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## **Smart Banking: Cryptocurrency and Blockchain. A Snapshot of the Future.**

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### **Abstract**

Facing global digital challenges and opportunities, the banking system is changing at a breathtaking speed, striving to improve their services and develop modern methods to keep their customers. Among the digital innovations banks take into consideration are smart banking, blockchain, and cryptocurrencies. The present paper aims to present an introduction to these concepts based on recent information. The paper is intended as a starting point for future research on the topic.

**Keywords:** smart banking; cryptocurrency; blockchain; digital banking

### **Introduction**

We live in a very dynamic world where banks have to adapt their businesses to cover more and more customers (individuals as well as companies) while facing low trust and brand loyalty.

Among the new (digital) technologies that are considered by banks to accommodate their customers' needs, the more notable ones are the smart banking, the blockchain technologies and the cryptocurrency. The change is just at the beginning. It remains to be seen whether the traditional banking and regulatory systems and the bureaucracy red-tape found everywhere in banks will be capable to adapt to the new needs of the customers.

However small and regardless of the pace, the banking system is changing. Small and fast processes are becoming the norm with today's speed and ubiquitous online interactions, and the banks need to adapt to the customers' needs. Even inside banks, the workplace is becoming more and more digital and dynamic, including the interactions with the customers, and many online tools and systems already exist to assist in these processes (Avanade, 2014). It became apparent that banks need to become more and more innovative and develop modern methods to keep their customers, however, they should preserve the balance with traditional good practices and avoid the trap of over-modernizing everything (Stokes, 2014).

The changes will not be easily implemented, in part because of the regulatory systems, and in part because of the remaining effects of the financial crisis of 2008-2009. For example, the European Union is still making big steps in creating banking reforms. The banks also struggle with high-costs maintenance for their legacy infrastructures and lower trust and loyalty from their customers (Oosthuizen, 2015).

## **Blockchain technology**

The blockchain technology is a huge digital ledger of transactions that is incorruptible and can also expand beyond the financial world to other activities. At its core, the blockchain technology is a time-stamp with a unique date and record that is managed by hundreds of computers and servers around the world (Tapscott, D., Tapscott, A., 2018).

Hundreds and hundreds of businesses exchanges, between suppliers, partners, customers, and other entities happen every second of every hour 24/7 around the globe, ranging from goods or services to money and data. Each exchange needs to be precise and reliable for an efficient flow of work involving two entities. Over ten years ago, IBM started using the blockchain technologies to create a block (like a Lego piece) for every single one of the transactions and then to connect the block to the transaction before and the transaction after, resulting in an

irreversible chain to track all financial moves of the company (IBM, 2006). With the blockchain system, data can be distributed but not copied creating a backbone for future security software. In order for someone to alter a record already in the chain, he/she would need to modify millions of chains (Rosic, 2016).

## **Cryptocurrency**

Currencies allow people to convert effort into something that maintains its value. Cryptocurrencies convert plain text into unintelligible text and vice-versa. Since in this day and age everyone is expecting confidentiality, integrity, and authentication, a currency that can provide these aspects has significant importance and value (Deikun, 2018).

Back in 2017, when bitcoin skyrocketed to \$20,000 per unit, everyone was talking about it, from investors to brokers to investors. It was the hot topic of the day and everyone regretted not investing in it. However, after just a couple of years, the value of a bitcoin is out of the hyper-bubble, to a more stable \$5,000 per coin, and people started to lose interest on the subject. Nevertheless, according to Spilotro (2019), it may well happen that using market strategies the value of bitcoin or other cryptocurrencies will rise again (Spilotro, 2019).

The rise of cryptocurrency is both good and bad for banks around the world. Some banks forbid transactions with cryptocurrencies, whilst other banks are adapting to the trend and create their own cryptocurrency. For example, the Pakistan state bank will launch its own cryptocurrency by the end of 2025 to promote financial responsibility and reduce corruption(Kiani, 2019).

One major issue concerning the cryptocurrency around the world is the security of transactions. Early in 2019, a major attack shook the cryptocurrency world targeting 32 android apps and 100 international banks dealing with cryptocurrencies. These types of attacks will continue and will be more and more frequent as the world is still adapting to a mix between the old money and cryptocurrency (Canellis, 2019).

## **Conclusion**

Banks are trying to adapt to the emerging digital technologies and needs of their customers by becoming “smart” and employing, among others, blockchain and cryptocurrencies. The change is neither easy nor fast because of many reasons. One of these reasons is that people are looking more and more for confidentiality, integrity, and authentication, something banks are not used to provide at the standards we are expecting in today’s day and age. Another reason is that banks are being blocked by red-tape from bureaucracy and regulations.

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