Money and assets of the future

Central bank digital currencies, new platforms, crypto assets – what boards need to know

Current changes in the banking sector are just the harbingers of the radical upheaval underway in the financial industry. Fintech business models hint at where the journey could be leading. More efficient and automated financial services are putting pressure on traditional financial institutions. But the real revolution is yet to come - crypto assets and, ultimately, central bank digital currencies have the potential to make core banking activities obsolete as new models take over.

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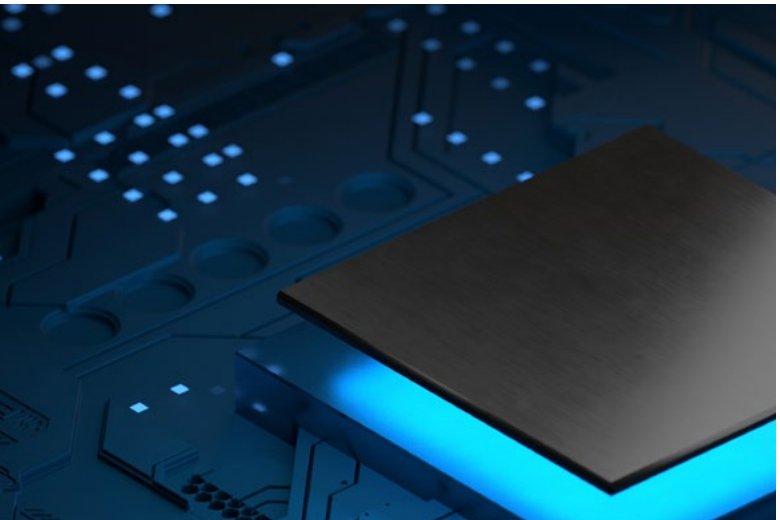
When did you last visit a bank branch?

Already today, we hardly ever go to bank branches for traditional banking services such as payment transactions or cash withdrawals. The banks themselves have significantly and consciously driven this development, introducing fees for services to encourage clients to process payments largely online – and fully automatically for the bank. Many banks even charge clients additional fees for hardcopy statements. This development – and the "progress" initiated by the banks – is fueled by the banks themselves.

A brief look at history

The Swiss financial industry has long been recognized as an early adopter of technical innovations for optimization and automation. For example, the first bank computers were introduced as early as the 1950s at what was then Schweizerische Kreditanstalt (SKA) and Union Bank of Switzerland (UBS). The ATM was introduced in 1967 – also relatively early by international standards – with the primary aim of providing customers with cash around the clock.
The late 1990s saw the triumph of online banking take digital interaction with banks into private households. From our current standpoint, the technological advances of recent years suggest that banks have always taken advantage of new technologies. Accordingly, we could conclude that they should be able to adopt new technologies, as they have done in the past, to drive the speed, efficiency and cost-effectiveness of their own services.



Critics, on the other hand, tend to compare the current situation of traditional banks with that of the retail trade, which is undergoing enormous upheaval in an environment of technological advances and the coronavirus pandemic. Certain parallels can certainly be drawn. Retailers compete with large online platforms that connect manufacturers and end customers directly. Goods are ordered online from around the globe, then delivered free of charge to the customer's home. We see the effects of this in both Europe and the USA: retail outlets are giving way to street cafés, while shopping malls stand deserted. Although it would be inaccurate to say that efficient online banks are already displacing the existing top dogs, new providers are certainly emerging, especially players in the payment card sector and online banks. Certain omens of this development can also be seen in the analyses of the Swiss Federal Statistical Office. The relative share of the banking sector in total value added has almost halved since 2000 in Switzerland. This reflects the waning importance of the banking business in Switzerland – at least relative to the country's overall economic development.

Whether technological developments will benefit banks or put them under additional pressure remains to be seen. The truth probably lies somewhere in between. However, if we look at current developments around cryptocurrencies, the fundamental question arises as to whether these merely represent a further "evolutionary stage" in technological development, or whether we should speak of a "revolution".

From Bitcoin to CBDC

The oldest of the cryptocurrencies, Bitcoin remains its most well-known representative. Given the rapid and extremely volatile performance of Bitcoin as well as other cryptocurrencies, established investors and financial institutions have also begun to take an interest in cryptocurrencies as an investment object in the last two years. New providers from the parabanking sector, as well as traditional financial institutions, are making cryptocurrencies accessible to their banking customers. Some are enabling clients to buy Bitcoin directly, for example, while others are using financial products such as investment funds or structured products as an investment object for cryptocurrencies. In all cases, the question arises as to how to (objectively) determine the value of crypto assets.

In terms of content, it should be noted that cryptocurrencies – also known as "digital assets" – can be designed in very different ways. In principle, cryptocurrencies can be classified into basic types. In practice, financial market regulators around the world apply quite different concepts. The most common basic concepts divide cryptocurrencies into "payment tokens", "security tokens" and "utility tokens". For the purposes of this article, we will restrict ourselves to payment tokens, which include Bitcoin.

- Payment tokens can now in turn be divided into cryptocurrencies in the narrower sense (e.g. **Bitcoin**, **Ether**, etc.), whose value is determined by supply and demand.
- Next in importance are the so-called **stablecoins**, which are pegged to an underlying asset such as a FIAT currency or real assets such as gold. Tether or Diem are prominent representatives here.
- The most recent and perhaps most promising category is **central bank digital currencies** (CBDC), where central banks issue digital currency to commercial banks or directly to private individuals. CBDC can be based on blockchain technology – but, strictly speaking, does not have to be.

As mentioned above, Bitcoin and other cryptocurrencies are based on blockchain technology, also known as "distributed ledger technology" or "DLT". Put simply, this means that a kind of ledger is kept to show which market participant or person is entitled to which shares (tokens). However, the ledger is not kept centrally, but is distributed across a large number of locations. In addition, the "bookkeeping" is designed using cryptographic technology to ensure that a share (token) can only be transferred once. The storage of access data to this ledger, including the data needed to trigger transactions, can also be decentralized. The key giving users full disposal over their tokens can be stored in a wallet.

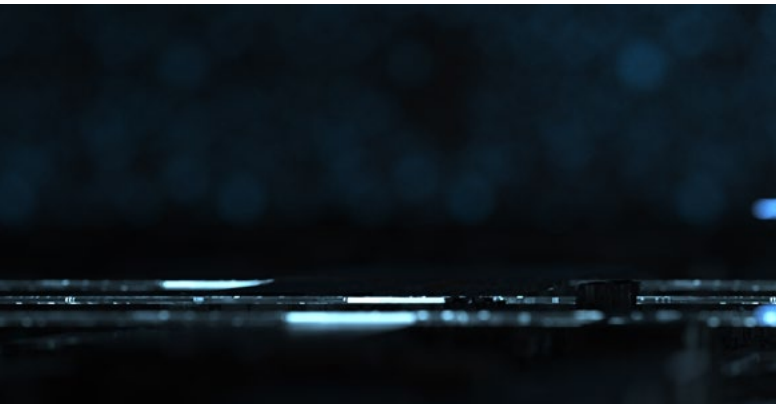
Due to the diverse designs of cryptocurrencies, it is not possible to make general statements about their properties. There are also – in some cases justified – points of criticism around cryptocurrencies, which should be mentioned:

- Efficiency/energy consumption: Distributed ledger technology may enable transactions without a central counterparty, but it is not very efficient. Depending on the cryptocurrency in question, a huge amount of power is required to complete a transaction.
- Transparency: Most cryptocurrencies are absolutely transparent when it comes to the transaction being carried out. However, parties to the transaction are not necessarily identifiable. This makes cryptocurrencies vulnerable to criminal asset transfers.
- Volatility: Bitcoin and other cryptocurrencies in the narrower sense are subject to very high volatility, which tends to prevent their use as a means of payment. Stable coins, however, solve this problem as they are pegged to a real asset or FIAT currency.
- Trust/acceptance: Value is also tied to the level of trust that the cryptocurrency can actually be used as a means of payment.

How DLT-based cryptocurrencies impact the banking business

Discussions on cryptocurrencies often assert that today's banks are being made obsolete. What should we make of this development?

The consequences for traditional payments are significant – on principle – and shake the foundations of existing financial architecture and the traditional financial system. As mentioned, cryptocurrencies such as Bitcoin enable payments (or transfers of value) without an actual payment system and without the need for intermediaries such as central banks. This is because, depending on the exact setup, distributed ledger technology eliminates trading as well as clearing and settlement in its current – centralized – form. While parties in the traditional and centralized system have to trust a third party to ensure a secure, accurate digital record of transactions, blockchain transactions rely on numerous copies of that record being distributed across the network. If the system's cryptography works, third parties (clearing houses, central counterparties, etc.) become largely irrelevant.



Impact of central bank digital currencies

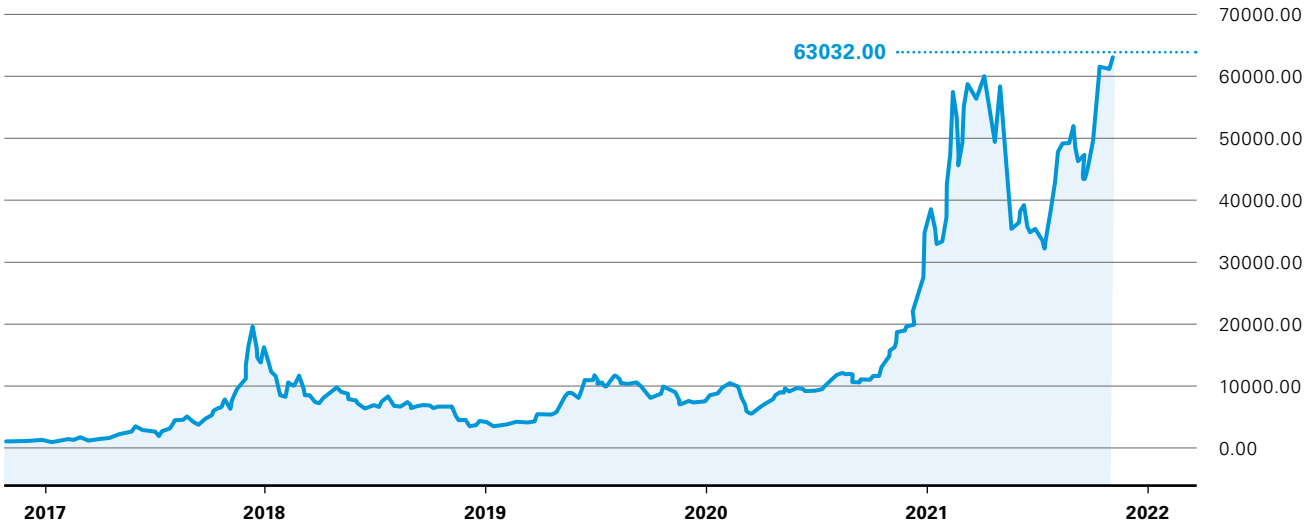
Another consequence is the effect on central banks in their role as guardians of currency. If cryptocurrencies such as Bitcoin or stablecoins were to become established, central banks would be limited in their monetary policy resources. For example, the amount of money in circulation could no longer be expanded at will.

The Facebook group's much-acclaimed Libra project, which was continued under the name "Diem", had the goal of enabling a broad population to access the financial system for the first time. All that was needed to make digital and absolutely decentralized payments was a smartphone, widely available in all parts of the world. The transaction would then take place in a comparatively stable currency (stablecoin) and not in the presumably highly volatile local currency.

At the same time, however, the project is a frontal attack on the currency sovereignty of the central banks. It is not surprising, then, that the Libra/Diem project faces considerable political headwind, which ultimately led to the project being redimensioned.

As mentioned, however, many central banks – including the Swiss National Bank – are gaining experience with the new technology with a view to possibly issuing central bank digital currencies themselves.

Bitcoin/dollar



Bitcoin value history from previous years

Depending on the design, such a development would also have considerable implications for commercial banks. If, for example, central bank digital currencies were accessible to everyone (a sort of "retail CBDC"), then de facto anyone could withdraw their bank balance and invest it directly in CBDC. This would also eliminate the counterparty risk with the commercial bank that today's bank customers face.

Against this background, it is not surprising that the trend among central banks is heading more toward "wholesale CBDC", i.e. the development of central bank digital currencies exclusively for banks. This could, for example, make international payment transactions or inter-bank transactions very efficient.

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Summary

The traditional banking business faces various influences:

- Technological advances and fintech business models can be both an opportunity and risk for banks. New providers offer services in a highly specialized way and implement novel technology, which increases efficiency and also potentially puts pressure on service prices (fees). Banks will have to assess to what extent they can adopt new technologies and use them for themselves (e.g. develop new business models or reduce costs), and to what extent they wish to withdraw from unprofitable business areas.
- Cryptocurrencies have gained importance as an investment and object of speculation. The extent to which banks should enable or even recommend investments in cryptocurrencies to their clients can be left unanswered. However, institutions would do well to gain experience in dealing with cryptocurrencies in order to understand the technology and its implications.
- With distributed ledger technology, transactions can be processed without a bank, which could have a significant impact on banks' payments. Furthermore, the development of a central bank digital currency could also compete with banks' existing business areas – or even render them obsolete. In this respect, banks should monitor the situation closely and, above all, assess and evaluate the medium-term strategic impact on their business activities.

Finally, financial institutions and private individuals alike should take a more in-depth look at technological developments, new fintech business models and crypto technology.