A Study to know fintech companies use blockchain to promote sustainability.

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ABSTRACT:

The Sustainable Development Goals (SDGs) could be considered the paramount objective for all nations in the world. In keeping with this, a sound global financial system is now required to fulfil its mandate to encourage the mobilizing of private capital for the achievement of sustainable development and consistent economic growth. Current technology advancements and applications like blockchain are part of digital transformation and innovation.

Green FinTech strives to safeguard the environment and make financing more affordable for people of lower socioeconomic status. The core components of fintech are digital currencies, including those issued by central banks, blockchain, and cryptocurrencies. One may argue that cryptocurrencies are environmentally friendly. A decentralised network is brought about by the blockchain-based solution used by many fintech companies to establish and manage green digital products of all kinds. Fintech encourages both green finance and sustainable development, and it has revolutionised financial services and pricing methods. Fintech is environmentally friendly in and of itself, and it aids sustainable development in at least the following ways: by ensuring green finance, lowering costs and informational inequalities, boosting efficiency, valuing the assets of nature, and supplying realistic sustainable lifestyles. Sustainable finance has a solution thanks to fintech. Ant Forest illustrates the impact of fintech on sustainable development. To address climate change, fintech and green finance should advance simultaneously. Blockchain platforms are the future of finance as it promotes sustainability. Fintech refers to the use of technological advancements in the finance industry. These technologies include digital payments, open banking, mobile wallets, robo-advisers, cryptocurrencies, and application programming interfaces (API). Regarding internet user consumption and overall mobile internet usage, fintech is tied to numerous participants who utilise mobile banking applications (Statista, 2021). The primary components of FinTech tools in finance are blockchain, cryptocurrencies, and digital money. FinTech innovations have increased effectiveness while also keeping financial activity expenses down. Sustainable development objectives can be pursued with the help of green fintech tools and techniques such the usage of blockchain, mobile devices, open banking, and big data analysis (Bank, 2018). Clearly, these objectives include employing green energy sources, conserving the environment.

Our study focuses on how fintech companies might use blockchain technology to save costs. the carbon footprint, which is the primary factor contributing to climatic change (SDG 13). Raising sea levels, more frequent and severe weather, and the loss of wildlife habitats are just a few of the effects of climate change that can be lessened through carbon removal.

Key words: Blockchain, Fintech, SDG, technology, carbon footprint, Financial transformation, climatic change.

INTRODUCTION:

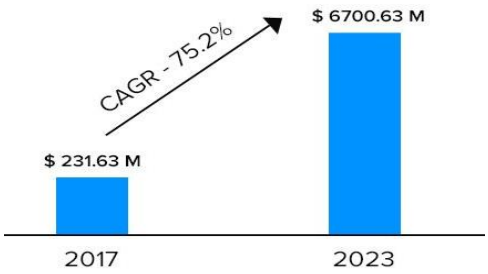
The United Nations (UN) developed the Sustainable Development Goals (SDG), which entered into effect in 2016.. More than 190 UN member states, including India, have signed them. These goals are to abolish economic poverty worldwide, safeguard the environment, and secure global peace and well-being for all. These goals are critical for all nations, and the SDGs emphasise that climate change is one of the primary issues that need rapid action. Environmental, social, and governance (ESG) issues must be the key guiding concept when financial sector investment decisions are made, according to one need for achieving SDGs. Environmental concerns may include biodiversity preservation, climate change mitigation and adaptation, and circular economy under the supervision and collaboration of public and private organisations.

The Sustainable Development Goals (SDG) were established by the United Nations (UN) and went into force in 2016. More than 190 UN member states, including India, have signed them. These goals are to abolish economic poverty worldwide, safeguard the environment, and secure global peace and well-being for all. These goals are critical for all nations, and the SDGs emphasise that climate change is one of the primary issues that need rapid action. Environmental, social, and governance (ESG) issues must be the key guiding concept when financial sector investment decisions are made, according to one need for achieving SDGs. Environmental concerns may include biodiversity preservation, climate change mitigation and adaptation, and circular economy under the supervision and collaboration of public and private organisations.

Blockchain is a decentralised, distributed ledger system that enables secure, transparent, and tamper-proof transaction and data recording. It permits the construction of a digital ledger of transactions that may be shared across different network members without the requirement for a centralised authority to maintain or validate the ledger. The technology is based on a cryptographic protocol that provides data security and authenticity by verifying participant identities and transaction integrity. Each block in the blockchain contains a cryptographic hash of the block before it, producing a chain of blocks that cannot be changed without invalidating the entire chain. Blockchains can be public or private, with public blockchains open to all players and private blockchains restricted to approved members.

Blockchain technology has applications has gone beyond bitcoin and financial transactions, such as supply chain management, identity verification, voting systems, and more. Because blockchain is a distributed and transparent system, it has the potential to improve efficiency, save prices, and increase trust and transparency across a variety of businesses.

Fintech refers to the use of technology to enhance financial products and services, while blockchain is a type of technology that allows for secure and transparent recording of transactions and asset tracking. Combining these two fields can offer many advantages to the financial sector, such as improved efficiency, transparency, and security.As Blockchain-based fintech firms utilize distributed ledger technology to provide transparent and secure financial services like payment processing, identity verification, and asset management. By leveraging blockchain technology, these firms can reduce costs, accelerate transaction times, and improve data accuracy. One of the primary benefits of blockchain in fintech is the ability to create immutable records of financial transactions, which can enhance security and prevent fraud. Furthermore, blockchain can enable real-time settlement of transactions, reduce the need for intermediaries, and streamline payment processes. The use of blockchain in fintech industry is 75.2%CAGR from 2017 to 2023.



Graph 1:forecast of fintech industry from 2017 to 2023

OBJECTIVES:

- To understand the role of Fintech and Blockchain in accomplishing sustainable development goals.
- To know how fintech use blockchain in ensuring green finance and reducing cost.
- To understand Fintech firms that use blockchain for sustainability may seek to increase social impact by supporting initiatives that solve social and environmental challenges.

RESEARCH METHODOLOGY:

- Research Design: The research design is an essential component of any research study since it specifies the overall approach and methodology for the research activity. Our research is purely secondary research and is completely Qualitative and is of descriptive design.
- Secondary Research can be effective research tool for this research as secondary research, pulls from a variety of sources such as academic journals, industry studies, and news items, can provide a more thorough understanding of this topic. This can help to improve the research findings' validity and dependability. Secondary research can assist in identifying trends and patterns in a specific subject or industry. These data can be utilised to guide future research and development. Validation of findings can be accomplished through secondary research. We can establish the reliability and validity of our research by comparing our findings to those of other studies.
- Where we considered mostly past few years data more of qualitative and some of quantitative data.
- Statistical research is an important part of this research. It entails examining numerical data in order to detect patterns, correlations, and trends, as well as making inferences from the data. Descriptive statistics help to summarise data, whereas inferential statistics help to make conclusions from data.

LITERATURE REVIEW:

1. (Hoang et al., 2022) in their study “Developments in Financial Technologies for Achieving the Sustainable Development Goals” they reviews the most recent financial technology advancements that support the SDGs and contribute to future sustainable international commerce. It shows that digital finance is progressively exhibiting its ability to solve barriers to the growth of finance for sustainable development, such as online banking, chip cards, online payment, mobile wallets, and payment apps. It also shows that FinTech may be integrated into new businesses and social organisations, resulting in a more evolved economic paradigm. The primary barriers to industry support for the SDGs are financial constraints and the hurdles posed by poor technological technology and costly updates. Blockchain technology may increase transaction costs and energy consumption, but its use may also increase heat

and lead to the formation of greenhouse gases. Future research should look on the potential for fintech to avoid or lessen financial contagion if it is structured properly.

2. Yushi, Ulrich(2021) in their article “Scaling up sustainable investment through blockchain-based project bonds” The suggested strategy would not only allow investors of all sizes to acquire local currency assets and companies such as municipalities to raise funds for sustainable infrastructure investment, but it would also facilitate project management once the project is operational, for example, through metering and billing, and create full transparency over the investment's life cycle, reducing problems associated with fund misuse. The paper focuses on how fintech may supplement traditional capital markets and mobilise financial resources for long-term infrastructure expenditures. It provides blockchain-based project bonds to raise funds via a digital crowdfunding platform that can also record and authenticate the use of proceeds, sustainability impact. It would include converting microsavers into microinvestors and reducing the need for overseas borrowing, with blockchain serving as the technical backbone. The Project was developed by the UNDP and the UNCDF to investigate how to leverage digital technology to collect small amounts of household savings for long-term infrastructure investment. The plan might be used to finance digital infrastructure investments and remove any regulatory constraints.

3. Gencay, Umut, and Fatih(2020) in their study “FinTech Companies: A Bibliometric Analysis” they investigated the FinTech research phenomenon among 636 Scopus papers between 2015 and 2021.where they analyses the sub-topics and trends in publications along two axes: financial services, financial inclusion, and financial technologies, and illustrates the growing interest in FinTechs over the last six years. Also examines the FinTech connections of cryptocurrencies, bitcoin, and smart contracts, as well as the significance of these new technology tools in enhancing individual and societal freedom. Finally, it explores if there is agreement on the framework required to characterise FinTech and evaluates universities contributions and support to academic research on FinTech. Some challenges have also arisen that require further investigation, such as FinTech's link with financial inclusion and financial services, and Blockchain's interaction with cryptocurrency and smart contracts.

4. Orkun, Isilay, and Mete(2022) in their article “Can Fintech Promote Sustainable Finance? They investigate the development of sustainable finance using fintech solutions for developing market economies in "Policy Lessons from the Example of Turkey." Fintech encourages green finance and sustainable development, which can assist mobilise financial resources for long-term infrastructure investments and mitigate the effects of climate change. It is clear that several factors and constraints must be addressed in order to accomplish green financing, such as the necessity for coordination between banks. Data was used from a research platform for a Turkish start-up ecosystem, Turkish regulations, and documents released on Turkey's sustainable finance strategies. Results confirmed that Turkey has made superb development in growing economic inclusivity for underbanked people and SMEs via contactless payment and contract systems and microfinance by mobile carriers and other online platforms. Turkey has also promoted the responsible consumption goal for sustainable development by improving fintachi solutions on payment systems with educational content. Future developments such as the sandbox environment in Istanbul Financial Center could provide Big Data, AI, and blockchain to better assess climate-related financial risks and form a national carbon trading mechanism. This might be accomplished in Turkey by creating a sandbox environment and a startup ecosystem. Unfortunately, due to data availability limitations, it has been unable to conduct an empirical analysis due to a lack of time series data. Limits and new research directions are offered for researchers to pursue.

5. Galazova, Magomaeva(2019) in their study “The Transformation of Traditional Banking Activity in Digital” they defined FinTech is a term that refers to financial institution background work technology. It began following the 2008 global financial crisis, when there was a lack of trust in banks, complicating access to loans. China and India are the global FinTech leaders. In 2016, the Central Bank established the Department of Financial Technologies, a project and process organisation, as well as the "FinTech" Association. In Russia, investments in financial technologies accounted for 4% of total

volume in 2015, rising to $15 million in 2016. The digital transformation of Russian banks necessitates an integrated technique primarily based totally at the introduction and implementation of a virtual strategy.. This change encompasses all facets of financial and credit activity, including banking management methods.

6. Simon et.al (2019) in their study “Blockchain in FinTech: A Mapping Study” they described Blockchain is a distributed network system with a shared ledger that offers privacy, security, transparency, and anonymity. A thorough mapping study was carried out to investigate the current state, themes, challenges, and limitations of blockchain technology in FinTech firms. The findings revealed a strong emphasis on issues such as security, scalability, legal and regulatory compliance, privacy, latency, cyber-risks, and technology development. The study sought to identify the primary blockchain research fields in the FinTech sector, as well as the primary publishing trends and academic literature shortages. It also highlighted the need of firms willing to use this technology dealing with impending obstacles, as well as the importance of understanding and addressing the aforementioned issues. Although blockchain is far from being the solution to all problems.

7. Kanta(2019) in his study “Token Model and Interpretation Function for Blockchain-Based FinTech Applications” he defined Financial Technology (FinTech) is a taxonomy that encompasses a wide variety of ICT (information and communications technology) connected to financial transactions and related processes. Token models play an essential part in financial engineering because blockchain is a technology that is employed in many other FinTech applications. This paper revisits some of the fundamental concepts that have accumulated behind this trend and demonstrates a generalised grasp of the technology through the use of an adapted metric approach. In this work, a token corresponding to a transaction output is modelled to be more suitable for financial engineering by extracting and interpreting some information from the block where the transaction is integrated. The Bitcoin blockchain's system design is more inventive than one might imagine. The potential of blockchain as a digital evidence system can be recognised more clearly by employing an adapted stochastic process to generalise the timestamping techniques. This recognition aids us in considering research options towards more stable FinTech applications, and this article offered a blockchain token paradigm as a starting point.

8. Husam, Tomiwa, and Dervis(2023) in their study on “Blockchain technology-based FinTech banking sector involvement using adaptive neuro-fuzzy-based K-nearest neighbors algorithm” the aim was to look at the financial technology (FinTech) aspects that influence Chinese banking performance. Because of the digital age, it is growing increasingly popular with customers, and FinTech has forced a fundamental revolution inside the financial services business. To optimise the proposed method, this work provides an adaptive neuro-fuzzy-based K-nearest neighbours' algorithm. The proposed technique was found to perform with 91% accuracy, 90% privacy, 96% robustness, and 25% cyber-risk. In the transition time, the recommended strategy will be more convenient, safe, and successful than existing approaches. It has changed how businesses function and consumers can now transfer money online more easily. FinTech companies have been created in response to the need for a more effective financial system with real-time applications. However, the study was limited to the financial and banking industry within China and could have limited sample size.

9. Puschmann, Hoffmann, and Khmarskyi (2020) in their study “How Green FinTech Can Alleviate the Impact of Climate Change—The Case of Switzerland”. they summarises pertinent academic research on the subject and presents the findings of an empirical, in-depth investigation of the Swiss FinTech ecosystem in terms of green FinTech startups and the services provided by the incumbents. The findings of the study indicate that although the literature in this new field has only just appeared, it is primarily distinguished by its concentration on particular Green FinTech components. According to research findings and market analysis, green financial technology (FinTech) has an impact on financial

services across the entire value chain, including customer-to-customer (C2C) and business-to-customer (B2C) interactions (b2c). In contrast to incumbents, whose solutions are still uncommon, the field is currently dominated by startup businesses. Although this study gives a preliminary thorough review of the topic of green FinTech, it also has several shortcomings and areas for further research. Secondly, while this study was confined to Switzerland, future studies may include other nations or even a worldwide viewpoint (e.g., policy development and alignment). environmental footprint and the importance of the financial services business.. Among those factors are the high percentage of imported greenhouse gas emissions (approximately two-thirds) and the high importance of the banking sector, which manages approximately 25 percent of all assets worldwide. A transfer of the results to other countries has to, therefore, be considered under these special circumstances. green FinTech can also address solutions of central banks or other financial institutions, which are not the focus of this research but may also have a significant impact on climate change. Notwithstanding these constraints, green FinTech appears to have considerable promise for achieving the Sustainable Development Goals, as its development has only just begun. The financial services business is undergoing a significant shift, with digitalization and sustainability serving as key drivers. While these ideas have been studied in recent years,

10. Isaac et.al (2021): in their study "A review of studies on green finance of banks, research gaps and future directions, Journal of Sustainable Finance & Investment". They look into environmental protection, climate change, social inclusion, and sustainability in the banking business. It highlighted seven main green finance bank products (green loan/bonds, green investment, climate financing, green infrastructure bonds, green insurance, green securities, and carbon finance) as well as 21 key green finance drivers. In addition, the investigation identified severe research and policy gaps in legislation, research, risk assessment, statistics, and simulations. This research has implications for banks and banking regulations, aiding in the extension of financial inclusion, the creation of innovative financing solutions, and the improvement of corporate sustainability. It may also assist regulators and management in developing policies that take into consideration the needs of stakeholders. Additionally, this study focused on two important aspects of green finance: goods and determinants, ignoring different challenges in bank green financing.

11. Anitha, Chitra (2022) reviewed in "The Impact of FinTech and Blockchain Technologies on Banking and Financial Services" that FinTech and blockchain are being used in the banking and finance sectors, with banks and financial institutions experiencing enormous transformations to keep up with digital technology progress. It found that FinTech will result in significant improvements in investing standards that provide good client information and are supported by blockchain technology. Blockchain in FinTech, based on equity and decentralisation, has the potential to provide a far more effective financial alternative than we now have. The need for technological transformation, collaboration, and corporate savings will push traditional banks to adopt a digital banking platform. Financial technology advancements will almost certainly result in huge changes in business and financial services, but blockchain technology now confronts numerous hurdles. Future researchers must correct flaws in the use of blockchain technology and fintech in digital financial services by gathering relevant sources related to cryptocurrencies in various sectors.

12. Chirag (2022) reported that The fintech industry is rapidly evolving and is expected to reach a valuation of $36.04 Billion by 2028. Decentralized Finance (DeFi) is an emerging financial technology based on blockchain that reduces the control of banks on financial services and money. In the future, digital ledgers will experience a transformation in how we receive, send, store and manage our money. FinTech blockchain is the following step on this evolution, which makes use of l decentralized clever contracts. . Several financial giants have also invested in blockchain in finance R&D for their business. DeFi is all about merging Fintech with blockchain, thus furthering success. Blockchain technology has revolutionized the fintech industry by bringing significant changes to business models and operating processes. It offers a decentralized, distributed, immutable and transparent digital ledger technology, allowing for a new type of security and freedom. DeFi organizations with blockchain factors create an

open opportunity to ordinary monetary factors, doing away with the requirement of a middleman. This blog explains what blockchain technology is and how it works. Blockchain technology has revolutionized the Fintech industry by bringing significant changes to business models and operating processes, making it a viable solution. This has led to an increase in demand for blockchain in the fintech sector, with startups and financial application development companies showing an interest in exploring its importance. Blockchain technology has also challenged the challenges faced by crypto miners, such as the lack of familiarity with it. Blockchain technology has become a popular solution to the fintech industry challenges, such as dependency on a centralized system, lack of trustability, slower processes, and higher operational cost. It has enabled users to reduce these issues by cutting down the dependency on multiple people, making the process public to all, and reducing the time involved. Als stated the advantages of using the blockchain in fintech Blockchain is revolutionizing the fintech industry by creating a decentralized system that follows different consensus algorithms for faster transactions. This could save the biggest investment bank close to $10 billion and enable banks to become more efficient in finance. Banks are aware of the real benefits of blockchain in finance, such as lower transaction costs and faster transactions, and have already executed a project to transfer its post-trade clearing and settlement to a blockchain system. Additionally, blockchain technology has the potential to address major issues such as high processing fees, fraud, and security concerns, which can be well taken down by blockchain adoption in banking and related financial services. Blockchain mobile app development companies are working on the implementation of technology in fintech and banking, which will enable cross-checking data across different organizations involved in international funds transfers to be streamlined and easily authenticated.

13. Kabaklarlı,(2022) According to their paper "Green FinTech: Sustainability of Bitcoin," Green FinTech is a digital currency that offers lower-income residents with access to finance at a cheaper cost. This research investigates the connection between Bitcoin miners' earnings and Bitcoin power use. The findings revealed a positive link between the two, with an average correlation of 50% over the whole sample, but greater during peak periods when Bitcoin prices skyrocketed. During 2015Q1 and 2017Q2, there was a conditional association of 65% between Bitcoin's hash rate and power usage. Following the COVID-19 cryptocurrency surge, the conditional correlations with Bitcoin Hash rate and Bitcoin Electricity consumption index increased for the second time. The article examines the connection between Bitcoin hash rate and power usage, as well as the potential of Fintech and Blockchain technologies to alter the banking sector. It also indicates the favourable relationship between the earnings of Bitcoin miners and the Bitcoin power usage index. Bitcoin miners rely on coal for energy, and switching to more sustainable options such as solar, wind, and geothermal is considered as more ecologically benign. Future research should look at the energy needs of cryptocurrency.

14. Weerawarna et al., (2023) in their study “Emerging advances of blockchain technology in finance: a content analysis”. Stated that Blockchain technology is increasingly being used in various fields, such as finance, supply chains, healthcare, education, and energy consumption. This systematic evaluation examines the content of the 50 most relevant papers and professional industry reports published between 2008 and 2022 in order to identify many potential elements of blockchain research in the financial sector. Three important research issues have been identified as critical for blockchain technology to become "next-generation networks." Blockchain technology is a significant aspect of the finance sector because it can be used to effectively and efficiently analyse, process, and handle large amounts of financial data. From many viewpoints, research has found limitations in the application environment of financial blockchains, such as business needs, technology, applicability, legislation, and oversight. Uncertain gaps are also caused by technical causes such as network latency during the encryption and authentication processes, information transfer, storage difficulties between modules, and block capacity. Security and privacy breaches in cryptocurrency platforms have discouraged society from believing in blockchain technology, and it is commonly considered that now is an excellent opportunity for academics, researchers, banks, and other financial organisations to further investigate blockchain technology. Governments should have a strategic plan to deliver blockchain knowledge to industry professionals and create opportunities to explore financial blockchain models.In conclusion, the future of finance will eventually dominate the field. The finance sector should be

transformed into a decentralized finance model by reducing transaction costs, increasing transaction scope, avoiding intermediates, increasing transparency of transactions, increasing security, and enabling interoperability and borderless transactions. To do this, several governments have focused on blockchain technology and financial institutions, experimenting with blockchain models in finance. If all parties work together to satisfy the commercial, technological, and social requirements of this technology, research may be increased by looking at different views in the literature and picking various parameters, such as blockchain in banking and remittances.

15. Wamba et al., (2020) in their study "Bitcoin, Blockchain and Fintech: a systematic review and case studies in the supply chain." This paper bridges the knowledge gap in existing literature on Bitcoin, Blockchain, and FinTech by clarifying their definition and conducting a systematic review and case studies in the supply chain industry. It also presents research methodologies/approaches used. The data indicate that these technologies are developing and that firms are adopting them to gain a competitive edge. Companies must capitalise on research into these technologies in order to better understand them, optimise their business strategy, and gain key insights for decision-making. This study's review and classification provide insights into Bitcoin, Blockchain, and Fintech research.

INTERPRETATION:

Blockchain technology can lower costs for financial services providers and end users while increasing payment transparency, efficiency, trust, and security. With the use of blockchain, payments that once took up to a week to transfer from one bank to another bank now do so quickly. Payment may now be completed more quickly, more affordably, more conveniently thanks to distributed ledger technology and digital currencies. Central banks have been testing whether updated payments may include distributed ledger technology. All parties involved benefit greatly from the time and money savings that blockchain provides. Due to the instantaneous settlement of payments, it has also eliminated the necessity for middle office and back office workers. In one of the article it is also mentioned that blockchain consumes lots of energy and further researches can be done wherein we can increase the effectiveness and efficiency of blockchain which consumes very low energy.

FinTech, which is primarily still in its early stages, offers industrial-based business services that are currently provided by a number of established traditional financial services, including banks, insurance, and asset management firms. FinTech typically offers services through applications, goods, business models, and business procedures in the banking and financial sector. Lending to businesses and consumers, as well as payments, are the two main FinTech product niches for the financial industry. Both developed and developing nations have seen an increase in digital technologies. From online banking to mobile banking, it evolved steadily and is currently moving in a new banking path. With a surge in the usage of smartphones, telecommunications, and internet services at affordable prices, a new technological environment is emerging. Secure electronic commerce platforms, the entry of new market participants, and expanded consumer awareness and financial sector opportunities are all brought about by this.

FINDINGS:

Through the use of blockchain technology, which increases supply chain transparency and traceability and allows businesses and investors to make more informed choices about the environmental and social impact of their investments, fintech can support sustainability.According to a report by the United Nations Environment Programme (UNEP), The distributed ledger technology of blockchain can provide significant benefits by allowing investors, developers, and purchasers of renewable energy projects to collaborate on a shared platform with established international standards for compliance due diligence.footprint using intelligent sensors compatible with the Internet of Things. The Internet of Things (IOT) refers to physical items or groups of such things that have sensor processing capability. Software and other technologies used to connect and share data with other devices and systems over the Internet or other means of communication.

When competing financial institutions coordinate, they often find it difficult to come to terms with the norms, guidelines, and restrictions that govern access to banking systems. A business needs a capable technological

infrastructure, adaptability, and security to increase the stability of a system. As a result, businesses that are considering learning more about fintech and making investments in innovative technology need to be conscious of their operational problems. Collaboration is a key issue for the fintech industry. Finding a new and perfect partner for any new business venture may be difficult and time-consuming.

In order to comply with and report on a number of requirements from their local authorities, financial institutions are required to comply with KYC standards globally. It can become more labor-intensive, time-consuming, and error-prone. Financial institutions can improve their KYC procedure with the use of blockchain technologies like KYC-chain. By decreasing duplication of work and raising confidence, it efficiently and in real-time offers KYC updates to the banks. Blockchain technology automates client identification by offering a digital single source of ID and other information and enabling the smooth interchange of papers between banks and other sources. The automated account opening process lowers costs while preserving the legal need for data protection.

Benefiting from blockchain technology has been a continuous process for the insurance sector. By using smart contracts to automate the sorting and processing of claims, it is enabling the insurance sector. Facilities including cross-industry data exchange, simple customer history access, and centralised customer identification are strengthening and preventing fraud in the claim settlement process. For instance, communication occurs between the customer, broker, insurer, and bank during the manual claim settlement process. Cross-checking, reconfirmation, and other processes are used in these exchanges, which wastes time and is ineffective. Blockchain establishes a connection between these parties through a shared and secure network, enabling collaboration in ways that lessen waste and accelerate the entire process.

By connecting lenders and borrowers through fees from all interested parties without any investment money, the new P2P lending and borrowing model from FinTech businesses produces revenue. Users are the ones that adopt new commercial goods and services in terms of technology, while the laws that support them work to ensure secure transactions on these electronic platforms. Banks and other financial organisations have made it feasible for their customers to conduct a range of payment operations by using these services. The technology that permeates payments has had a positive and disruptive impact on how banks do their other activities.

How Fintech creates Sustainability:

DEFI: Decentralized finance (DeFi) is a new financial system based on blockchain technology that offers open, accessible, and transparent financial services and products without the use of intermediaries like banks or other financial organisations. It promotes financial inclusion by making financial services available to anyone with an internet connection, regardless of location or socioeconomic level. Blockchain supports DeFi platforms, which enable peer-to-peer transactions without the need for intermediaries such as banks. By eliminating the requirement for physical infrastructure and lowering the energy required to run the financial system, this minimises the carbon footprint of financial transactions. Decentralized finance also allows those who do not have access to regular banking services to become financially included, eliminating inequality and increasing sustainability.

Carbon credits: Blockchain can enable the generation and exchange of carbon credits, incentivizing businesses to minimise their carbon footprint and invest in sustainable projects. Blockchain can encourage sustainable development and minimise greenhouse gas emissions by developing a transparent and secure system for carbon credits.

Emission Trading: Emission trading is a marketplace-based approach to pollution management that involves the establishment of a market for emission permits or credits that may be sold between polluting businesses. Governments or regulatory organizations often set a quota on the total amount of emissions allowed during a specific time period, and then assign or sell emission permits or credits to firms or sectors that create those emissions.

Businesses that can lower their emissions below the amount of their allotted limit can sell the excess allowances or credits to other companies which require the extra allowances to cover their emissions. As a result, businesses have an economic incentive to cut back on emissions since they may make money by selling any extra permits or credits, while businesses that continue to pollute will pay more for further allowances or credits.

By enabling businesses to choose the most affordable ways to cut their emissions and by encouraging innovation and the creation of cleaner technology, emission trading programs can assist to lower the total cost of emissions reductions.

All stakeholders may trace and confirm the origin and movement of emissions allowances or credits by using a blockchain-based digital ledger that is transparent and immutable to record emissions data. This can assist to avoid fraud and unlawful actions, and encourage sustainable and ethical trade practices.

By matching buyers and sellers in the most effective way possible using algorithms and artificial intelligence, fintech may also be used to optimise the trade of emissions permits or credits. This can assist to cut costs and boost liquidity in the emissions trading market, leading to more effective and sustained carbon reductions.

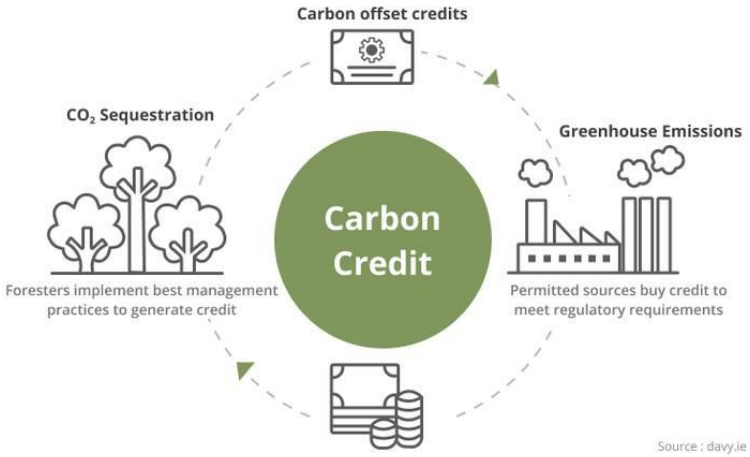


Fig 1: carbon credit flow chat

Emission trading may be made more effective, cost-efficient, secure, and reliable by utilising blockchain technology. Blockchain can make transactions easier, more secure, and need no intermediaries or third parties to verify transactions.

Blockchain may also be used to develop digital tokens that stand in for emissions credits or permits, which can then be exchanged on a platform built on the technology. These tokens, which may be readily sold and swapped between parties, can be used to represent the ownership and transfer of emissions permits or credits.

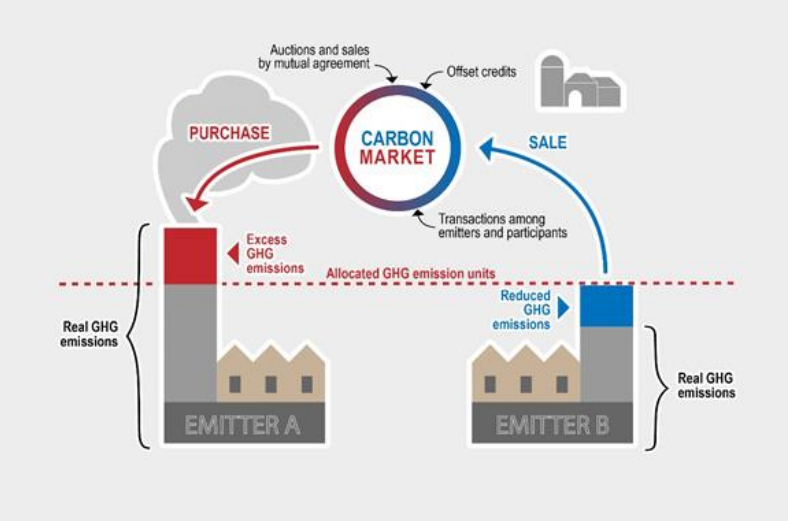


Figure 1: Carbon Cap and Trade Diagram

CONCLUSION:

The use of blockchain technology by the financial services sector is on the rise. This invention has revolutionized the global financial system and improved its efficiency and security. Blockchain technology is advancing the global financial services sector in a variety of ways. The largest advantage of blockchain is "cross-border settlements," which is the concept of using blockchain to build a worldwide network that is both very cost-effective and possibly transparent. It promotes low prices while giving service seekers additional benefits. The integration of blockchain technology in fintech has the potential to support sustainable development in various ways.

Firstly, the technology provides a secure and transparent means of transaction. The decentralization of the blockchain eliminates the need for intermediaries, which can reduce the costs associated with transactions. The transparent nature of the blockchain means that transactions can be tracked and verified, making the system more secure and reducing the possibility of fraud. This transparency can also be applied to the distribution of funds, ensuring that funds are being allocated to sustainable initiatives.

Secondly, blockchain-based solutions can increase financial inclusion, which can support economic development and social sustainability. In many countries, people are excluded from financial services, which can lead to poverty and inequality. Blockchain technology can enable the creation of decentralized financial systems, which can be accessed by anyone with an internet connection. This can allow individuals and small businesses to access financial services that were previously unavailable to them.

By facilitating the tracking and verification of carbon credits, blockchain technology can help to overcome key difficulties. Overall, it facilitates more transparent, efficient, and secure financial transactions, hence promoting long-term economic growth and development. Fintech will be a driving force in the future. We may anticipate increased use of blockchain, AI, and IoT in financial transactions by 2030.

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