain technology that powers bitcoin, but enhanced. All transactions are secured, tracked and recorded on a distributed ledger system. However, the value of stablecoins is pegged to real-world assets such as fiat currency, gold and other commodities, so they avoid the volatility and price swings that have blighted bitcoin and the first generation of crypto-assets².

Because of factors such as its volatility and slow speed, bitcoin become established as a widely used means of payment or a store of value. In contrast, stablecoins maintain a steady price over time and allow the value of their collateral to circulate in the market digitally. This will have profound implications for the way we make payments and transfer value. Stablecoins could pave the way towards a more democratic, decentralised, and efficient financial ecosystem.

If I want to send euros from Paris to pounds in London today, it can involve four to five different banks, and both the sender and the receiver will have to pay accumulated fees.

This antiquated system just doesn't make sense anymore, and now we have the technology to change it radically.



Nicolas Kozakiewicz

Executive Innovation Advisor,
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Down by **60%**

Cash withdrawals in the UK in April 2020 (compared to 2019)³

Facebook and central banks drive growth

The number of stablecoins has multiplied in recent years. According to *The Economist*, at least 20 stablecoins are now traded on crypto-exchanges and many more are under development.⁴ The most notable of these is Facebook's Diem project, originally called Libra, which has kick-started the current surge in activity.

Meanwhile, partly in response to Facebook's initiative, the development of Central Bank Digital Currency (CBDC) is high on the agenda. As commercial stablecoins accelerate, central banks around the world are planning their own digital payment networks to retain control of their monetary systems and provide an official alternative to cash. While China, the ECB and Sweden are some of the acknowledged leaders in this new global space race, about 80% of central banks are now engaged in wholesale and/or retail CBDC initiatives.⁵

1 <https://www.ecb.europa.eu/press/key/date/2020/html/ecb.sp201120~e92d92352f.en.html>

2 Bitcoin, the most well-known crypto-currency, can move as much against the dollar in a single day as the S&P 500 does in 23 (<https://www.economist.com/finance-and-economics/2018/10/20/a-new-form-of-cryptocurrency-promises-to-defy-financial-gravity>)

3 <https://www.bankofengland.co.uk/-/media/boe/files/speech/2020/reinventing-the-wheel-with-more-automation-speech-by-andrew-bailey.pdf?la=en&hash=6B5D-E50DC09345C4D88FA9BF6CC1F660CA742FD4>

4 <https://www.economist.com/finance-and-economics/2018/10/20/a-new-form-of-cryptocurrency-promises-to-defy-financial-gravity>

5 *ibid.*

6 *Futuring Payments*, Issue 3, 2020.

Industry implications

The economic implications of stablecoins

The implications of stablecoins are profound for significant parts of the global economy. From small early pilots to full-scale industry-wide services, Worldline's stablecoin solution can help drive a new phase of growth across a broad range of economic sectors. Some of these areas that are ripe for innovation are outlined below.

Central bank digital currencies

Sparked into life by Facebook's project, central banks around the world are now busy developing stablecoins of their own. These Central Bank Digital Currencies (CBDCs) are the most talked-about innovation in global finance of recent years.

Stablecoins issued and backed by the central banks can help protect their monetary sovereignty and defend their currency against branded cryptocurrencies developed by the private sector.

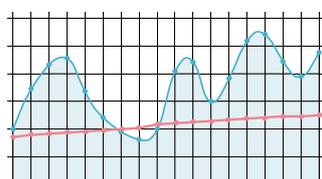
At a time when the use of cash is declining rapidly, CBDCs will also provide ordinary people with an alternative access to central bank money and accelerate the digital transformation of payments and transactions. CBDCs will be a new form of money that could be used by people and businesses to carry out transactions. They will require a new form of payments infrastructure.

With the right technology and the right regulations in place, CBDCs have the potential to reduce fees, increase liquidity and enhance the availability of the payment network. They will lead the way to simpler, faster and more direct transactions across the financial system, from cross-border payments to clearing, settlement, reconciliation, PSP payments, programmed payments and other transactions.

In 2020, the Bahamas became the first country in the world to launch a CBDC, the so-called Sand Dollar.⁷ Much larger economies such as the eurozone and China are also developing their own CBDCs. At the end of 2020, the People's Bank of China concluded a large-scale test of its digital yuan initiative which involved 50,000 consumers.

In Sweden, the Riksbank is conducting a pilot project using blockchain for an e-krona that can work as a complement to cash. In the simulation, users hold e-krona in a digital wallet and make payments, deposits and withdrawals via a mobile app.⁸ If the Riksbank's project goes ahead, the state would guarantee the value of the digital money, making the e-krona an innovative complement to cash in a country where less than one-tenth of all payments are made in cash.⁹ According to the Riksbank, just like cash the e-krona would provide a state payment alternative that is available to all and it would strengthen the resilience of the payment system.

The CBDC has the potential to be the digital equivalent of banknotes in the future, providing citizens with low-cost (or free) access to secured and risk-free central bank money. It could further support the digitalisation of payments and contribute to the modernisation of economies.



Bitcoin, the most well-known crypto-currency, is highly volatile; its value can move as much against the dollar in a single day as the S&P 500 does **IN 23**.



The value of stablecoins is **pegged to real-world assets** (eg. fiat currency, gold and other commodities) so they avoid price swings and are, as their name suggests, **stable**.



Central banks are now engaged in some kind of CBDC initiative.

20+ stablecoins



are now traded on crypto-exchanges and many more are under development.



China, the European Central Bank and Sweden are some of the acknowledged leaders in this new global space race; while the **Bahamas** has become the very first country to launch its CBDC, the 'Sand Dollar'.

7 <https://www.centralbankbahamas.com/news/public-notice/the-sand-dollar-is-on-schedule-for-gradual-national-release-to-the-bahamas-in-mid-october-2020>
8 <https://www.riksbank.se/en-gb/press-and-published/notices-and-press-releases/notices/2020/the-riksbank-to-test-technical-solution-for-the-e-krona/>
9 <https://www.riksbank.se/en-gb/press-and-published/notices-and-press-releases/press-releases/2020/payments-in-sweden-2020/>



Safe havens for challenging times

In contrast to the volatility of bitcoin, today’s stablecoins are poised to become the currency of choice for people, businesses and traders looking to sell and exchange a wide range of assets, including fiat money, financial instruments, precious metal, and other commodities.

Pegged to assets in the real world and fully backed by these assets, stablecoins will carry intrinsic, stable value and maintain that value over time. That positions stablecoins to become not just a store of value but also a global means of payment.

Blockchain-based safe assets have another advantage when compared with conventional safe havens such as gold. Gold’s high value – currently nearly \$2,000 per ounce – makes it very hard to exchange in everyday scenarios. Stablecoins make gold trading more convenient by creating tokens which have gold as their collateral.

In a token-based system secured by a permissioned blockchain, authenticated people on the platform exchange digital certificates, while the gold remains safely in the bank. The gold coin can be digitally divided into much smaller bits that can be easily used as a stable daily currency in shops, hotels and restaurants. This will also serve to strengthen the liquidity of the market and even enhance the appeal of the underlying asset.

Regional currencies reborn

Stablecoins could revitalise national financial systems and reenergise regional economies, helping them recover from the damage wreaked by the pandemic and the lockdowns.

Inventive stablecoin projects could even help communities put their economies on a more sustainable footing.

For example, local governments could deploy their own stablecoins, which could be backed by the national fiat currency and would be accepted for products and services across the region. Governments could then use these stablecoins to reward residents with stablecoin points for good citizenship, such as regular recycling, energy saving, car sharing, or the appropriate use of parking and public transport facilities.



Residents would spend these stablecoin points elsewhere in the city or in the wider region, supporting local enterprises as well as incentivising sustainable behaviour. Because these local stablecoins would share the characteristics of money, they would be accessible to everyone in the community, helping create a more inclusive payments ecosystem.

In this scenario, stablecoins would be more than just a means of transaction.

They would become a facilitator for building a better society.

A local currency for major events

Large-scale events such as the Olympic Games and the World Cup have well-documented impacts on the infrastructure and monetary system of the host city.

The sudden inrush of large numbers of people – more than 1.1 million people came to Rio de Janeiro for the Olympic Games in 2016 – can overwhelm banking and communications networks and expose visitors to high fees, volatile and unfavourable exchange rates and local currency shortages.

Stablecoins offer a smart alternative to relying on the national currency alone during these major events. A stablecoin deployed only during the Games, for example, would protect travellers from fluctuations in the exchange rate and reduce the bank fees they have to pay to use a foreign currency. It would also help to maintain monetary and financial stability at a time when there is usually a surge of foreign currency inflows into the country.

Use of the stablecoin would not have to be limited to official events such as the purchase of tickets. There would also be extensive commercial opportunities for local merchants to accept payment in the digital currency. These merchants could even offer loyalty-based discounts to consumers paying with a stablecoin-based application.

A new look for loyalty schemes

Loyalty schemes such as air miles have long been a mainstay of the world's travel, retail and hospitality businesses. By rewarding people with points for their custom, they have proven to be a highly effective means of turning ordinary clients into loyal repeat customers.

Stablecoins provide an opportunity to take these schemes to the next level and add a new dimension. It would be a straightforward step to use the points that are awarded and redeemed under the scheme as the collateral or backing for a new stablecoin, to be used by members of the scheme on a private blockchain platform.

Customers would accumulate their points as usual. The difference would be that they would be able to redeem the points at a much wider variety of outlets than is currently the case with traditional schemes.

Currently, most air miles can only be redeemed on one airline and hotel points at one hotel brand. If a stablecoin was pegged to these loyalty schemes, it would be simple for customers to accumulate and use their points more widely, from shops to restaurants and even other airlines and hotels.

The use of stablecoins based on loyalty points would result in increased volumes and increased revenue across the industry, helping to breathe new life into hospitality, travel and retail, at a challenging time for all these key service sectors.

Worldline's expertise and solution

Worldline: one of the first market movers in stablecoins

At Worldline, we have had a head start in blockchain and stablecoin with many years of experience in this area, and the expertise to make this next stage of the evolution of payments a reality.

Worldline is the leading payment transactions service provider in Europe and the fourth largest in the world. We handle billions of transactions every day, serving nearly one million merchants and 1,200 banks and financial institutions.

As part of our mission to be a pioneer in innovation, Worldline is one of the first market movers to pilot projects that will enable stablecoin to become a unique, viable payment means in the future digital payment mix. For more than six years, we have been deeply involved in the development of asset-based infrastructure models that enable large-scale transactions based on private, permissioned blockchain infrastructure, which can handle thousands of transactions per second. We have already completed successful pilot projects that leverage our expertise in digital payments and distributed ledger technology.

Ahead of market competition, we have the capability to build private blockchain platforms from scratch on our own infrastructure. This puts us in an ideal position to help our clients benefit from the advent of stablecoins.



Introducing the WL DAM Platform

The **WL Digital Asset Management Platform** (WL DAM Platform) is our industry-leading solution to enable stablecoin applications. The live platform manages all use cases, from digital versions of fiat currencies to loyalty schemes and local currencies.

The application leverages the full power of WL Wallet, a digital wallet for face-to-face or e/m-commerce, and includes key features such as Compensation Chamber and Certification & Tracking. It enables users to make seamless payments and transactions using the digital currencies of their choice.

The solution makes it straightforward to issue and use stablecoins:

- A trusted party on the platform creates digital certificates (tokens) with one serial number per collateral for instance.
- Customers, as well as service providers, complete the regulatory know-your-customer (KYC) checks, acquire these certificates using their digital wallets and use them to make purchases and complete transactions with people and merchants from the same community.
- Thanks to blockchain, all transactions are tracked and recorded in a distributed ledger that can never be altered. This level of security-by-design eliminates the risk of fraud. Decentralisation also reduces the risks from a single point-of-failure, enhancing resilience and availability.

Tokenisation means that consumers can easily buy and trade the precious metals and commodities that many stablecoins are backed by, without ever having to carry or move the goods around. The physical assets are kept safely at one location. It is only their digitised representations in the form of the certificates which change hands.

A gold standard for stablecoins

In 2020, Worldline developed the secure private blockchain platform which is powering the innovative DaVinci token issued by Gold Global Currency Corp. in Switzerland.

The DaVinci stablecoin is designed to tokenize gold via a secure private blockchain. It allows customers to own and trade gold assets digitally and in complete security, removing the logistical issues inherent to traditional gold trading. Thanks to Worldline's secure and fast blockchain platform, consumers can buy, save and sell gold without ever having to physically move coins, bars and bullion.

Each DaVinci token is 100%-backed by a one-ounce 24-carat gold coin, secured in a Swiss vault. The token represents digital ownership of this asset, which is registered on the private, permissioned blockchain. For each coin, there is a certificate on the blockchain. Owners can transfer this title over the secure permissioned blockchain, using a combination of the DaVinci digital wallet and QR codes to exchange certificates and trade with other people in the community. In contrast to standard gold trading, there is no need for an intermediary.

All end-users with access to the blockchain must first pass Know Your Customer and Anti-Money Laundering checks. The private blockchain ensures the irreversibility and traceability of

all transactions. At any time, the token owner can redeem the token for the gold coin.

The blockchain solution will also allow people to acquire fractions of the digital certificates, which they will be able to use just like cash when making payments for everyday goods and services. Merchants who accept these tokens as payment will be able to redeem them for the certificates of gold ownership.

This unique digital currency will increase liquidity, help a new breed of investor benefit from the stability of gold and democratise access to gold investment.

As well as being responsible for issuing new digital tokens, Worldline will also operate the payment system powering the DaVinci stablecoin.

At Worldline, we believe that the DaVinci Token points the way to an alternative, decentralised monetary system, which can increase access to finance and serve as a seamless and innovative method for universal payment.

The same WL Digital Asset Management platform which underlies the DaVinci Token can be used to issue and complete transactions in other crypto-currencies and stablecoins. The possibilities are endless.



Future developments

Less volatile than the first generation of peer-to-peer cryptocurrencies, and delivering a seamless and efficient user experience, blockchain-based stablecoins are here to stay.

These digital currencies will have profound implications for the way we make payments and transfer value. More stable and easier to use than traditional fiat currencies, they will open up countless use cases for investors, industries, communities and entire nation states.

From powering CBDCs to simplifying cross-border payments, from loyalty

schemes for global industries to stable investment vehicles for savers and traders, digital currencies are set to pave the way towards a more democratic, decentralised, and efficient financial ecosystem. As stable and as widespread as the dollar or euro, they will transform global finance.

The development of stablecoins by central banks and by the world's largest technology companies is accelerating. They are readying for prime time. For enterprises, financial institutions, governments and the public administration, the time to engage with digital currencies is now.

At Worldline, we intend to be at the heart of this latest evolution in the payment ecosystem. Our vision is to enable stablecoins to become a viable and compelling alternative in the future digital payment mix.

Leveraging our expertise in blockchain and our experience in payments and transactions, we have the knowledge and the toolkit to make this vision a reality. We look forward to you joining us on this journey!

About Worldline

Worldline [Euronext: WLN] is the European leader in the payments and transactional services industry and #4 player worldwide. With its global reach and its commitment to innovation, Worldline is the technology partner of choice for merchants, banks and third-party acquirers as well as public transport operators, government agencies and industrial companies in all sectors. Powered by over 20,000 employees in more than 50 countries, Worldline provides its clients with sustainable, trusted and secure solutions across the payment value chain, fostering their business growth wherever they are. Services offered by Worldline in the areas of Merchant Services; Terminals, Solutions & Services; Financial Services and Mobility & e-Transactional Services include domestic and cross-border commercial acquiring, both in-store and online, highly-secure payment transaction processing, a broad portfolio of payment terminals as well as e-ticketing and digital services in the industrial environment. In 2020 Worldline generated a proforma revenue of 4.8 billion euros.

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