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RISK OF OBSOLESCENCE OF SYSTEM IN INDIAN BANKS

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ABSTRACT

In the present study, an attempt is made to analyze the group-wise bankers' viewpoint towards the risk of obsolescence of system in public and private sector Indian banks. A sample of 440 banks' officials i.e. 120 from State Bank Group, 200 from Nationalized Banks and 120 from Private Sector Banks is taken. The primary data were collected with the help of pre-tested structured questionnaire on five point Likert scale and analyzed through various descriptive and inferential statistical techniques like percentage, mean and standard deviation, etc. Further, ANOVA technique was used to test the hypotheses and validate the results. It is found that rapid pace of change of technology, poor implementation of new technology and inability to provide continuous support development are most important factors responsible for the risk of obsolescence of system in selected groups of banks. Further, possible legal repercussion from erroneous transactions and increase in costs associated with the updation of bank's system is the most significant impacts on the functioning of these groups of banks. However, regular review of capabilities of existing hardware and software system and transparency in the use of technology are the most adopted measures for overcoming the risk of obsolescence of system in all the selected groups of banks. It is recommended that updated information and communication technology should be used to prepare the authenticated database management system. Error-free software/programmes should be developed to maintain the security and safety of database, and such programmes should be evaluated from time to time to keep them updated and compete in an ethical way.

KEYWORDS: *Unauthorized, Publicity, Transactions, Counterfeiting, Alteration.*

INTRODUCTION

Indian banks are in the process of implementation of technological solutions these days. But public sector banks are far behind in this process, therefore there is a huge scope for automation in these banks *(www.centralbank.ie)*. No doubt, technology has been helpful for enhancing the customers' convenience in the products and services offered, which were difficult earlier with traditional banking. But the security of the transactions is a major concern in the use of technology as it induces some risks which are highly interdependent and events that affect one area of risk can also have ramifications for a range of other risk categories *(Singh, 2015).* Among these risks, operational risk is emerging as a new challenge to the Indian banks, which exists in each product and services offered and is not directly taken in return for an expected reward. The failure in properly managing the operational risk can result in a mis-statement of an institution's risk profile and expose the institution to significant losses *(www.fsrc.gov.ag)*. Operational risk is confronted by the bank even before it decides its first credit transaction realizing that the merely a quantitative approach to credit risk and market risk overlooks the key danger areas and that operational risk management should consequently be developed into a discipline *(Geiger, 2000).*The regulatory authorities have also renewed their interest in operational risk as they feel that about 25 percent of regulatory capital is needed for operational risk *(Akbari, 2012)*. Increasing dependence on computers and electronic communication in banking transactions has increased the possibility of system failure, which adversely affects its business. Obsolescence is the state of being which occurs when an object, service or practice is no longer wanted even though it may still be in good working order. Obsolescence frequently occurs because a replacement has become available that has, in sum, more advantageous than the inconvenience related to repurchasing the replacement. Therefore, system should be updated from time to time and managed properly; otherwise it will be difficult to keep pace with the changing competitive environment.

REVIEW OF LITERATURE

The articles on different aspects of operational risk appeared in various journals are restrictive and do not give a comprehensive picture. *Ebnother and Vanini et al. (2003)* found the results of the modeling exercise relevant for the implementation of a risk management framework, but the risk factor 'fraud' dominates all other factors and finally, only 10 percent of all processes have a 98 percent contribution to the resulting VaR. *Chapelle and Crama et al. (2005)* estimated the effects of operational risk management actions on banks' profitability and found that substantial savings can be achieved through active management techniques, although the effect of a reduction of the

frequency or severity of operational losses depend on the calibration of the aggregate loss distributions. *Jankiraman (2008)* assessed the status of operational risk management in the Indian banking system in the context of Basel II and the approach adopted for computation of capital required for operational risk is compared broadly with the banking system in Asia, Africa and Middle East. A survey on 22 Indian banks was conducted, which indicated the need to devote more time and resources if the banks desire to implement the advanced approaches under Basel II. *Ana (2008)* said that information technology risk occupied a small corner of operational risk - the opportunity loss from a missed information technology development deadline. The World Economic Forum also ranked a breakdown of critical information infrastructure among the most likely core global risks, with 10-20 percent likelihood over the next 10 years and potential worldwide impact of $250 billion. *Tanase and Serbu (2010)* said that the operational risk is generated primarily as a result of direct customer interaction with the credit institution. But the provision of e-banking services reduced direct contact with banks' customers and thus reduced potential losses arising from operational risk. They considered it necessary to be aware of the relationship between operational risks and e-banking services promoted by the banks and of the importance of this connection especially in a financial environment affected by the financial crisis. *Embrechts and Hofert (2011)* summarized the techniques, observed range of practices and supervisory issues in operational risk modeling, and found that one of the largest problems in operational risk modeling is data scarcity, therefore poses the challenges to both academia and industry. *Akbari (2012)* identified, compared and ranked the factors affecting operational risk in e-banking from the viewpoints of customers and employees of Kermanshah Melli bank of Iran. The results indicated that data accuracy, internal controls, technological infrastructure, access to system and security influences the operational risk in e-banking in the selected bank. In the security factors, employees' opinion is more effective than customers, but in case of data accuracy and technological infrastructure, the trend is reversed. *Singh (2014)* recommended that regular review of capabilities of existing software, regular review of capabilities of existing hardware, installation of accountability system that assigns responsibility for updates to equipment/system should be used to overcome the risk of obsolescence of the system. *Epetimehin and Fatoki (2015)* examined the regulatory framework related to operational risk management with a sample of 150 employees from different financial institutions such as banks, insurance, stock brokers and microfinance companies. The results showed that operational risk management has positive effects on the financial development and growth in the financial sector. The foregoing review of literature and other articles which could not be cited here focused upon

how to implement the provisions of Basel Accords, how to measure the operational risk, how to estimate the impact of operational risk on banks' profitability, how to shift from one approach to other approach for measuring the operational risk, *etc.*, but no concerted efforts were made to analyze the risk of obsolescence of system in Indian banks. Therefore, the present study is undertaken to fill the gaps in the existing literature.

SCOPE OF THE STUDY

The present study is conducted to examine the bankers' viewpoint towards the risk of obsolescence of system in the selected banks located in the area of Punjab, Chandigarh, Haryana, New Delhi and Rajasthan in India.

RESEARCH OBJECTIVES

The following are the specific objectives of the study:

(i) To identify the factors responsible for risk of obsolescence of system in the selected groups of banks.

(ii) To examine the potential impacts of risk of obsolescence of system on the functioning of the selected groups of banks.

(iii) To analyze the measures to overcome the risk of obsolescence of system in the selected groups of banks.

RESEARCH HYPOTHESES

The following research hypotheses have been formulated and tested to validate the results of the present study:

H_{01}: There is no significant difference among the bankers' viewpoint towards the factors responsible for risk of obsolescence of system in the selected groups of banks.

H_{02}: There is no significant difference among the bankers' viewpoint towards the potential impacts of risk of obsolescence of system on the functioning of the selected groups of banks.

H_{03}: There is no significant difference among the bankers' viewpoint towards the measures for overcoming the risk of obsolescence of system in the selected groups of banks.

RESEARCH METHODOLOGY

SAMPLE PROFILE

The population for the present study is the Indian banking sector, which is divided into three categories *i.e.* State Bank Group, Nationalized Banks and Private Sector Banks. State Bank of India (SBI), State Bank of Patiala (SBOP), State Bank of Bikaner and Jaipur (SBBJ) from the category of State Bank group; Punjab National Bank (PNB), Dena Bank (DENA), Oriental Bank of Commerce (OBC),

Andhra Bank (ANDRA), and Syndicate Bank (SYNDI) from the category of nationalized banks; and HDFC Bank (HDFC), ICICI Bank (ICICI) and Axis Bank (AXIS) from the category of private sector banks are selected for the present study. A sample of 440 banks officials (40 from each bank) is taken on the basis of judgement sampling. Out of 440 respondents, 99 respondents (22.5 percent) are having the experience of less than four years, 140 respondents (31.8 percent) are having the experience of 5-8 years and 201 respondents (45.7 percent) are having the experience of more than 8 years. On the other hand, 317 respondents (72 percent) are postgraduates, 121 respondents (27.5 percent) are graduates and 02 (0.50 percent) are having professional qualification like CA, CS, *etc.*

DATA COLLECTION

The present study is of exploratory-cum-descriptive in nature. Accordingly both types of data *i.e.* primary and secondary were used. The primary data were collected with the help of pre-tested structured questionnaire on five point Likert scale *i.e.* Strongly Disagree (SD), Disagree (D), Neutral (N), Agree (A) and Strongly Agree (SA) from the officials of branches of the selected banks. On the other hand, secondary data were collected from journals, magazines, websites, reports of RBI and IBA, *etc.* Besides questionnaire, interviews and discussion techniques were also used to unveil the required information.

DATA ANALYSIS

The collected data were analyzed through various descriptive and inferential statistical techniques like frequency distribution, percentage, mean, standard deviation, *etc* with the help of SPSS (18.0 version). For coding and editing the data, weights were assigned in order of importance *i.e.* 1 to Strongly Disagree (SD), 2 to Disagree (D), 3 to Neutral (N), 4 to Agree (A) and 5 to Strongly Agree (SA). Further, ANOVA (one-way) technique was used to test the research hypotheses and validate the results of the study. The reliability of the scale used for collection of data is evaluated by calculating the value of Cronbach alpha coefficient, which is 0.819 at 5 percent level of significance, so the scale is considered reliable.

RESULTS AND DISCUSSIONS

FACTORS RESPONSIBLE FOR RISK

As displayed in Table 1 (A), rapid pace of change of technology is ranked as the most important factor in all the selected groups of banks *i.e.* State Bank Group (Mean=4.39, SD= 0.85), Nationalized Banks (Mean=4.37, SD=0.80), and Private Sector Banks (Mean=4.37, SD=0.87), followed by poor implementation of new technology in State Bank Group (Mean=3.91, SD=1.11), Nationalized Banks (Mean=4.00, SD=0.97), and inability to provide continuous support development in Private Sector

Banks (Mean=4.02, SD=0.94) ICICI (Mean=3.95, SD=0.99). The mean score of all the statements, which is greater than 3.00, implies that most of the respondents agree with the factors responsible for the risk of obsolescence of system in the selected groups of banks. Statistically, ANOVA results show that the respondents in the selected groups of banks do not differ significantly towards the factors responsible for risk of obsolescence of the system; therefore the null hypothesis (H_{01}) is accepted. Further, the results of post-hoc analysis (multiple comparisons) also show that there is no significant difference in viewpoint of respondents of the selected groups of banks towards the factors responsible for risk of obsolescence of system at 5 percent level of significance.

As revealed from Table 1 (B), taking all the selected eleven banks together, rapid pace of change of information technology (Mean=4.37, SD=0.83) is ranked as the most significant factor responsible for the risk of obsolescence of the system followed by poor implementation of new technology (Mean=3.95, SD=1.04) and inability to provide continuous support development (Mean=3.78, SD=1.11). The mean score of all the statements, which is greater than 3.00, implies that most of the respondents agree with the factors responsible for the risk of obsolescence of system in the selected banks. Statistically, ANOVA results show that the respondents in the selected banks do not differ significantly towards the factors responsible for the risk of obsolescence of the system; therefore the null hypothesis (H_{01}) is accepted.

IMPACTS OF RISK

As displayed in Table 2 (A), possible legal repercussions from erroneous transactions is ranked as the most significant impact in State Bank Group (Mean=4.36, SD=0.90), Nationalized Banks (Mean=4.18, SD=1.00), Private Sector Banks (Mean=4.18, SD=1.02) on the functioning of the selected groups of banks, followed by increase in costs associated with the updating the bank's system in State Bank Group (Mean=4.07, SD=0.92) and Nationalized Banks (Mean=4.00, SD=1.000.94), and increase in costs associated with the updating the bank's system in Private Sector Banks (Mean=4.05, SD=1.15). The mean score of all the statements, which is greater than 3.00, implies that most of the respondents agree with the impacts of risk of obsolescence of system on the functioning of the selected groups of banks. Statistically, ANOVA results show that the respondents in the selected groups of banks do not differ significantly towards the impacts of the risk of obsolescence of the system on the functioning of the banks; therefore the null hypothesis (H_{02}) is accepted. Further, the results of post-hoc analysis (multiple comparisons) also show that there is no significant difference in viewpoint of respondents of the selected groups of banks towards the impacts of the risk on the functioning of the selected groups of banks at 5 percent level of significance.

As revealed from Table 2 (B), taking all the selected eleven banks together, possible legal repercussions from erroneous transactions (Mean=4.23, SD=0.98) is ranked as the most significant impact of the risk of obsolescence of the system, followed by costs associated with resolving the problems of the customers (Mean=4.00, SD=0.94) and increase in costs associated with the updating the bank's system (Mean=3.97, SD=1.07). The mean score of all the statements, which is greater than 3.00, implies that most of the respondents agree with the impacts of risk of obsolescence of system on the functioning of the selected banks. Statistically, ANOVA results show that the respondents in the selected banks do not differ significantly towards the impacts of the risk of obsolescence of the system on the functioning of the banks; therefore the null hypothesis (H_{02}) is accepted.

RISK MANAGEMENT MEASURES

As displayed in Table 3(A), regular review of capabilities of existing hardware system is ranked as the most significant measure in all the selected groups *i.e.* State Bank Group (Mean=4.34, SD=0.76), Nationalized Banks (Mean=4.44, SD=0.90) and Private Sector Banks (Mean=4.46, SD=0.85), followed by regular review of capabilities of existing hardware system in State Bank Group (Mean=4.06, SD=1.03), Nationalized Banks (Mean=4.15, SD=0..87) and transparency in the use of technology in Private Sector Banks (Mean=4.14, SD=0.93). The mean score of all the statements, which is greater than 3.00, implies that most of the respondents agree with the measures for overcoming the risk of obsolescence of system in the selected groups of banks. Statistically, ANOVA results show that the respondents in the selected groups of banks do not differ significantly as measures for overcoming the risk of obsolescence of the system; therefore the null hypothesis (H_{03}) is accepted. Further, the results of post-hoc analysis (multiple comparisons) also show that there is no significant difference in viewpoint of respondents of the selected groups of banks towards the measures of the risk for overcoming the risk at 5 percent level of significance.

As revealed from Table 3(B), taking all the selected eleven banks together, regular review of capabilities of existing hardware system (Mean=4.42, SD=0.85) is ranked as the most significant measure for overcoming the risk of obsolescence of the system, followed by regular review of capabilities of existing software system (Mean=4.10, SD=0.93) and transparency in the use of technology (Mean=3.88, SD=1.15). The mean score of all the statements, which is greater than 3.00, implies that most of the respondents agree with the measures for overcoming the risk of obsolescence of system in the selected banks. Statistically, ANOVA results show that the

respondents in the selected banks do not differ significantly towards the measures for overcoming the risk of obsolescence of the system; therefore the null hypothesis (H_{03}) is accepted.

CONCLUSIONS AND RECOMMENDATIONS

To sum up, rapid pace of change of technology, poor implementation of new technology and inability to provide continuous support development are the factors responsible for risk of obsolescence of system in the selected groups of banks. Further, possible legal repercussion from erroneous transactions and increase in costs associated with updating thebank's system are the most significant impacts on the functioning of these groups of banks. However, regular review of capabilities of existing hardware system, regular review of capabilities of existing hardware system and transparency in the use of technology are the most adopted measures for overcoming the risk of obsolescence of system in all the selected groups of banks. It is recommended that updated information and communication technology should be used to prepare the authenticated database management system. Error-free software/programmes should be developed to maintain the security and safety of database, and such programmes should be evaluated from time to time to keep them updated and compete in an ethical way.

REFERENCES

Akbari, P. (2012). A Study on Factors Affecting Operational Electronic Banking Risks in Iran Banking Industry. *International Journal Management Business Research*: *Spring*, 2 (2), 123-135 https://www.ccg-catalyst.com/bank-consulting/bank-operational-risk

Ana, Savic (2008). Managing IT Related Operational Risks. *Communications,* 88-109, accessed on Feb. 28, 2014 from http://www.doiserbia.nb.rs/img/doi/0013-3264/ 2008/0013-32640876088S. pdf

Chapelle, Ariane; Crama, Yyes; Hubner, George & Peters, Jean Philippe (2005). Measuring and Managing Operational Risk in the Financial Sector: An Integrated Framework. accessed on February 27, 2014. Available at SSRN: http://ssrn.com/abstract=675186

Ebnother, Silvan; Vanini, Paolo; Mcneil, Alexander and Antolinez-Fehr, Pierrre (2003). Modeling Operational Risk. *Journal of Risk,* 5 (3), 1-16, December, available at SSRN: http://ssrn.com/abstract=293179.

Embrechts, Paul & Hofert, Marius (2011). Practices and Issues in Operational Risk Modeling under Basel II. *Lithuanian Mathematical Journal,* 51 (02), April, 180-193.

Epetimehin, F. M. and Fatoki, O. (2015). Operational Risk Management and the Financial Sector Development: An Overview. *International Journal of Economics, Commerce and Management*, 3 (3), 1-11.

Jankiraman, Usha (2008). Operational Risk Management in Indian Banks in the context of Basel II: A Survey of the State of Preparedness and Challenges in Developing the Framework. *Asia Pacific Journal of Finance and Banking Research,* 2 (2), 26-44

Malhotra, Naresh K. and Dash, Satyabhusan (2010). *Marketing Research - An Applied Orientation*. 6th Edition, New Delhi, Pearson Education, Inc.

Report of Financial Services Regulatory Commission (2004) on Sound Practices for the Management of Operational Risk, available at http://www.fsrc.gov.ag/files/Operational %20Risk.pdf

Report of the Commission on Credit Unions (2015), available at http://www. centralbank.ie/ regulation/industrysectors/creditunions/Documents/CU%20Handbook%20-20Full%20 Handbook.pdf

Singh, S. & Chaudhry, Sahila (2014). Appraisal of Risks in E-Banking in India. Published in Emerging Paradigms in Management in the Era of Globalization edited by Ahlawat, Jagbir; Bohra and Monika Tushir, *Savera Publishing House*, New Delhi, 143-147.

Singh, S. (2015). Analysis of System Deficiencies in E-Banking. *GE - International Journal of Management Research*. 3 (7), July, 90-101

Srinivastava, T. N. and Rego, Sahilaja (2011). *Business Research Methodology*. 1st Edition, New Delhi, Tata McGraw Hill Education Private Limited.

Tanase, R. D. and Serbu R. (2010). Operational Risk and E-banking. *Bulletin of the Transivania University of Brasov*, Series V, Economic Sciences, 3 (1), 327-334.

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Table 1 (A): Factors Responsible for Risk of Obsolescence of System in Selected Groups of Banks

Factors	State Bank Group				Nationalized Banks				Private Sector Banks				ANOVA	
	N	Mean	S.D.	Rank	N	Mean	S.D.	Rank	N	Mean	S.D.	Rank	F	Sig.
Rapid pace of change of information technology	120	4.39	0.85	1	200	4.37	0.80	1	120	4.37	0.87	1	0.026	0.975
Poor implementation of new technology	120	3.91	1.11	2	200	4.00	0.97	2	120	3.90	1.10	3	0.471	0.625
Inability to provide continuous support development	120	3.65	1.19	5	200	3.76	1.12	3	120	3.95	0.99	2	2.147	0.118
Lack of monitoring the exiting deficiencies of the system	120	3.90	1.09	3	200	3.71	1.31	5	120	3.76	1.05	5	0.916	0.401
Indifferent attitude of the employees towards latest developments	120	3.68	1.36	4	200	3.75	1.21	4	120	3.78	1.30	4	0.192	0.825

Source: Survey, **Note:** *= Significant at 5 percent level, Degrees of Freedom (df) = 2,437

Table 1 (B): Factors Responsible for Risk of Obsolescence of System in Selected Banks

Factors	N/P	Response						Descriptive Statistics			ANOVA	
		SD	D	N	A	SA	Total	Mean	S.D.	Rank	F	Sig.
Rapid pace of change of information technology	N	6	19	9	175	231	440	4.37	0.83	1	0.348	0.967
	P	1.4	4.3	2.0	39.8	52.5	100.0					
Poor implementation of new technology	N	16	45	21	220	138	440	3.95	1.04	2	1.069	0.385
	P	3.6	10.2	4.8	50.0	31.4	100.0					
Inability to provide continuous support development	N	18	62	37	203	120	440	3.78	1.11	3	0.813	0.616
	P	4.1	14.1	8.4	46.1	27.3	100.0					
Lack of monitoring the exiting deficiencies of the bank's system	N	30	57	19	208	126	440	3.77	1.18	4	1.726	0.073
	P	6.8	13.0	4.3	47.3	28.6	100.0					
Indifferent attitude of the employees towards latest developments	N	39	59	20	181	141	440	3.74	1.27	5	1.353	0.200
	P	8.9	13.4	4.5	41.1	32.0	100.0					

Source: Survey, **N**=Number of Respondents, **P**=Percent, Degree of Freedom (df)=10,429, *=Significant at 5 percent level

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Table 2 (A): Impacts of Risk of Obsolescence of System in Selected Groups of Banks

Impacts	State Bank Group				Nationalized Banks				Private Sector Banks				ANOVA	
	N	Mean	S.D.	Rank	N	Mean	S.D.	Rank	N	Mean	S.D.	Rank	F	Sig.
Possible legal repercussions resulting from erroneous transactions	120	4.36	0.90	1	200	4.18	1.00	1	120	4.18	1.02	1	1.488	0.227
Costs associated with resolving the problems of the customers	120	4.07	0.92	2	200	4.00	0.94	2	120	3.95	0.95	3	0.478	0.620
Increase in costs associated with updating the bank's system	120	3.84	1.20	3	200	3.98	1.04	3	120	4.11	0.98	2	1.966	0.141
Potential adverse publicity	120	3.83	1.19	4	200	3.80	1.07	5	120	3.80	1.13	5	0.032	0.968
Delay in processing of transactions	120	3.80	1.20	5	200	3.91	1.15	4	120	3.84	1.18	4	0.343	0.710
Disruptions in processing of transactions	120	3.60	1.25	6	200	3.71	1.24	6	120	3.70	1.14	6	0.318	0.727

Source: Survey, **Note:** *= Significant at 5 percent level, Degrees of Freedom (df) = 2,437

Table 2 (B): Impacts of risk of Obsolescence of System in Selected Banks

Impacts	N/P	Response						Descriptive Statistics			ANOVA	
		SD	D	N	A	SA	Total	Mean	S.D.	Rank	F	Sig.
Possible legal repercussions as law suits could result from erroneous transactions	N	13	29	10	178	210	440	4.23	0.98	1	0.931	0.504
	P	3.0	6.6	2.3	40.5	47.7	100.0					
Costs associated with resolving the problems of the customers	N	14	31	15	257	123	440	4.00	0.94	2	1.501	0.136
	P	3.2	7.0	3.4	58.4	28.0	100.0					
Increase in costs associated with updating the bank's system	N	24	31	22	216	147	440	3.97	1.07	3	1.691	0.080
	P	5.5	7.0	5.0	49.1	33.4	100.0					
Potential adverse publicity	N	16	73	12	216	123	440	3.81	1.12	5	0.274	0.987
	P	3.6	16.6	2.7	49.1	28.0	100.0					

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Delay in processing of transactions	N	25	59	10	202	144	440	3.86	1.17	4	0.969	0.470
	P	5.7	13.4	2.3	45.9	32.7	100.0					
Disruptions in processing of transactions	N	28	76	22	195	119	440	3.68	1.21	6	0.560	0.847
	P	6.4	17.3	5.0	44.3	27.0	100.0					

Source: Survey, **N**=Number of Respondents, **P**=Percent, Degree of Freedom (df)=10,429, *=Significant at 5 percent level.

Table 3 (A): Measures for Overcoming the Risk of Obsolescence of System in Selected Groups of Banks

Measures	N	State Bank Group			N	Nationalized Banks			N	Private Sector Banks			ANOVA	
		Mean	S.D	Rank		Mean	S.D.	Rank		Mean	S.D.	Rank	F	Sig.
Regular review of capabilities of existing hardware of bank's system	120	4.34	0.76	1	200	4.44	0.90	1	120	4.46	0.85	1	0.740	0.478
Regular review of capabilities of existing software of bank's system	120	4.06	1.03	2	200	4.15	0.87	2	120	4.07	0.93	3	0.392	0.676
Installation of accountability system for updates in bank's system	120	3.93	1.15	4	200	3.83	1.12	4	120	3.94	1.21	5	0.473	0.623
Transparency in use of technology	120	3.98	1.09	3	200	4.02	1.08	3	120	4.14	0.93	2	0.767	0.465
Partnering agreements with suppliers	120	3.91	1.07	5	200	3.78	1.12	6	120	3.91	1.10	7	0.771	0.463
Regular obsolescence monitoring	120	3.83	1.21	6	200	3.78	1.26	7	120	3.93	1.17	6	0.587	0.556
Planned upgradation of system	120	3.76	1.24	7	200	3.82	1.25	5	120	4.04	1.18	4	1.748	0.175

Source: Survey, **Note:** *= Significant at 5 percent level, Degrees of Freedom (df) = 2,437.

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Table 3 (B): Measures for Overcoming the Risk of Obsolescence of System in Selected Banks

Measures	N/P	Response						Descriptive Statistics			ANOVA	
		SD	D	N	A	SA	Total	Mean	S.D.	Rank	F	Sig.
Regular review of capabilities of existing hardware of bank's system	N	12	10	4	169	245	440	4.42	0.85	1	1.501	0.136
	P	2.7	2.3	.9	38.4	55.7	100.0					
Regular review of capabilities of existing software of bank's system	N	12	28	15	231	154	440	4.10	0.93	2	1.177	0.304
	P	2.7	6.4	3.4	52.5	35.0	100.0					
Installation of accountability system for updates in bank's system	N	29	42	20	207	142	440	3.88	1.15	4	2.213	0.016
	P	6.6	9.5	4.5	47.0	32.3	100.0					
Transparency in use of technology	N	13	48	12	201	166	440	4.04	1.05	3	1.226	0.272
	P	3.0	10.9	2.7	45.7	37.7	100.0					
Partnering agreements with suppliers	N	21	50	29	211	129	440	3.85	1.10	6	1.025	0.421
	P	4.8	11.4	6.6	48.0	29.3	100.0					
Regular obsolescence monitoring	N	34	50	17	192	147	440	3.83	1.22	7	1.142	0.329
	P	7.7	11.4	3.9	43.6	33.4	100.0					
Planned upgradation of system	N	33	52	14	183	158	440	3.86	1.23	5	2.177	0.018
	P	7.5	11.8	3.2	41.6	35.9	100.0					

Source: Survey, **N**=Number of Respondents, **P**=Percent, Degree of Freedom (df)=10,429, *=Significant at 5 percent level.