TECHNOLOGICAL INNOVATION AND CORPORATE GOVERNANCE IN INDIAN BANKING SECTOR

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ABSTRACT

Corporate governance especially in today times cannot be ignored wherein multiple sector of economy are pacing and adapting itself with the new advents in technology. Technology like digitization, robots, chat bots, and artificial intelligence has changed the landscape of how the organization used to operate. The objectives of present paper areto 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. Use of technology is an integral part of corporate governance and will thus needs to be focused upon thoroughly.

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

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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 basically deals with governing the activities of organisation and ensuring that activities undertaken by management are in interest of the shareholders. As the ownership lies with the shareholders and management of day to day operation lies with the managers it is essential to have a proper mechanism or system in place ensuring things is going well. So, it is about how organization are directed, controlled and held accountable for its activities to the shareholders. The relevance of corporate governance especially in today times cannot be ignored wherein multiple sector of economy are pacing and adapting itself with the new advents in technology. Technology like digitization, robots, chatbots, and artificial intelligence has changed the landscape of how the organization used to operate. The consequent change in operational structure requires change in way the corporate used to be regulated.

In India, corporate governance norms for Indian listed companies are detailed out in Companies act, clause 49 of listing agreement and listing obligation and disclosure requirement regulation act 2015. These norms contain different provision regarding disclosure of information regarding organisation's financial performance, ownership structure, formation of different committees, presence of independent director on board, structuring of committees, governance report. Though there are stringent laws in place to govern the practices of listed companies but India, certainly lags in implementation of same. Multiple governance issues have been reported every now and then and has been in headlines such as kingfisher case, niravmodi scandal, irresponsible lending by banks in case of ICICI etc. Large portion of scams has strongly contributed to non-performing assets of banks' balance sheet. It has not only significantly hit the Indian banking sector but also smacked the hard earned money and confidence of common people in

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Indian banking system. Banking sector being the pillar of financial system of any nation demands strong attention and intervention of law makers of how to make system more scam immune. Such cases, does not only questions the law makers but also loose operational structure as well as ownership structure of banks in India. In most of cases, it is the top-level managers that have had been help responsible. Wherein, the banking sector has been revolutionized with latest technologies the same can be harnessed to improve the corporate governance mechanism of banks in India. The present study aims to put forward the above raised concerns and current practices of banks in India and what role does technology can play in maintaining or improving the corporate governance structure in banking sector 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-to-income 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 the total respondents, 85 % agree and consider artificial intelligence reduces cost to income ratio thereby making banks operation more economical. 15% strongly agree and consider it to have extreme importance in easing out bank operations. Of the total respondents, 50 % agree and consider artificial intelligence detects fraud easily thereby improving banks' ability to perform as well as strengthening governance mechanism. 11% consider it to be of have no role, 11% disagree to it while 39% strongly agree and consider it to have extreme importance in easing out bank operations.Of the total respondents, 53% strongly agree and consider artificial intelligence expedites operational efficiency thereby improving banks performance. 04% consider it to be of have no role, 03% disagree to it while 40% agree and consider it to have extreme importance in easing out bank operations.Of the total respondents, 65 % agree and consider artificial intelligence leverages existing infrastructure thereby increasing efficiency of bank. 22% consider it to be of have no role, 22% disagree to it while 09% strongly agree and consider it to have extreme importance in easing out 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 the total respondents, 35 % agree and consider blockchain technology helps in fraud reduction and can act as moderately important tool for ensuring proper functioning and governance mechanism of the organisation. 30% consider it to be of no importance, 30% disagree to the same while 26% strongly agree consider it to have extreme importance in the governance mechanism. Of the total

respondents, 37 % agree and consider blockchain technology helps in knowing bank's customer and can act as moderately important tool for ensuring proper functioning and governance mechanism of the organisation. 37% consider it to be of no importance, 37% disagree to the same while 17% strongly agree consider it to have extreme importance in the governance mechanism. Of the total respondents, 52 % agree and consider blockchain technology helps in making smart contacts and can act as moderately important tool for ensuring proper functioning and governance mechanism of the organisation. 26% consider it to be of no importance, 26% disagree to the same while 13% strongly agree consider it to have extreme importance in the governance mechanism. Of the total respondents, 52 % agree and consider blockchain technology helps in clearing and settlement system and can act as moderately important tool for ensuring proper functioning and governance mechanism of the organisation. 27% consider it to be of no importance, 27% disagree to the same while 21% strongly agree consider it to have extreme importance in the governance mechanism. Of the total respondents, 53 % agree and consider blockchain technology helps in trade finance and can act as moderately important tool for ensuring proper functioning and governance mechanism of the organisation. 26% consider it to be of no importance, 26% disagree to the same while 21% strongly agree consider it to have extreme importance in the governance mechanism.

Of the total respondents, 43 % agree and consider blockchain technology helps in extending syndicated loan and can act as moderately important tool for ensuring proper functioning and governance mechanism of the organisation. 35% consider it to be of no importance, 35% disagree to the same while 13% strongly agree consider it to have extreme importance in the governance mechanism. Out of the total respondents, 54 % agree and consider blockchain technology helps in payments system and can act as moderately important tool for ensuring proper functioning and governance mechanism of the organisation. 16% consider it to be of no importance, 16% disagree to the same while 30% strongly agree consider it to have extreme importance in the governance mechanism. Of the total respondents, 45 % strongly agree and consider blockchain technology usage in trading platforms and can act as extremely important tool for ensuring proper functioning and governance mechanism of the organisation. 19% consider it to be of no importance, 19% disagree to the same while 33% agree consider it to have moderate importance in the governance mechanism.

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 consider robotic process automation role in customer service as moderately important tool in ensuring proper functioning and governance mechanism of the organisation. 12% consider it to be of no importance, 12% disagree to the use of robotic process automation in customer service, 04% strongly disagree to it while 16% strongly agree and consider it to have moderate importance in the governance mechanism.Out of the total respondents, 47 % agree and consider robotic process automation use in mortgage processing as moderately important tool in ensuring proper functioning and governance mechanism of the organisation. 28% consider it to be of no importance, 28% disagree to the use of robotic process automation in mortgage processing,while 08% strongly agree and consider it to have moderate importance in the governance mechanism.

Out of the total respondents, 37 % agree and consider robotic process automation role in KYC as moderately important tool in ensuring proper functioning and governance mechanism of the organisation. 28% consider it to be of no importance, 28% disagree to the use of robotic process automation in KYC, 08% strongly disagree to it while 27% strongly agree and consider it to have moderate importance in the governance mechanism. Of the total respondents, 48 % agree and consider robotic process automation role in credit card processing as moderately important tool in ensuring proper functioning and governance mechanism of the organisation. 31% consider it to be of no importance, 31% disagree to the use of robotic process automation in credit card processing, while 08% strongly agree and consider it to have moderate importance in the governance mechanism. Of the total respondents, 54 % agree and consider robotic process automation role in maintaining general ledger as moderately important tool in ensuring proper functioning and governance mechanism of the organisation. 16% consider it to be of no importance, 16% disagree to the use of robotic process automation in maintaining general ledger, while 22% strongly agree and consider it to have moderate importance in the governance mechanism.

Out of the total respondents, 65 % agree and consider robotic process automation role in fulfilling compliance norms as moderately important tool in ensuring proper functioning and governance mechanism of the organisation. 22% consider it to be of no importance, 22% disagree to the use of robotic process automation in compliance, while 09% strongly agree and consider it to have moderate importance in the governance mechanism. Of the total respondents, 27 % agree and consider robotic process automation role in account origination and receivables as moderately important tool in ensuring proper functioning and governance mechanism of the organisation. 43% consider it to be of no importance, 43% disagree to the use of robotic process automation in account origination and receivables, while 18% strongly agree and consider it to have moderate importance in the governance mechanism.

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 adaptation of artificial technology and blockchain technology in totality has been able to bring reform in the way the banks used to function and has made them more transparent than before? Answer to this question were obtained by raising the question to respondents wherein, 87% of total respondents agreed that use of artificial technology and blockchain technology has helped their banks in framing better corporate governance measures and remaining 13% claimed that usage of such technology may have positive influence on the governance mechanism of their bank. Thus, it was found that banking industry is trying to win over the technology aspect in their corporate governance mechanism. They have come so far but there are still leaps and bounds to cover. Use of technology is an integral part of corporate governance and will thus needs to be focused upon thoroughly.

Conclusion

It is concluded from the analysis that banking industry is trying to win over the technology aspect in their corporate governance mechanism. They have come so far but there are still leaps and bounds to cover. Use of technology is an integral part of corporate governance and will thus needs to be focused upon thoroughly.

References

1.   Kapur J.N. and Saxena H.C., "Mathematical Statistics", Sultan Chand and company, New Delhi, 1999, pp.18-39.
2.   KaulLokesh, "Methodology of Education Research", Vikas Publishing House, Pvt. Ltd., New Delhi, 1996, pp.12-34.
3.   Kothari C.R., "Research Methodology, Methods and Techniques", WishwaPrakashan, New Delhi, 2004, pp.15-31.
4.   IFAC (2003).Rebuilding Public Confidence in Financial Reporting: An International Perspective, New York, and International Federation of Accountants.
5.   IFAC (2004). Enterprise Governance: Getting the Balance Right, New York, International Federation of Accountants.
6.   Institute of Business Ethics (2003).Does Business Ethics Pay: Ethics and Financial Performance, London, Institute of Business Ethics.
7.   Larcker, D., Richardson, S. and Tuna, I. (2005). Ratings add fire to the governance debate', FT Mastering Corporate Governance, 2 May.
8.   Los Angeles Times (2004a). Ex-exec tells of Adelphia fraud', 3 April.
9.   McKinsey & Company (2002). Global Investor Opinion Survey on Corporate Governance, London, McKinsey & Company.
10.   Standard & Poor's Governance Services (2002). Corporate Governance Scores: Criteria, Methodology and Definitions, New York, Standard and Poor's.
11.   UNCTAD (2003). 'Case study on corporate governance disclosures in the United States of America', Geneva: TD/B/Com.2/ISAR/19/ Add.5, 31 July.
12.   UNCTAD (2005). 2005 Review of the Implementation Status of Corporate Governance Disclosures', Geneva: TD/B/COM.2/ISAR/ CRP.1, 17 November.

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