



# Digital currencies: The question is not if, but when and how it will start to impact your business

*Explaining the basics of digital currencies and why you should get familiar with it*

Perhaps this is the first time you're reading of "digital currencies". However, you most likely have heard about the most infamous digital currency of all: Bitcoin. Bitcoin, whatever your opinion of it may be, is currently the most dominant digital "store-of-value", capturing the interest of many professional and retail investors around the world – while simultaneously being closely followed by Governments and Central Banks.

The goal of this article is not to cover every aspect of the digital currency trend, on which entire books are being written, we aim to make you reflect upon the potential effects that digital currencies could have on your business. If you have not yet considered a world where payment transactions are carried out in another way than what we have been used to our entire lives, then now is the time to start contemplating on what this could actually mean for you.

## Payment Transactions

In order to grasp the potential effects of digital currencies, it is important to understand what a payment transaction is, and how your business handles them. Suppose you own a brick and mortar clothing store that sells its products online as well. A potential customer is looking for a pair of jeans costing €100,-. Without considering the sales channel through which the customer goes (store/online), there are 3 general levels of transaction that transfer the money from the customer to your business:



**Level 1:** The customer pulls out their wallet and pays €100,- in cash

**Level 2:** The customer swipes their debit/credit card and €100,- is deposited into your bank account

**Level 3:** The customer uses an app or web browser and pays via a third-party payment service like PayPal, after which the €100,- is deposited into your bank account

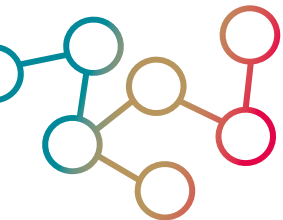
If your business offers products or services in return for money then chances are that you operate at one or more of these levels. At level 1, you know for sure that the customer provided a particular means of exchange and that they paid for the product or service. However, at levels 2 and 3, how do you know whether the customer did actually pay? Your answer probably revolves around the fact that you trust your bank or payment provider, and that they, one way or another, have checked the credibility of the customer and the success of the transaction. This trust, however, is not offered for free. The bank and payment provider charge you a particular fee for their services, in order to ensure they have the necessary organizational and technical means to live up to the trust that you have in them. These are the so-called transaction costs.

Now, imagine digital currencies as a fourth payment transaction level that 1) provide the same level of trust as cash, while 2) lowering the overall transaction costs:

**Level 4:** The customer transfers the €100,- from their digital wallet to your digital wallet

### **What is a digital currency?**

At a first glance, level 4 might not seem that different from 2 and 3. So what makes digital currencies so unique? They are different in the way in which they induce trust in the system. There are two ways this can be done, either decentralized, through a technology that leverages cryptography (i.e. cryptocurrencies), or centralized, through verification by a central bank (i.e. central bank digital currencies (CBDC's)). While this contrast in centrality makes the two inherently very different, one thing crypto currencies and CBDC's have in common is that they are a means of exchange available only in digital or electronic form, meaning that the funds within this system travel from one digital wallet to another.



## Cryptocurrencies

On the one hand, we have cryptocurrencies, like Bitcoin or Ethereum, which are often in the news, not because of their innovative technology, but rather because of their potential as an interesting investment opportunity. Nevertheless, their underlying distributed ledger technology, often referred to as the blockchain, is disrupting many established industries such as the financial sector. Picture the blockchain as an enormous virtual spreadsheet that is duplicated across many computers, which are all connected through the internet in order to form "the chain" in blockchain.

Payment transactions are one of the primary use cases of blockchains. In the transaction example of buying a jeans, if the customer would buy the jeans using cryptocurrencies then he or she would send the transaction out into a "block" of multiple other transactions. The transactions in this block would then be validated against the spreadsheets of other participants in the network in order to



ensure that the customer has the funds, after which the funds would be transferred to the business account. As such, blockchain technology is used to ensure the transaction can be trusted without a central party (e.g. bank) needing to ensure both parties that the buyer has the necessary funds to pay the seller. Even though it is still in a very early phase, **unthinkable transactions are already being executed at a lower cost than ever before.**

### ***Central bank digital currencies***

On the other hand, we have CBDC's, which, unlike cryptocurrencies, will be issued centrally and backed by their respective central banks. These currencies, such as the potential **digital euro**, **digital dollar**, and **digital yuan**, may become reality in the coming years, with the People's Bank of China (the Chinese equivalent of the European Central Bank) planning to **fully operationalize its digital yuan as soon as 2022.**

These currencies are similar to cryptocurrencies in the sense that they are stored within a digital wallet and lower to incurred transaction costs. However, even though they might be based on blockchain technology, they will most definitely not be decentralized as their respective monetary institutions will control them in order to ensure financial stability. Also, because of the centralized governance of CBDC's, governments and central banks view the technology underlying such digital currencies as an opportunity for reducing and controlling financial criminality (e.g. money laundering), instead of a criminal risk that is often linked to cryptocurrencies.

### **Why should you care?**

Maybe you did not want to have anything to do with Bitcoin or CBDC's whatsoever up until now. However, digital currencies are coming and the "cash" mindset found in level 1 will soon be as outdated as using oil lamps and the fireplace to light and warm up your home. This does not mean that you should start buying Bitcoin right now, sell all your future products for cryptocurrency, or read up every day on the progress surrounding CBDC's. In fact, many aspects of exactly

when and how digital currencies will start to impact your business are still unknown, but one thing you can do is evaluate on which transaction level your business depends the most and maybe upgrade that in order to smoothen the transition to digital currencies in the future. Ultimately, there lies an opportunity in preparing for the developing digital currency trend, which, even though it might not give you a complete competitive advantage in all aspects of your business immediately, will at the very least show your competitors, clients, and partners that you are willing and prepared to operate in the new digital era.