

GREEN BANKING THROUGH BLOCKCHAIN

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ABSTRACT

The concept of Sustainable Development has gained lot of prominence in almost all the industry. Banking being one of the greatest services providing industry should also look into ways to attain sustainability. Even though many initiatives have been taken by banking industry to attain sustainability, still they are in the nascent phase of going green. This paper highlights one of the initiative that can be taken by banks to attain sustainability to the great extent, BlockChain technology being solution to major problems can be implemented in banking process to eliminate unwanted procedures, intermediaries and to go paperless, which enables bank to provide environmental-friendly service. The absence of a common record is a very costly problem, BlockChain does resolve that challenge.

Keywords: *Green banking, BlockChain, Sustainable banking, Green strategies, Paperless banking, Digital Ledger, Environment-friendly financial products and service, Ethical banking*

I. INTRODUCTION

Sustainable Banking is a different kind of banking about which not much is known to everybody but has risen to prominence in the recent years. From a bird's eye view, sustainable banking can be referred to as, the concept that focuses on the role that banks play in contributing towards sustainable development. The primary benefit of the sustainable banking approach is the protection of the natural resources and the environment. While it is known that banks play a crucial role in promoting sustainable development, the banking industry as such has started to acknowledge sustainability as an item on its agenda, a little late.

It is a known fact that banks not only need to make direct investments in sustainable development, but they also need to leverage their indirect control over investments and management decisions to influence businesses into aligning with the broader goals. The challenge is, however, on how to make this change possible so as to deal with environmental and social issues related to the short-term incentives and the long-term vision of sustainable banking operations that includes issues like management of physical assets, cost of branch location, opportunity risk exposure and human capital, along with their external connections with clients and projects they hold up. This is where it is recommended that the banks could adopt green banking as a business model for sustainable banking so as to align them more closely to being responsible to a healthier environment. Banks are considered to be responsible corporate citizens. They hold the belief that every small step taken as part of green banking today would go a long way in structuring a greener

future and that each one of them can work towards better global environment. Such banks are termed as Green Banks. From a broader perspective, being “Green” is being ethical, sustainable and socially responsible. Therefore, practices that amount to green banking are those kinds of practices that adds to social welfare, that are environment friendly and those that contribute towards the protection of the environment. Green banking basically means promoting environment-friendly practices and bringing down the carbon footprint from activities undertaken by banks and developing banking strategies which will guarantee sustainable economic development thereby leading to a green economy. Banks can therefore make the most of green banking as a prospect to gain advantage in the market by creating a variation in their strategy making process and simultaneously contribute towards sustainable development. This paper emphasizes upon how green banking can be effectively practiced by using the BlockChain technology.

II. REVIEW OF LITERATURE

1. Green Banking: A Step towards Sustainable Development.

Author: Neeru Kapoor, Dr. Meenu Jaitly, Rishi Gupta, volume 6 of International Journal of Research in Management, Economics and Commerce, issue 7, July 2016, page: 69-72.

The paper states the stages of growth in green banking and the awareness of the same among the banks and realizing the importance of adopting green banking policy by the banks for its stability. The banks should scrutinize for the environmental aspect involved in the project. It emphasis on certain strategies that can be adopted which are carbon credit business, green financial products paperless banking, energy consciousness, green building and social responsibility programs and services. It concludes that if green banking policies taken with due care can act as a preventive measure for pollution from banking industry. (Kapoor, Jaitly, & Gupta, 2016)

2. Green Banking Practices and Their Impact to Reduce Stress in Public Sector Banks.

Author: Sneha Singh, volume 6 of Indian Journal of Applied Research, issue 4, April 2016, page: 294-296.

Global warming being a major issue needs to be addressed by taking in necessary action to reduce it. Banks should go green to improve ecological sustainability and to reduce the employee stress. Banks responding to the customer demand for sustainability are providing green products and developing new products and services. The paper states that R3 approach will improve environment benefits. The technological advancement can be used as an opportunity by the banks to go green. Paper states the fact that practice is more to do than just spreading awareness. Schedule banks should allocate certain sum for its sustainability activities and to use them optimally. (Singh S. , 2016)

3. Green Banking: As Initiative for Sustainable Development.

Author: Ravi Meena, volume 3 of Global Journal of Management and Business Studies, issue 10, 2013, page: 1181-1186.

This paper states about the benefits of going green which includes avoiding paper works, creating awareness about environment, providing loans for environment cause and setting environmental standards for providing loans. It highlights about energy consciousness which the banks should give more importance and green building concept by which not only reduces carbon in the economy but also saves cost. It suggest how to create awareness about green banking which can be by means of communication through press or leaflets, organizing events, educating via bank websites etc,. It states the fact about how the Government can play a major role in developing sustainable banks by way of introducing green policy and financial incentives. (Meena, 2013)

4. Green Banking Strategies: Sustainability through Corporate Entrepreneurship.

Author: Dr.Broto Rauth Bhardwaj, Aarushi Malhotra, volume 3 of Greener Journal of Business and Management Studies, issue 4, May 2013, page: 180-193.

Not many banks have taken initiative in going green. Indian banks should take into consideration ecological responsibility and promote socially responsible investments. Sustainable banking strategies should include two major aspects that are handling environment risk and determining chances for creative environment oriented financial products. In investing the project bank should take into consideration environment liabilities. The paper suggests that evaluation of the organization should not only include economic parameters but also should include environmental performance.(Bhardwaj & Malhotra, 2013)

5. Green Banking for Environmental Management: A Paradigm Shift.

Author: Kanak Tara, Saumy Singh, Ritesh Kumar, volume 10 of Current World Environment, issue 3, December 2015, page: 1029-1038.

The potential benefits of the thought has grabbed the excitement of the regulatory specialists, society, NGOs, laborers, customers and furthermore the worldwide bodies to the issue. In such way, this stress for natural viability by the banks has offered a flight of stairs to thought of Green Banking. This would help the firms in the rising economies utilize their obliged resources in a perfect course without harming the normal natural surroundings and face the overall trial of supportability in productive way. Thus, it is important that Indian Banks should comprehend their commitments towards the earth and moreover the overall population to battle and get by in the overall market. (Tara, Singh, & Kumar, 2015)

III. RESEARCH DESIGN

Statement of Problem: Banks being a major contributor to the economy should also take into account environmental, ethical and sustainability aspects. So banks should ensure they go paperless, by eliminating paper work in its activities, solving this problem is a major issue because all the banking activities include paper work. Apart from this issue banks also should address delay issues, human error and network problems improvising on these terms are matter to be taken into consideration by the banks. Maintaining the confidentiality of KYC is difficult and there are chances of personal detail being lost, this makes the customer not to trust the banks.

Source of Data: Research is based on secondary data collected from various websites, journals, periodicals, articles and other internet sources.

Data analysis tool: Research Methodology is based on Graphical representation.

Limitations of the Study:

1. This study is restricted and covers macro details of the implementation of BlockChain.
2. The implementation of BlockChain in the banking industry is not easy. A foolproof and a seamless way of implementing is not covered.
3. BlockChain is complicated and cannot be applied overnight. Complexity of BlockChain is not covered in the study.
4. The human errors which are unavoidable while data management is not covered in this study.
5. Durability and Robustness of BlockChain has been ignored.

IV. DATA ANALYSIS

The BlockChain was initially developed as a method of accounting for the virtual crypto currencies. With the passage of time it is evident that BlockChain is one of the ground-breaking technologies that serve plethora of commercial applications. BlockChain was initially used to verify transactions, with digital currencies. The BlockChain is a digital and incorruptible ledger technology that can be programmed to record financial transactions; it is not just limited to financial transaction, but also to record everything that has value. BlockChain stores blocks of information that are identical across its network, with no control over the entire network and without a single point of failure, the durability and robustness of BlockChain is un-questionable.

Regardless of the magnitude of the business, coalescing the fortes of BlockChain with a business can present limitless prospects. It is a matter of time before firms are left with no option but to adopt BlockChain secure record management systems. And with the adoption of green practices in banking sector, the performance of the banks is enhanced, with seamless operations and lesser manual intervention

by going for full digitalization, the profitability of the banks along with impact that is created in regards to environmental factors is ensured. With security being one of the major pain points and loopholes, the banks are desperately trying to bring a solution. The Distributed Ledger Technology /Digital Ledger Transaction can be used to fix this major issue, as the information in the block can only be changed by the holder of the account and only if the individual has a private key. Hence the tampering or distortion of data is next to impossible as, during the time of the on-boarding, the data registered of the individuals will go through stringent checks and once the Data is on-boarded it is easy to identify a certain customer and highly difficult to tamper and the threats of fraudulent claims and transactions are eliminated.

With a lot of emphasis on green initiatives being laid, the reduction in use of papers will be one of the major reasons that will be important in implementing BlockChain. Along with it the safety of the information in BlockChain is taken care of as there is a risk of data being misused or misplaced is always imminent. The age old tradition of book-keeping will also be eliminated, as the ledger is all digital and details in the digital ledger is easy on maintenance without the workout manual practices that as are currently in use. The use of DLT or Distributed Ledger Technologies in BlockChain can as well add up to some serious cost savings for banks, business and other financial institutions. It is not just that it can reduce on cost, but also on the errors and delays caused by the traditional and conventional methods. BlockChain can eliminate human involvement especially in cross-border trades which take much longer than expected as the time-zone in different countries can be a limitation.

Across payments, capital markets, trade services, investment and wealth management, BlockChain is considered one of the main reasons to achieve a substantial cost saving. The concept of cost-effectiveness beats the conservative digital payment methods that are followed, as it removes the payment processors that thrive in between for the exchange of security and promise for the transactions. Using BlockChain, the banking entity can guarantee a similar level of security to its customers. Firms can reduce the manual intervention that is needed in the current banking systems, the need of accumulating, revising, sharing data, supervisory reporting and auditing documents would be all the more easier and also requires less manual processing. Firms will also be able to hold and share a common digital representation of asset holdings and also helps in keep a track of the execution, clearing the settlement of securities outside the proprietary databases.

BlockChain is not just restricted to accepting payments but it can also easily integrate into various systems in a banking entity. The possibilities are endless as a cloud-based platform backed by the BlockChain technology can eliminate the usage of the papers. If it can't completely eliminate the use of papers, it can still reduce the usage of the papers and it just doesn't end there, as the digitalization in banking system will change the dynamics of the banking sector, paving way for more ease in accessing the transaction history and other streamlines. In financial services the potential of BlockChain is huge, and has numerous applications that span across capital markets, payments, investment and wealth management, trade services and securities.

The major advantage of the BlockChain is the transparency and incorruptibility of the entire system. With BlockChain creating a new way to authenticate transactions, several aspects of traditional banking would see a radical change and the fulcrum of all the system would be BlockChain, it could make all types of record keeping fully public and decentralized. Transactions through BlockChain offer essential visibility, safety, faster dispensation and traceability through the decentralized record of possession. Every transaction is recorded and will be visible to the public, including the creation of a block. One also can automate the fulfillment of agreements. It also eliminates the risk of manipulation which is very high when the current and traditional banking methodologies.

However, every technology has its limitations and they evolve eventually or risk of becoming obsolete. Though BlockChain has come a long way since its inception in Bitcoin, it does have certain limitations some of which are its complexity, network size, technical awareness and such others.

V. FINDINGS AND SUGGESTIONS

1. The performance of the bank can be enhanced if it adopts green practices in its banking system which in turn increases the profitability of the banks that is to say financial performance will be better along with environmental performance.
2. The security being the major objective of the banks can be achieved if Digital Ledger Transaction is opted by the banks in its banking process. Users can change the information in the block they own only if they have private key so no information or data can be tampered or distorted.
3. Banks cannot be termed as solely working self-sufficient entities because they still are dependent on intermediaries. The intermediaries in the banking process can be eliminated which will be a benefit to both customers and banks as they will not have to pay fees or commission.
4. Know Your Customer (KYC) process becomes easy and verification can be accurate. Proper KYC checks on both cardholders and affiliates restrict fraudulent transactions.
5. Paper works will be reduced completely which is a great sign for banks to show its green initiatives taken by it. The data safety is also taken care as transferring of paper, that is to say, documents does not take place.
6. The errors will reduce to great extent because of less manual work involved in the banking activities.
7. Scams and other corrupt activities cannot be carried out, as it is an extremely difficult task to carry out the computing operations.
8. Money transfer and maintenance of ledger or records will be an easy task as everything will be digitalized.
9. The authenticity of the transaction need not be re-verified because only confirmed blocks of transactions will be added to the ledger.

10. Over-riding the systems is an impossible task as it would require the miscreant to over-ride the entire network and it also requires heavy computing operations.
11. Data management becomes an easy task as it is easily accessible and the quality of data will be enhanced and tampering or misplacing the data is out of question and there will also be transparency in the system as users will have access to complete historical data which is opposed to mysterious conventional banking.
12. Cross-border transfer of fund can take place with minimal time as against the time taken by banks wherein the block-chain based messaging enables transfer in seconds as against SWIFT or Chips based messaging.
13. Banks can use BlockChain technology to give customers give every minute details of where their money is invested and when interest payment comes through. Banking sector can use securely encrypted apps based on BlockChain instead of encoding and issuing ATM cards. Therefore by adopting this technology, financial institutions can save money and grant customers more safety, power and control over the money they hand over in those institutions.
14. Banking system being computerized faces the threat of data being tampered by anyone in the organization, but by adopting BlockChain this threat can be eliminated because the books and records are digitally generated and the organization can check who logged in the last time into the system to make changes and that person can be held responsible.
15. Carbon footprint from banking sector can be reduced as BlockChain technology adoption will reduce the usage of paper and everything will be carried on in the network.

VI. CONCLUSION

Banks should take sustainable development as a serious action and should take necessary steps to achieve it. BlockChain being an emerging technology can be adopted by the banks. In spite of its disadvantages there are more to the advantage side of BlockChain which can be considered for stability and sustainability in the banking sector. Adoption of BlockChain will definitely be a major change in the banking history because it is like banking without much of paper involvement and time consumption being minimal. The accountability factors will be enhanced such that any fraud committed can be detected immediately and actions can be taken immediately. The cost of maintenance of records and other data will also be reduced to great extent because of digitalization of transaction. BlockChain can do to banks what the internet did to media. If BlockChain is implemented in banking sector every aspects of banking activities will be in virtual form and there won't be much scope for physical existence of bank. However customer failing to understand the working of BlockChain will still be dependent on physical banks. Certain banks have taken initiatives to adopt BlockChain technology due to ease of operation and research is being carried out in this field. With BlockChain finding its presence in the banking sector lot of issues would be solved and making the banking system more reliable and accessible.

VII. BIBLIOGRAPHY

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