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TECHNOLOGICAL INNOVATION AND CORPORATE GOVERNANCE IN INDIAN BANKING SECTOR

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ABSTRACT

Corporate governance, in particular in today's times where many sectors of the economy are pacing and adapting themselves with the latest advancements in technology, cannot be neglected. The landscape of how the organization used to function has been significantly altered as a result of the introduction of new technologies such as digitalization, robotics, chat bots, and artificial intelligence. The purpose of this article is to explore the effect of respondent characteristics on their use of technology in the banking business and to research the function of corporate administration in assuring the interest of its stakeholders. Both of these goals will be accomplished as a result of reading this paper. The use of technology is an essential component of effective corporate governance, and as such, it will need a significant amount of attention and concentration.

***KEYWORDS**: Block Chain, Artificial Intelligence, Robots.*

Introduction

Indian banking sector predominently consists of public sector banks holding largest proportion, followed by private sector bank and foreign banks. There are in total 97 banks (excluding regional rural banks, urban and rural cooperative banks) operating in India of which 27 are publicly held while 21 are privately held and 49 foreign bank. India has large banking network that consist of total 14.7 lakh branches (as of 2017) employing number of people. The list of banks operating is India is retrieved from Reserve Bank of India website, international monetary fund website, ibef website along with information on number of branches and number of individuals employed.

Corporate governance, in its most fundamental sense, refers to the process of managing the operations of an organization and ensuring that the actions carried out by management are in the best interest of the shareholders. It is vital to have a good mechanism or system in place to ensure things are going smoothly since the ownership rests with the shareholders and the management of the day-to-day operation lies with the managers. This is because the shareholders control the day-to-day operation. Therefore, it is about how organizations are directed, controlled, and held accountable for the activities they engage in in relation to their shareholders. It is impossible to dismiss the importance of corporate governance, particularly in modern times, when so many different parts of the economy are rushing to catch up with the latest technological developments and adjusting their practices accordingly. The landscape of how the organization used to function has been significantly altered as a result of the introduction of new technologies such as digitalization, robotics, chatbots, and artificial intelligence. Because of this, the operating structure of the company has to be modified, as does the way the corporation was previously governed.

Firm’s act, clause 49 of listing agreement, and listing obligation and disclosure requirement regulation act 2015 are the three pieces of legislation in India that outline the corporate governance standards for Indian firms that are publicly traded. These requirements include several provisions about the publication of information concerning an organization's financial performance, ownership structure, establishment of various committees, presence of independent director on board, committee structuring, and governance report. Even though there are strict laws in place to govern the practices of listed companies, India is definitely behind in the implementation of those laws. The cases of Kingfisher and Niravmodi, as well as imprudent lending by banks in the case of ICICI and other companies, are just a few examples of the several governance concerns that have been reported on a regular basis and have made headlines. The balance sheets of many banks have seen significant increases in the amount of non-performing assets as a direct result of the large proportion of fraudulent activities. It has not only dealt a big blow to the Indian banking industry, but it has also dealt a blow to the money that individuals have worked so hard to earn and their faith in the Indian financial system. The fact that the banking industry is the backbone of any country's monetary system necessitates the strong attention and active participation of lawmakers in determining how to make the system more resistant to fraud. These kinds of incidents call into question not just the people who create the laws, but also the loose operating organization and ownership structure of India's banking industry. In the vast majority of instances, the top-level managers are the ones who should assist be held accountable. In this regard, the banking industry has been modernized with the use of the most recent technology, and these developments may be utilized to enhance the corporate governance mechanisms of banks in India. The purpose of this research is to discuss the issues and concerns that have been expressed before, as well as the existing practices of banks in India, and to investigate the role that technology may play in either sustaining or strengthening the corporate governance structure that exists in the banking industry in India.

Research Objectives

- To examine the influence of respondent characteristics on their use of technology in banking industry.
- To study the role of corporate administration in ensuring the interest of its stakeholders.

Research Design

Disproportionate double stage Quota sampling was done based on relative importance of banks under public sector and private sector wherein three banks each from public and private sector bank was selected based on the extent of its operation all over India. Under public sector umbrella based on the mentioned criteria, state bank of India, punjab national bank and UCO bank were selected and under private sector bank, ICICI Bank, HDFC Bank and Axis Bank were selected. In the next stage, from each selected public and private sector bank respondentes were sampled out. Respondents were sampled based on judgemental and convenience sampling. The sampling technique adopted here ensures that sampling error is avoided as the technique The sample size of respondents was calculated with acceptable error margin of five percent with ninty five percent confidence and was was obtained 542 of which approximately 90 respondents were pulled from each bank.

Results and Discussions

Automation in banking increases productivity, cost saving and customer satisfaction?

Table 1

Do you believe that automation in banking increases productivity, cost saving and customer satisfaction?	
Yes	527
No	0
Maybe	15

Source: Primary Data

Respondents were asked as to whether automation in banking has bring in the required increase in productivity, cost saving and customer satisfaction, wherein 97 % respondents said yes while remaining 3 % respondents said may be. Majority of respondents agreed on to the benefits that automation holds for banking industry.

Artificial intelligence brings more efficiency to back office and even reduces fraud and security risks?

Table 2

Do you think that artificial intelligence brings more efficiency to back office and even reduces fraud and security risks?	
Yes	467
No	0
Maybe	75

Source: Primary Data

Artificial intelligence is a well sought and known technology. Organisation must harness the potential of it in all possible ways. Employment of same and incorporating it in its governance process can be of something that banks can boast of. When asked about how artificial intelligence can play role in reducing frauds and increasing back end office tasks, 86% of the respondents believed usage of such technology can help in reducing fraud and increasing efficiency while 14% respondents were unsure of its utility in banking operations and role in governance.

To what extent do you agree with the following statements about Artificial Intelligence?

Table 3

To what Extent do You Agree with the Following Statements about Artificial Intelligence					
	Reduces the response time to customers increases accuracy to 100%	**It has reduced its cost-toincome ratio**	**Detects fraud easily**	**Expedites the operational efficiency**	**Leverages the existing infrastructure**
Strongly agree	117	80	209	287	47
Agree	410	462	272	219	353
Neutral	15	0	61	21	121
Disagree	15	0	61	21	121
Strongly disagreed	0	0	0	0	0

Source: Primary Data

Dealing in detail with the role of artificial intelligence in easing out banking operation, respondents were asked on their perception regarding its possible role in reduction in response time to customers, reduction in cost to income ratio, fraud detection, increasing operational efficiency and leveraging existing infrastructure. The following section discusses the results obtained in detail. Out of the total respondents, 76 % agree and consider artificial intelligence reduces response time to customers and increases accuracy thereby improving banks performance. 03% consider it to be of have no role, 03% disagree to it while 22% strongly agree and consider it to have extreme importance in easing out bank operations.

Out of all respondents, 85% think artificial intelligence lowers the cost-to-income ratio, which makes banks run more cost-effectively. 15% fervently agree and think it's crucial for streamlining bank operations. According to 50% of the respondents, artificial intelligence can readily identify fraud, enhancing banks' performance and boosting governance mechanisms. 39% strongly agree and think it is very important in streamlining bank operations, compared to 11% who think technology plays no role and 11% who disagree.A total of 53% of those surveyed strongly agree and think artificial intelligence accelerates operational efficiency, enhancing banks' performance. 40% agree and believe it to be of utmost significance in streamlining bank operations, compared to 4% who think it plays no role and 3% who disagree.65% of those who responded agree and think artificial intelligence makes use of the infrastructure that already exists to increase bank efficiency. 22% believe it plays no part, 22% disagree, and 9% strongly agree, believing it to be of utmost significance in streamlining bank operations.

Do you agree that the Block chain helps banks in following? Table 4

Do you agree that the Block chain helps banks in following								
	Fraud Reduction	**Know your Customer**	**Smart Contacts**	**Clearing and Settlement**	**Trade finance**	**Syndicated loan**	**Payments**	**Trading Platforms**
Strongly agree	142	94	71	115	114	69	160	246
Agree	189	203	283	280	289	232	293	178
Neutral	165	198	141	147	139	191	89	105
Disagree	165	198	141	147	139	191	89	105
Strongly disagree	0	0	0	0	0	0	0	0

Source: Primary Data

Blockchain technology is the new advent in market and its use has been excessively recognised in e commerce and financial transactions. The application of such technology is believed to bring revolution in banking industry as well. Use of blockchain technology is subject to broad application including fraud detection, knowing customers, making smart contacts, clearing and settlement of transactions, financing trade, lending loan through syndicate, payments options as well as in trading platforms. Keeping in mind the prospects of blockchain technology in banking industry respondents were asked about the possible application of technology in different banking operations.

Out of all respondents, 35% agree that blockchain technology reduces fraud and can be a moderately important tool for ensuring the organization's governance and operational processes are in order. In the governance mechanism, 30% believe it to be of no importance, 30% disagree, and 26% firmly believe it to be of the utmost importance. According to 37% of the respondents, blockchain technology may help banks better understand their customers and can be a relatively useful tool for ensuring the organization's governance and operational processes are in place. While 37% disagree that it is important, 37% strongly agree that it is extremely important to the governance process, and 17% strongly disagree. Of the total respondents, 52% agree and think that blockchain technology aids in forming intelligent connections and may work as a somewhat essential instrument for assuring effective organization governance and operation. 13% firmly believe that it has severe relevance in the governing structure, whereas 26% strongly disagree and 26% think it is unimportant. Of the total respondents, 52% agree and think that blockchain technology aids in clearing and settlement systems and may work as a relatively essential instrument to ensure effective organization governance and operation. In the governance mechanism, 21% strongly agree that it is extremely important, 27% strongly disagree, and 27% strongly agree that it is of no importance. 53% of all respondents agree and think that blockchain technology aids in trade finance and may be a relatively essential instrument for assuring the operation and control of the organization. 26% believe it to be unimportant, 26% disagree, and 21% strongly agree, believing it to be of utmost significance in the governing process.

43% of the total respondents consider and agree with this. Blockchain technology supports the extension of syndicated loans and has the potential to be a reasonably significant instrument for assuring the organization's governance and correct operation. 13% firmly think that it has great relevance in the governing process, whereas 35% strongly disagree and 35% agree that it is of no value. Out of all respondents, 54% agree and think that blockchain technology aids in the payments system and can function as a moderately important tool to ensure proper operation and governance of the organization. While 30% strongly agree that it has extreme importance in the governance mechanism, 16% believe it is unimportant, 16% disagree, and 4% strongly disagree. Of the total respondents, 45% strongly agree and think that using blockchain technology in trading platforms may be a very essential tool for ensuring the organization's governance system is operating properly. 19% believe it to be unimportant, 19% disagree, and 33% think it to be of intermediate significance in the governing process.

Do you believe that Robotic Process Automation helps in the following processes?

Table 5

Do you believe that Robotic Process Automation helps in the following processes?							
	Customer Service	**Mortgage Processing**	**KYC**	**Credit Card Processing**	**General ledger**	**Compliance**	**Account origination and Receivables**
Strongly Agree	88	69	144	44	121	50	100
Agree	349	256	203	261	294	351	146
Neutral	63	154	153	170	85	120	233
Disagree	63	154	153	170	85	120	233
Strongly Disagree	21	0	42	0	0	0	0

Source: Primary Data

Another technology available and used in banking sector involves employing robots or robotic process automation where human tasks are more diligently handled by robots. Bankers were asked about the usage of robotic process automation in banking sector in improving customer service, mortgage processing, KYC, credit card processing, maintaining general ledger, compliance of norms and account origination and receivables. The results are detailed out below:

Of the total respondents, 64% agree and see robotic process automation as a fairly essential instrument for guaranteeing the organization's governance and appropriate operation. In the governance mechanism, 12% think it is unimportant, 12% are against using robotic process automation in customer service, 4% are strongly against it, and 16% are both strongly in favor of it and think it is moderately important.Out of all respondents, 47% concur and think that using robotic process automation for mortgage processing is a moderately important tool for ensuring the organization's governance and proper operation. While 28% disagree with the use of robotic process automation in mortgage processing, 28% think it is not important, and 8% strongly agree that it is of moderate importance in the governance mechanism.

Of all respondents, 37% agree and think that robotic process automation's involvement in KYC is a fairly essential instrument for maintaining the organization's governance and appropriate operation. In the governance mechanism, 28% believe it to be of little significance, 28% disapprove of the use of robotic process automation in KYC, 8% strongly disapprove of it, and 27% strongly agree with it. A total of 48% of respondents agreed and said that robotic process automation's participation in credit card processing was a fairly essential instrument for maintaining the organization's governance and correct operation. While 31% disagree with the use of robotic process automation in credit card processing, 31% think it is not important, and 8% strongly agree that it is of moderate importance in the governance mechanism. Of the total respondents, 54% agree and see robotic process automation as a fairly significant instrument for keeping the general ledger and guaranteeing the correct operation and control of the organization. Although 22% strongly agree and believe it to be of moderate importance in the governance mechanism, 16% believe it to be of no importance, 16% oppose the use of robotic process automation in maintaining general ledger, and 16% think it is of no importance.

Of the total respondents, 65% are in agreement and see robotic process automation as a fairly essential instrument for guaranteeing the correct operation and administration of the organization. Robotic process automation is used in compliance, which 22% believe has no significance, 22% disagree, and 9% strongly agree, believing it to have some significance in the governance structure. A somewhat essential instrument for guaranteeing the appropriate operation and governance of the organization, according to 27% of the respondents, is robotic process automation's involvement in account origination and receivables. The use of robotic process automation in account origination and receivables is seen by 43% as having no significance, 43% as disagreeable, while 18% strongly agree and see it as having considerable significance in the governance system.

How would you rate the degree of transparency in your bank by using Blockchain/Artificial Intelligence technology?

Table 6

How would you rate the degree of transparency in your bank by using Blockchain/Artificial Intelligence technology	
Excellent	67
Good	320
Fair	155
Poor	0

Source: Primary Data

Gathering the perception of how different technologies are useful in multiple banking operations of banks, respondents were asked to rate on likert scale ranging from excellent to poor overall effectiveness of the blockchain or artificial intelligence technology employed by their bank in improving transparency. Results indicated that 59 % of respondents claimed it having a good effect on transparency. 29 % rated it fair on performance scale while only 12 % rate it having excellent role in enhancing the transparency of operation thus strengthening the governance structure.

Does your bank use Blockchain technology for?

Table 7

Does your bank use Blockchain technology for			
	Money Transfer	**Record Keeping**	**Back End functions**
Yes	298	141	201
No	105	147	90
Maybe	139	254	251

Source: Primary Data

The extent of employability of blockchain technology in actual scenario by banks for the purpose of money transfer, record keeping and back end functions was assessed from the responses collected. The results obtained are listed below Out of the total respondents, 55% were of opinion that block chain technology is employed by their bank for the purpose of money transfer, 26% answered may be its been used in their banking system and 19% claimed that their bank does not use block chain technology for the said purpose, Of the total respondents, 47% answered may be and were not aware of usage of blockchain technology by bank for record keeping purpose. 27% answered that technology is not used by bank for keeping their records 26% agreed to the use of technology for such purpose. Of the total respondents, 46% answered may be such technology is being used by their bank for back end operations. 37% agreed that the same has been used by its bank foe back end functions and 17% disagree to it.

Do you agree that using Artificial intelligence and Blockchain technology helps in better corporate governance in your bank?

Table 8

Do you agree that using Artificial intelligence and Blockchain technology helps in better corporate governance in your bank?	
Yes	470
No	0
Maybe	72

Source: Primary Data

Does the use of blockchain technology and artificial intelligence in its entirety have the potential to transform the way banks now operate and make them more transparent than they were in the past? Answers to this question were obtained by posing it to respondents. Of the total respondents, 87% agreed that the use of artificial intelligence and blockchain technology had assisted their banks in developing better corporate governance measures, while the remaining 13% asserted that such technology's use might have a favorable impact on their bank's governance system. As a result, it was discovered that the banking sector is attempting to incorporate technology into its corporate governance structure. Despite how far they have come, there are still many more miles to travel. Technology utilization is a crucial component of corporate governance and must be given careful consideration.

Conclusion

Based on the findings of the research, it can be deduced that the banking sector is attempting to triumph over the technological component of their corporate governance process. They have made significant progress, but there is still a significant distance left to go. The use of technology is an essential component of effective corporate governance, and as such, it will need a significant amount of attention and concentration.

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