

## Why must banks change their infrastructure as cash becomes digitized?

In the key scene in the movie *The Matrix*, Neo realizes that he must choose between the red and the blue pill. Central Banks also have a fundamental choice of how to digitize cash. – Cash can either be digitized as a new currency, using existing payment rails, or as a new format, requiring large investments in the banking sector, says Joachim Samuelsson, CEO Crunchfish.



*Crunchfish CEO Joachim Samuelsson shows that the World's Central Banks are facing a decisive choice that will have an enormous impact on the bank infrastructure in their countries.*

Money is available in four formats - two physical and two digital. Central Banks issue physical money in the form of coins and banknotes. Digital money exists on bank accounts and constitutes a claim on the bank rather than on the Central Bank. Cryptocurrency is a new digital format, not guaranteed by Central or commercial banks. Instead, authenticity is proven by a blockchain of transactions. One of the key reasons why Central Banks want to digitize cash is the threat that international cryptocurrencies could undermine a country's currency and its opportunities to dictate monetary policy.

- Digital cash is neither digital money nor a cryptocurrency. The goal is to obtain the unique properties of physical cash as a means of payment in digital form. Such payment methods must work offline and be able to be accepted as payment immediately and completely independent of network connectivity. The privacy of payments must still be ensured within reasonable limits. Just because payments are digital does not mean that the bank needs to see every transaction made. Digital cash must also be extremely flexible, scalable and interoperable with current payment solutions. Crunchfish has developed a solution that meets all these criteria, Joachim Samuelsson proudly states.

### Crunchfish Digital Cash Wallet xoxo.cash

Crunchfish complements the World's payment services with its [Digital Cash Wallet xoxo.cash](#), whether on mobile or payment card. It processes an offline balance that is reflected in a corresponding and blocked Digital Cash account online.

-As the payment is carried out, a digitally signed payment is created and verified offline by the specified recipient. Crunchfish Digital Cash payments can be compared to paying by credit card; the difference is that the debited account is blocked to guarantee that there is no overdraft when the offline payment is settled, **Joachim Samuelsson explains**.

The primary purpose of digital cash is not to keep but to replace the unique properties of physical cash as a means of payment. Crunchfish's patent-pending Digital Cash Wallet solves this by processing payments in two steps. First offline clearing upon payment and then settlement when the money is moved between accounts.

### New currency or new format?

The World's Central Banks have a choice to make. They can choose to issue their digital cash as a new currency, to be handled on existing payment systems, or as a new format requiring bank infrastructures to be upgraded to handle the new format. However, according to a [staff memo from the Central Bank of Sweden](#), a new format will not solve the issue of offline payments. At the same time, [VISA explains](#) that offline payments can be offered by using two-step payments. Regardless of what the Central Banks decide, Crunchfish's Digital Cash solution will be needed.

Crunchfish's entry with Sweden's dominant real-time payment service Swish in the National Telecom Agency innovation contest shows that it is possible to implement offline payments on account-based rails. The Crunchfish Digital Cash Wallet can then also handle the Central Banks' digital cash, as there is no technical difference in whether the digital cash is guaranteed by the Central Banks or commercial banks.

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### About Crunchfish – [crunchfish.com/digitalcash](https://crunchfish.com/digitalcash)

Crunchfish is a technical pioneer in digital payment solutions with xoxo.cash, its patent-pending Digital Cash Wallet that uses a two-step payment process; first offline clearing followed by online settlement. This makes digital payments robust and independent of the internet. Crunchfish has been listed on Nasdaq First North Growth Market since 2016 and is headquartered in Malmö and with operations in India.