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Bitcoin: signal of a traditional monetary system in distress?

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Summary

- Bitcoin is a cryptocurrency created in 2009 by Satoshi Nakamoto and introduced in a report named "Bitcoin: A Peer-to-Peer Electronic Cash System."
- A cryptocurrency was defined by the European Central Bank in 2012 as "*a type of unregulated, digital money, which is issued and usually controlled by its developers, and used and accepted among the members of a specific virtual community.*"
- Developed in the aftermath of the Subprime mortgage crisis in 2008 to provide an alternative model to the monetary system based on trust, Bitcoin is currently experiencing massive success in the context of the Covid-19 crisis.
- Investments in Bitcoin can be seen as a kind of technological populism that highlights the contradictions and dysfunctions of the traditional monetary model.
- Bitcoin can be risky if misused. The volatility and irreversibility of transactions put economic agents at risk. The anonymity of transactions can be a way for illegal groups, such as terrorist groups, to finance their actions and circumvent the controls of banking or public authorities.
- Bitcoin also raises ecological concerns regarding the power consumption of computers.
- National, regional and international public authorities must cooperate to regulate this innovative technology. It is not a question of destroying innovation but providing it with a legal framework and adapting it to contemporary issues.

Keywords

Bitcoin, cryptocurrency, Blockchain, bitcoin mining, monetary system, technological populism, volatility, regulation, security, governance, central banks, European Central Bank, Czech National Bank

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On March 13, 2021, "The top cryptocurrency by market cap crossed $60,000 for the first time and hours later crossed $61,000 to set an all-time high of $61,556.59" (Palmer, 2021). Bitcoin is a cryptocurrency whose upsurge since the beginning of the Covid-19 crisis has raised questions and concerns among many observers around the world. The effervescence that Bitcoin causes in 2021 with its rise in investments questions the traditional monetary model and its contradictions. Thus, our working hypothesis is not to present the nature of Bitcoin but rather to understand its progression in the particular context of the health crisis. The progression of Bitcoin can signal the condition of societies in economic, monetary, political, and social terms.

To what extent can be the rise of Bitcoin analysed as a reaction to the malfunctioning of the traditional monetary model? What are its risks, and what policies should be considered?

Introduction

Bitcoin is a digital currency revealed to the public in 2009 during the global economic crisis through a report published by Satoshi Nakamoto entitled "Bitcoin: A Peer-to-Peer Electronic Cash System" (Nakamoto, 2009). The anonymity and doubt surrounding the author's identity contribute to the difficulty of grasping Bitcoin's complexities. Bitcoin is "a software, a program designed to allow people to exchange value directly with each other" (Vigna, 2009). It works in a decentralised way via a network of connected computers. In other words, Bitcoin does not depend on any exchange intermediaries and supervisory authorities such as banks or states. Satoshi Nakamoto explains that "the aim is to make payments online, from a third party to another, without going through a financial institution" (Nakamoto, 2009). A computer network verifies and guarantees secure transactions at reduced costs. Bitcoins are digital products created by computers around the world using open-source software and stored in programs called "wallets".

Moreover, the specificity of Bitcoin lies in the Blockchain technology that composes it. Blockchain is a "shared and public ledger on which the entire Bitcoin network is based. All confirmed transactions are included in the Blockchain" ("About bitcoin.org", n.d). It memorizes transactions chronologically with cryptographic means and an electronic signature. The confirmation of Bitcoin transactions in the Blockchain register is possible thanks to Bitcoin mining, which consists of confirming the transactions and contributes to the security and development of the Blockchain.

Bitcoin appeared in the context of the global economic crisis in 2009 to be a technological innovation challenging the traditional monetary model based on trust. There is confidence between economic and regulatory actors such as central banks, private banks, and states. However, in the context of the Covid-19 crisis, Bitcoin is becoming increasingly popular. This is especially the case of Prague in the Czech Republic, which has been described by Radio Prague International from 2019 as "the capital of the world where you can pay in the most shops with Bitcoins" (Rosenzweig, 2009). In 2021, Radio iROZHLAS ("Bitcoin dál stoupá, cena kryptoměny poprvé překonala 50 tisíc dolarů", 2021) reports a significant increase in demand for bitcoins in the Czech Republic. This popularity can be worrying since Bitcoin may contradict the traditional monetary system and become an alternative system.

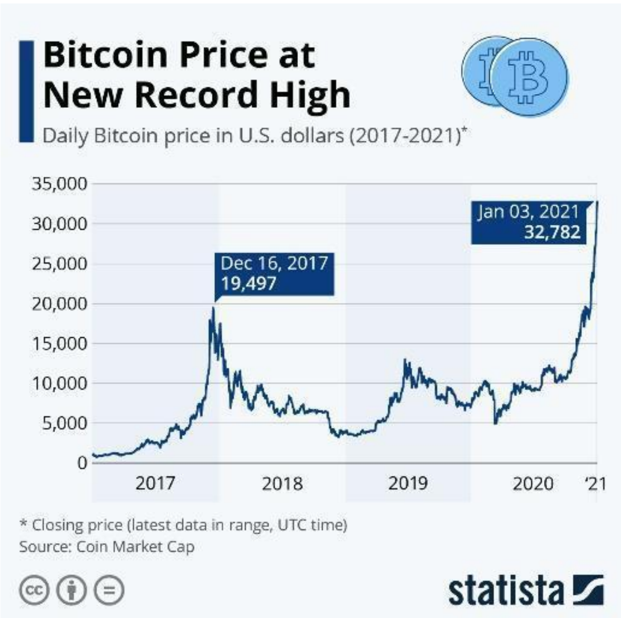
An alternative to the traditional monetary system?

In the traditional monetary system, monetary policies are the responsibility of central banks. Central banks must guarantee the balance of the money supply in the market and ensure price stability. They are in charge of money-related matters but cannot act on other issues such as taxation, which is the state's domain. At the European level, the European Central Bank regulates the money supply and manages the Eurozone. At the level of the Czech Republic, which has not adopted Euro yet, the Czech National Bank is responsible for maintaining monetary stability: "According to Article 98 of the Constitution of the Czech Republic and in accordance with primary EU law, the primary objective of the CNB is to maintain price stability" ("About the CNB", n.d).

However, it must be understood that the traditional monetary system and the economies more broadly are interdependent. As a result of globalisation, which involves trade around the world and an economic system based on free trade, central banks are in contact with each other and exchange liquidity. This interdependence of central banks and second-tier banks roots back to the Subprime mortgage crisis in 2008. This crisis has shown the limits of the interdependence of economies (Bartnik, 2015). In this context, Bitcoin has emerged as an alternative model that does not depend on trust.

Bitcoin should compensate for the contradictions and dysfunctions of the traditional monetary and economic model. "What is needed is an electronic payment system based on cryptographic proof instead of trust, allowing any two willing parties to transact directly with each other without the need for a trusted third party" (Nakamoto, 2009). Without any intermediaries, Bitcoin becomes a reaction to a risky economic system. Thus, Bitcoin investments have gradually increased between 2017 and 2021, as shown in the table below.

Table 1: Daily Bitcoin price in U.S. dollars (2017-2021)



Source: Coin Market Cap, Statista, 2021

The explosion in Bitcoin investment is correlated with the onset of the Covid-19 crisis. This crisis has increased teleworking to maintain people's health. Digital technologies have become not only the necessary tools to communicate but also to pursue an economic activity. This is particularly the case for Bitcoin. According to the graph below, Bitcoin reached $61,556.59 on

March 13th, 2021 (Palmer, 2021). There are several reasons for this. The digitalization of payments and internet purchases due to the closure of most non-essential shops and the recession threatening the economies due to the economic slowdown are all reasons favourable to Bitcoin.

Table 2: Bitcoin value from February 1, 2021, to March 19, 2021

Source: Coindesk, 2021

It is becoming interesting to invest in Bitcoin in times of the Covid-19 crisis, as the car manufacturer Tesla shows. It has invested 1.5 billion dollars equivalent to 32 million Czech crowns in Bitcoin ("Po investici Tesly je bitcoin na svém historickém maximu", 2021). The company's managing director explains that investing in Bitcoin diversifies liquidity and offers new payment possibilities for customers (Karpal, 2021). In a context of crisis, investors may turn to Bitcoin as the traditional monetary system is in trouble. Thus, the progression of Bitcoin can be understood as a signal showing the dysfunctions of the current financial system.

Bitcoin as a technological populism?

Bitcoin is a distress signal of the traditional monetary system. It reveals its dysfunctions and shows how the system needs to be regulated and adapted to the contemporary economic situation. If we refer to Satoshi Nakamoto's report (2009), the term "peer-to-peer" is fundamental. Bitcoin breaks the current model and allow economic actors to exchange directly without intermediaries. In this logic, Bitcoin has become a populism,[1] denouncing the abuses of the traditional monetary model and the intermediaries of exchange perceived as "elites". Thus, populism can also be applied to the world of finance, resulting in what researchers Asress Adimi Gikay and Catalin Gabriel Stanescu call "technological populism" (2019).

[1] Populism is a political science term defined by Cas Mudde (2017) as "thin ideology that sees society as divided between two camps that are both homogeneous and perfectly antagonistic, "the pure people" and "the corrupt elite" and claiming politics can only be the expression of the general will of the people" (Mudde & Rovira Kaltwasser, 2017). As Funke (2016) explains, the economic crisis has led to a radicalisation of political conflicts, the strengthening of extremist political parties and populist trends.

In political science, populism can be seen as a pathology of society or a signal that society is experiencing difficulties. In finance, technological populism would serve the same function as in political science, namely, to reveal the dysfunctions of an ailing global economic policy. However, there are examples of Bitcoin becoming an instrument of political strategy with potentially serious consequences. In Russia, for example, Alexei Navalny had invested in Bitcoin to finance his election campaign. As Wolfgang Munchau explains, "The reason they chose Bitcoin was to escape the clutches of Vladimir Putin, who has ultimate control over all ruble-based financial flows" (2021). The decentralised nature of Bitcoin and the absence of supervisory authorities allow it to escape the control of the Russian authorities (Sauer, 2021). In Iran, mining farms are "used to circumvent US sanctions and avoid the problems the country faces with hard currency" (Joffre, 2021). Journalist Tzvi Joffre further explains that "Hamas has also used Bitcoin to raise funds while avoiding international sanctions" (Ibid.). Thus, in these cases, Bitcoin is a strategic tool, not only in monetary but also in political terms. However, the strategic use of Bitcoin may have a cost for society. More than a cryptocurrency, it is a tool that can exceed the field of finance and become a danger.

Risks of the cryptocurrency

The first risk of Bitcoin is its value. Bitcoin is not rooted in reality; its value does not depend on anything concrete. The owner of Bitcoin does not own something real but a line of numbers in a computer program. Thus, the value of Bitcoin depends on supply and demand, which makes it speculative. A speculative cryptocurrency has a value that can change at any time. Therefore, Bitcoin is very fickle and insecure. As Paul Vigna explains, "The result of Bitcoin is only the result of what investors are willing to pay" (2021). Bitcoin's high volatility is a risk for economic agents such as consumers and traders. For an investor, the risk is less since he or she invests money with the aim that its value fluctuates. However, for consumers, the currency must be stable. For example, during the first weekend of January 2021, the value of Bitcoin rose by 20%, but the following Sunday, it fell by 20% (Ibid.).

The second risk of Bitcoin is linked to its nature and is becoming a security issue. By providing an alternative model to the traditional monetary system, which showed its limits during the 2008 crisis and the Covid-19 crisis, Bitcoin has created other risks. When a transaction is carried out, it is final, and nothing can reverse it. There are no safeguards as in the banking system, where banks act as intermediaries when problems occur. Irreversible transactions can present a risk for economic agents.

Moreover, on a more global scale, anonymity and the absence of supervisory authorities is a risk, particularly in the case of illegal money transactions, but also in the case of international terrorism (Dion-Schwarz, Manheim & Johnston, 2019). As part of the fight against international terrorism, money flows, and financial transactions that can be used to support terrorist attacks must be controlled (Ibid.). However, in the case of Bitcoin, states cannot have access to the transactions. These are visible on the Blockchain but otherwise anonymous. As official currencies are more controlled by states and banking authorities, terrorist groups may be encouraged to turn to cryptocurrency.

Bitcoin's final risk is its ecological impact. Thousands of miners working in networks use a lot of energy and can cause power outages, as it happened in Iran, for example. A series of power outages have been observed in Iran near the mining area (Joffre, 2021). It is still difficult to know the actual environmental cost of Bitcoin.

Recommendations: How to balance innovation with regulation?

Bitcoin is a challenge. It raises multiple questions related to:

- Volatility
- Regulation
- Security
- Governance
- Energy and environment

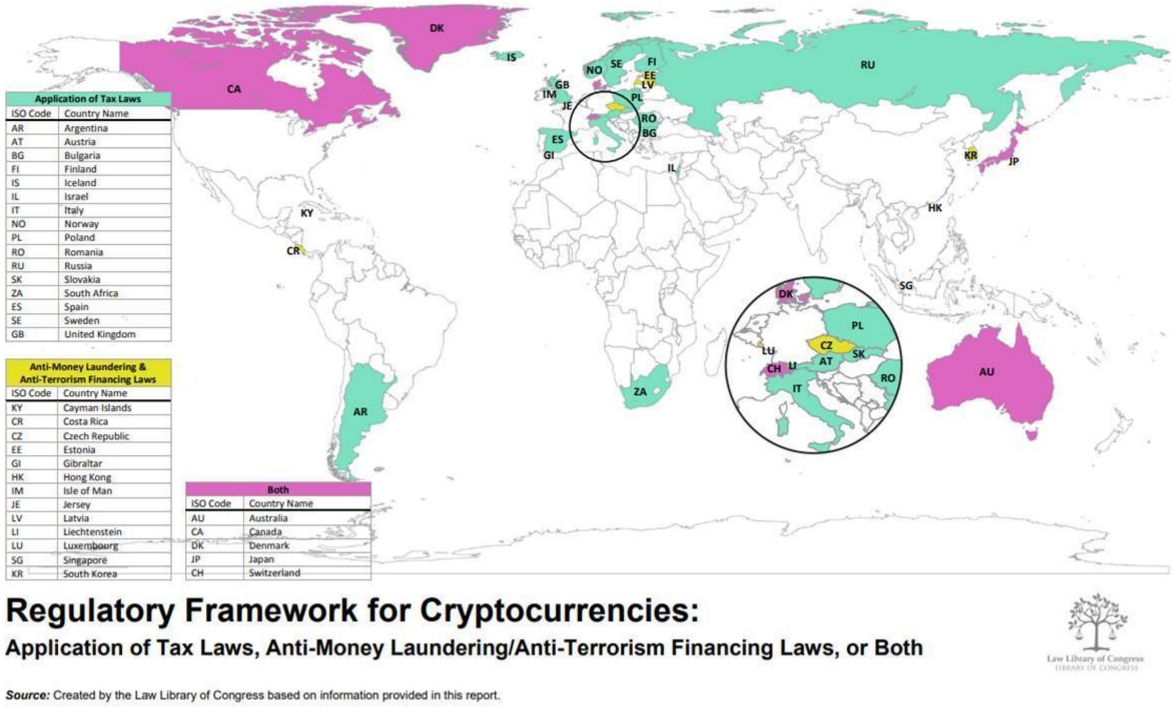
These challenges require a broad reflection on the future of Bitcoin and its place in society.

- **Clearly define Bitcoin and create its regulatory framework**

There is a legal uncertainty surrounding the notion of Bitcoin. Bitcoin is the subject of lively debate about its nature: is it a currency or not? Most countries and institutions, such as the European Union, are unable to solve the legal questions posed by virtual currencies (Cvetkova, 2018). The European Central Bank defined cryptocurrency as "a type of unregulated, digital money, which is issued and usually controlled by its developers, and used and accepted among the members of a specific virtual community" (2012). This definition is not clear for Bitcoin because it does not provide a clearly defined legal framework. Therefore, there is still confusion today, as the words of the President of the European Central Bank, Christine Lagarde, show: "Bitcoin is not a currency" (Munchau, 2021). Some consider Bitcoin as a currency and others as digital data.

However, the official recognition of Bitcoin as a currency would allow the addition of tools to control it, which is currently very difficult. The following map shows the different international legislation implemented for Bitcoin. For example, in the Czech Republic, a 2016 law against the financing of terrorism and money laundering has been amended by adding an article on virtual currencies ("Law No. 368/2016", 2016). However, this type of legislation is specific to the Czech Republic and does not apply to other states.

Table 3: Regulatory Framework for Cryptocurrencies ("Regulation of Cryptocurrency Around the World", 2018)



Source: Law Library Congress, 2018

- **Bitcoin regulation: Push for political dialogue**

The issue of the regulation of Bitcoin is fundamental. If in "the wrong hands," Bitcoin could become a strategic tool for terrorist groups, for example. The question of the democratisation of Bitcoin is as crucial as the question of its regulation. Can Central Banks act to regulate Bitcoin? Can a supervisory authority compromise Bitcoin's primary function? These questions need to be asked as Bitcoin will continue to progress.

We need to envisage cooperation at several levels: at the regional level within Europe, as well as at the international level. Setting up working groups on Bitcoin at the European level to define a common policy to regulate Bitcoin and creating international bodies specializing in cryptocurrencies could be envisaged.

Regulation is required on issues related to combating international terrorism. Bitcoin must not become a drag on counterterrorism policies.

- **Create working groups with different areas of analysis**

Bitcoin has consequences for society. It exceeds the world of finance and raises questions about the future of transactions. If working groups are set up, they should be composed of different specialities. Political analysts, sociologists, economists, historians and other specialists should take part in the discussions.

Conclusion

Bitcoin is a technological innovation challenging the traditional view of monetary and commercial transactions. It shows how the Internet can revolutionise everyday life. It does not have common legal recognition worldwide. Thus, technological innovation and novelty are contributing to the popularity of Bitcoin. Moreover, Bitcoin is developing in the particular context of a global pandemic. The public policies set up against Covid-19 are contributing to the acceleration of digital technologies, which are becoming essential, especially because this crisis reveals the limits of the system based on globalisation. For this reason, the contemporary period can be considered a turning point because it is the first time the world is confronted with a pandemic affecting all continents.

Numerous studies have been launched since the beginning of the health crisis to rethink the monetary model and adapt it to contemporary challenges. The Bitcoin outbreak comes in this context and can be considered a tool that reveals the economic system's condition. We can talk about "technological populism" as Bitcoin is a signal of a traditional system in distress.

However, the use of Bitcoin cannot be seen as a solution. Bitcoin is risky and can become a danger for several reasons analysed above. It can become a drag in certain areas, particularly in the fight against terrorism–a particular issue in the 21st century. Concrete measures should be encouraged to regulate Bitcoin. Besides, a policy for Bitcoin cannot be effective without defining a legal framework. Finally, it is necessary to promote dialogue and international cooperation to understand and respond to these issues.

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A French student in political science and international relations, she spent a semester at Charles University in Prague. Her fields of study at Charles University focused on current issues such as the notion of war in the 21st century, religion and secularisation in Europe, but also on issues related to the geographical area of Central and Eastern Europe.

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