

Impact of Blockchain on the Global Economy

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Abstract: This article researches the effects of the subject on the economic development of the global economy and its role in financial markets and operations. Blockchain updates the ways of completing transactions and unites various participants in a network, saving time and money and being transparent. It looks at leaders such as Bitcoin and Ethereum and the enormous technical progress of asset digitisation and Smart Contracts, and the discussion outlines the opportunities and threats currently prevailing in practice. Thirdly, it considers the industry perspective concerning the future of blockchain and corresponding sectors and domains. Last of all, the article will endeavour to provide a review of the fact that the technology of blockchain is indeed transforming the economic world.

Keywords: Blockchain, global economy, financial markets, economic transactions, digital currencies, smart contracts, asset tokenisation, efficiency, transparency, challenges.

I. INTRODUCTION

Blockchain technology is truly revolutionising the traditional transaction processes across all industries. It is secure and transparent in record keeping, which is all required in today's digital world because it's decentralised. The **impact of blockchain on the global economy** is profound, as it enables efficient transactions without the need for intermediaries like banks or financial institutions. In this instance, Blockchain allows these middlemen to be bypassed, saves on transaction costs, and speeds the settlement of transactions, which becomes an attractive option for companies that wish to improve their operational efficiency.

Blockchain enables borderless payments in financial markets and the economy and tokenises assets and smart contracts. The implications for these businesses and financial services are huge, given that businesses are increasingly adopting this technology. This ability to execute secure, automated transactions is not only being used by financial institutions in a similar way to create new landscapes but is also enabling innovation in other industries.

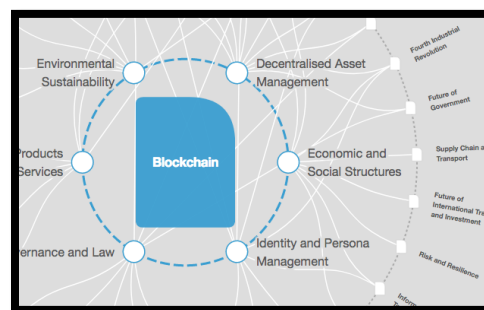


Fig 1: Impact of Blockchain on the Global Economy

Interpreting the possibilities of blockchain technology depends on grasping its principles. As blockchain applications and benefits continue to unfold, we discover the far-reaching **impact of blockchain on the global economy** beyond all financial transactions, seeking a more transparent, efficient and connected world.

II. OVERVIEW OF FINANCIAL MARKETS AND ECONOMIC TRANSACTIONS

The buying and selling of capital and resources in the global economy can readily be engaged through the participation of financial market players at individual, corporate, and government levels. Markets use many instruments, including stocks, bonds, currencies, and commodities, to establish the value of assets and then direct money to its most productive uses [1]. These other processes are associated with buying and selling. Economic transactions range from simple consumer spending to complex forms of investment.

Conventional financial markets have applied structure intermediation mechanisms where traders involve professionals like banks and brokers to aid in trading, record keeping, and reporting of regulatory compliance. Such reliance results in higher costs and reduced effectiveness as every transaction has to be authorised and verified by different parties. However, with the coming of blockchain technology, the markets were seen to be changing significantly in their financial market. The **impact of blockchain on the global economy** is profound, as it promises to reduce transaction costs and streamline processes, enabling faster and more secure economic transactions.

Due to its dispersed structure, blockchain provides more transparency and improves the level of protection, as participants execute transactions without intermediaries. The shift could add value to the population that does not have access to formal financial services, which would create a better monetary system for the population. Additionally, the use of decentralised digital currencies and other decentralised financial applications (DeFi) is changing the perception of money in people's lives and an emerging range of new financial services and products.

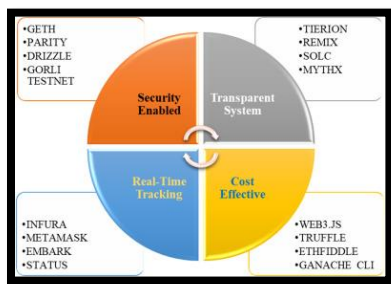


Fig 2: Blockchain Technology applications for financial services

In a word, a profound study of the underlying financial markets and the processes of an economy is of utmost importance to be able to understand its deeper ramifications with the advent of blockchain technology [2]. This new advancement will mean that a totally new turnabout in the world of economies might be around the corner toward a more efficient and inclusive financial horizon.

III. KEY APPLICATIONS OF BLOCKCHAIN IN FINANCIAL MARKETS

Blockchain is quickly becoming prominent in more and more financial markets, providing new and sleek solutions to previously enduring problems. One of the key applications of blockchain is in **digital currencies**. Other cryptocurrencies, such as the most renowned Bitcoin and Ethereum, have demonstrated that decentralised currency can facilitate P2P payment, but what business needs is not what centralised banks have to offer. This not only enhances transaction speed

but also significantly reduces costs, illustrating the **impact of blockchain on the global economy**.

Another critical application is in **smart contracts**. These smart contracts, with the conditions stated within the code, execute different tasks on their own, including trade settlement and payment. Reduce the number of intermediaries in many business transactions substantially, where they have not been eliminated, and drastically reduce the chances of errors from manual data processing. The participation of smart contracts in enhancing the financial markets' operation is expected to redefine how contracts are made in the future.

Furthermore, it shifted record-keeping, making it more **transparency and security** with the help of blockchain. Every contract is documented in a blockchain – once a deal has been done, the entry cannot be reversed [4]. This has a big boost on the security of the channel as well as compiling that evidence for any incidence that has taken place, which in a big way brings that check and confidence in the market players at play.

In addition, the utilisation of blockchain across **digital asset management** is increasingly popular. Blockchain also de-centralizes tangible assets, including real estate commodities, and thus makes ownership of expensive big properties possible. This can, in a way, over time, also raise the potential for financial systems to be able to house the deprived and foster economic growth.

IV. BENEFITS OF BLOCKCHAIN

TECHNOLOGY ON THE GLOBAL ECONOMY

The integration of blockchain technology into various sectors offers significant benefits that have far-reaching implications for the **global economy**. One of the main benefits is the efficiency in exchanges is improved [5]. Blockchain movements are done in absentia of other parties such as banks, and this is done in peer-to-peer; hence, it may take much less time and cost if compared to the traditional systems. In addition, it improves the financial processes and releases control over financial markets, which are extremely important for development.

Another key benefit is the **enhanced security** that blockchain provides. Owing to a decentralised ledger structure that depends on the distributed consensus, it is almost impossible for a single node to tamper with or delete information held in a blockchain. The records are encrypted, and all transactions are connected to the prior one, which makes the system virtually incorruptible. The degree of security is useful in industry areas like finance because fraud-related incidents have adverse impacts on the economy [6]. The **impact of blockchain on the global economy** is

underscored by its ability to build trust among stakeholders, leading to more robust financial systems. Moreover, blockchain technology promotes **greater transparency** in transactions. As to the nature of a Blockchain Network, all participants involved have equal access to information that results in less alteration and manipulation. Such openness can help promote responsibility where industry necessitates it such as the supply chain management and financial industries. In turn, if firms and customers gain confidence in the other party through trust, commerce in the economy is expected to rise.

The **democratization of access to financial services** is another critical benefit. Blockchain technology provides an opportunity for people and SMBs to engage in financial systems that were closed to them because of high thresholds. For example, the decentralised finance (DeFi) concept opens the possibility of obtaining loans or making an investment without any central banking infrastructure for underprivileged people.

V. CHALLENGES AND LIMITATIONS OF BLOCKCHAIN ADOPTION

Despite the promising advantages of blockchain technology, its widespread adoption faces several challenges and limitations that can hinder the **impact of blockchain on the global economy**. One of the primary concerns is **regulatory uncertainty**. Even today, communities, governments, and other regulating authorities around the world continue to try to regulate blockchain and the products that come along with it, such as cryptocurrencies and smart contracts [7]. This strange insecurity helps many companies, and investors do not want to take the risks to implement blockchain within the existing financial markets actively.

Another significant challenge is **scalability**. Since the origin of blockchain technology, which is practically performing multiple transactions at once, this problem has been evident. In detail, while using Bitcoin and Ethereum, users have faced a congestion issue where completing many transactions takes a longer time or needs a high fee amount, respectively. This limitation could impede the ability of blockchain to serve as a foundation for mainstream financial services and economic transactions, thereby reducing its overall effectiveness in enhancing the **global economy**.

Interoperability also poses a challenge for blockchain adoption. Since this is a way of developing the best use of the blockchain technology, there are many such platforms available provide coordination between them. This lack of standard can create fragmentation, and when blockchain is implemented, this will be the cause for a lot of complications towards the current business structures.

Additionally, **privacy concerns** are prevalent among users. The transparency provided by blockchain, however, can be its biggest drawback: valuable financial data is to be made available to the public. Whilst organisations wrestle with issues of disclosure and non-disclosure, the resistance to adapting this innovative technology may slow down the expansion of blockchain in the financial markets.

Lastly, the **environmental impact** of blockchain technology cannot be overlooked. The consumption of energy in hashing operations, as used by proof-of-work, has been seen as a prolific factor influencing the sustainability capabilities of blockchain. Addressing these environmental concerns is essential for broader acceptance and integration into the global economy.

VI. FUTURE PROSPECTS OF BLOCKCHAIN AND ITS ECONOMIC IMPACT

The future of blockchain technology is very promising, especially concerning its **impact on the global economy**. It seems likely that blockchain technology could disrupt several industries and become instrumental in the evolution of markets in finance and other business applications for economic transactions because companies and governments are innovating in the application. Take, for instance, the emergence of **decentralised finance (DeFi)** platforms. There, through blockchain, some technological advancements have revolutionised how people traditionally perceive these traditional financial systems by eliminating middlemen in making cross-transactions. In reality, it can reach these people in developing regions as access to financial services gets broader.

In addition, it is hoped that **smart contracts** will eventually make processes easier throughout all industries. For since it is possible for smart contracts to self-execute based on specified conditions without having to look for intermediaries, one can expect it to make transactions cheaper, more transparent, and raise trust from participants [9]. This will further amplify the **benefits of blockchain technology** by making transactions faster, cheaper, and more secure.

This, too, regulation clarity would emerge, since governments are keen to weigh innovation and consumer protection equally. In this regard, as regulatory frameworks become further defined, the adoption would speed towards mainstream financial systems.

The blockchain in the global economy will change the way all transactions will be carried out but will spur economic growth since it gives rise to innovative business models and efficiency opportunities [10]. As partners, including developers, regulators and businesses, find ways to eradicate current hindrances, it will come to be the epitome of the future of the

economy, opening doors of innovation and sustainability.

VII. CONCLUSION

The **impact of blockchain on the global economy** is profound and multifaceted. It still has great potential as it progresses, as this technology creates a positive change by improving efficiency, cutting transaction costs, and increasing transparency in the financial markets and other economic transactions. It's also important to underline that blockchain still has the potential to change industries and stimulate new ideas. While stakeholders actively come to resolve these challenges, there is a belief that blockchain will help bring economic growth and change the interactions of companies and individuals in the field of financial transactions. It will be important for adopting this technology to fully realise its benefits given the growing digital environment.

VIII. REFERENCES

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