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Risk of Careless Attitude of Service Providers in E-Banking : A Study of Selected Groups of Indian Banks

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Abstract

In the present study, an attempt is made to study the various aspects of risk of careless attitude of service providers in e-banking in the selected groups of public and private sector banks. A sample of 440 respondents (bank officials) is taken on the basis of judgement sampling i.e. 120 from State Bank Group, 200 from Nationalized Banks and 120 from Private Sector Banks. The primary data was collected with the help of pre-tested structured questionnaire on five point Likert scale i.e. Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D) and Strongly Disagree (SD). The collected data was 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 the absence of performance benchmarks, sole dependence of one service provider and lack of backup plans with the service providers are the main factors leading to the risk of careless attitude of service providers in the selected banks. On the other hand, accountability of the bank to the customers for service providers-induced problems and possible costs associated with repairing the bank's system are the most significant impacts on the functioning of the selected banks. However, undertaking due diligence before entering into a service contract with the service providers, developing the service provider contracts that covers auditing provisions, and clear understanding of contractual relationship with the service providers are the measures being used by these banks for overcoming the risk of careless attitude of service providers in e-banking.

Key Words

Performance Benchmarks, Accountability, Auditing Provisions, Due Diligence

INTRODUCTION

Indian banking sector today is in the mid of an IT revolution. New private sector banks and foreign banks have an edge over public sector banks in the implementation of technological solutions. However, public sector banks are in the process of making huge investment in technology. To be successful in this competitive environment, these banks have to take certain steps like cost reduction by economies of scale, better relations with the customers by providing better services and facilities to them. Pressure of performance and profitability will keep them on their toes all the times as the shareholders expect good performance along with good returns on their equity. The changing scenario and the new technologies like internet banking, mobile banking, improvement in payment technology, etc. can help in increasing the scale of economies in providing financial services. With the help of technology, banks are now able to offer such products and services, which were difficult or impossible with traditional banking. Indian banks have been able to take one step in this direction - physical cash has been replaced by anytime, anywhere money, but these are more pronounced in foreign and private sector banks. No doubt, e-banking provides so many benefits, but face to face contact between the bank and the customer is absent in e-banking transactions, which causes most of the problems like credit card frauds, fraud of internet, etc. While it mitigates some risks, but induces some risks also. The main risks of e-banking are strategic risk, business risk, operational risk, security risk, privacy/security risk, legal risk, cross-border risk, reputational risk, liquidity risk, etc. These risks are highly interdependent and events that affect one area of risk can have ramifications for a range of other risk categories. Among these risks, operational risk in e-banking is emerging as a new challenge to the Indian banks, which is a distinct class of risk similar to credit and market risk, and exists in each product and services offered. Examples of operational risk include internal and external fraud, employment practices and workplace safety, clients, products and business practices, damage to physical assets, business disruption and system failures, execution, delivery and process management (for example, data entry errors, collateral management failures, incomplete legal documentation, unapproved access given to client accounts, non-client counterparty mis-performance and vendor disputes) Operational risk differs from other banking risks in that it is typically not directly taken in return for an expected reward, but exists in the natural course of corporate activity. At the same time, failure to properly manage operational risk can result in a misstatement of an institution's risk profile and expose the institution to significant losses. The objective of operational risk management is the same as for

credit and market risks i.e. to find out the extent of the financial institution's operational risk exposure, to understand what drives it, to allocate capital against it and identify trends internally and externally that would help in predicting it. Therefore, it should be managed properly so that the technology implementation is smooth and beneficial to the customers and the banking organization.

REVIEW OF LITERATURE

The articles on varied aspects of operational risk in e-banking found in different journals but they are restrictive in nature and do not give a comprehensive view. *Geiger* (2010) highlighted the renewed interest of banks and the supervisors in operational risk in view of the Basel Committee call for capital charge for operational risk as a component of Pillar I in the new capital adequacy framework of June 1999. Based on an analysis of the definitions of operational risk and its demarcation from credit and market risks, he argued that it would be inappropriate to introduce extra capital charge for operational risk in Pillar I. *Trenca and Neag* (2010) provided an analysis of the operational risk from the perspective of the financial institutions in Romania exposed to operational risk in the context of the Basel II Agreement. The results of the analysis insist on the importance of identifying, measuring and modeling operational risk and the benefits of continuously improving the instruments, methodology and techniques of operational risk management. *Embrocates and Hofert* (2011) highlighted the introduction of operational risk, which is based on Basel II legal documents and summarized the techniques, observed range of practices and supervisory issues in operational risk modeling. He revealed that one of the largest problems in operational risk modeling is data scarcity. Frequently, sophisticated models for operational risk losses, which seem to be realistic, are invented and can be found in the literature. Without an adequate amount data, this is not possible and therefore, still poses challenges to both academia and industry. *Mehra* (2011) explored the range of practices used by Indian banks in management of operational risk essential for achievement of Advanced Measurement Approach (AMA) for a cross-section of Indian banks and perform a comparative analysis with AMA compliant banks worldwide. The study provided conclusive evidence that size was observed to be a deterrent to collection of external loss data, deeper level of involvement of operational risk functionaries, data collection and analysis. The practices of average and small sized public sector bank and old private sector banks were observed to be lagging behind new private sector banks, usage of scenarios, updating of these indicators and collection and usage of external loss data. Wide gap was observed in the range of practices

followed by Indian banks and the AMA compliant banks worldwide. *Akbari* (2012) identified, compared and ranked factors affecting operational e-banking risks in 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 e-banking risks in Melli Bank of Kermanshah in Iran. In the security factors, employees' opinion is more effective than customers, but in case of data accuracy and technological infrastructure, the trend is reversed. *Osunmuyiwa* (2013) examined the various aspects of online banking risks and the risk management methods employed in mitigating these risks and recommended that banks that carry out online banking should clearly explain the privacy rule and communicate to their clients. Banks can also make use of materials like vendor oversight, assignment sheet; excel spreadsheet for risk assessment for policies to carry out data safekeeping. *Singh and Chaudhry* (2014) analyzed the bankers' viewpoint towards various types of e-banking risks in selected public, private and foreign banks in India. The operational risk is considered as the most important risk in e-banking in all the three categories of banks followed by reputational and legal risk, whereas strategic risk was considered as the least important risk by all the three categories of banks.

The foregoing review of literature shows that no concerted effort has been made so far to study the factors leading to the risk of careless attitude of service providers in e-banking which is an important component of operational risk, its impacts on the functioning of the banks and framework provided to mitigate the risk in Indian banks. Therefore, the present study is undertaken to fill the gap in the existing literature.

SCOPE OF THE STUDY

The present study is confined to the analysis of risk of careless attitude of service providers in the selected groups of banks in the area of Punjab, Chandigarh, Haryana, New Delhi and Rajasthan.

OBJECTIVES OF THE STUDY

The present study aims to examine the various aspects of risk of careless attitude of service providers in e-banking in the selected banks. In this broader framework, the following are the specific objectives of the study :

(i) To identify the factors responsible for risk of careless attitude of service providers in e-banking in selected banks.

(ii) To examine the impacts of risk of careless attitude of service providers

in e-banking on the functioning of the selected banks.

(iii) To analyze the risk management framework provided for overcoming the risk of careless attitude of service providers in e-banking in selected banks.

RESEARCH HYPOTHESES

The following 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 careless attitude of service providers in e-banking in selected banks.

H_{02} : There is no significant difference among the bankers' viewpoint towards the impacts of risk of careless attitude of service providers in e-banking on the functioning of the selected banks.

H_{03} : There is no significant difference among the bankers' viewpoint towards the risk management framework provided for overcoming the risk of careless attitude of service providers in e-banking in selected banks.

RESEARCH METHODOLOGY

The population for the present study is the Indian banking sector, which is divided into three categories i.e. State Bank of India and its associates, nationalized banks; and private sector banks. State Bank of India (SBI), State Bank of Patiala (SBOP), State Bank of Bikaner and Jaipur (SBBJ) are selected from the category of State Bank and its associates; Punjab National Bank (PNB), Dena Bank (DENA), Oriental Bank of Commerce (OBC), Andhra Bank (ANDRA), and Syndicate Bank (SYNDI) are selected from the category of nationalized banks. On the other hand, HDFC Bank (HDFC), ICICI Bank (ICICI) and Axis Bank (AXIS) are selected from the category of private sector banks. A sample of 440 officials (40 from each bank) is taken from the selected banks on the basis of judgement sampling. Out of 440 respondents, 91 respondents (22.5 per cent) are having the experience of less than four years, 140 respondents (31.8 per cent) are having the experience of 5-8 years and 201 respondents (45.7 per cent) are having the experience of more than 8 years. On the other hand, 317 respondents (72 per cent) are post-graduates, 121 respondents (27.5 per cent) are graduates and 02 (0.50 per cent) are having professional qualification like CA, CS, etc. The primary data was collected with the help of pre-tested structured questionnaire on five point Likert scale i.e. Strongly Agree (SA),

Agree (A), Neutral (N), Disagree (D) and Strongly Disagree (SD). On the other hand, the secondary data was collected mainly from RBI and IBA publications such as RBI Monthly Bulletins, the Report on Trends and Progress of Banking in India, IBA Bulletins, the Indian Banking Year Book; and Journals such as Asia Pacific Journal of Finance and Banking Research, Bank Management, Professional Banker, e-journals; and newspapers like The Economic Times, The Financial Express and The Hindu etc. were also referred. The collected data was be 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.

RESULTS AND DISCUSSIONS

(A) Factors Responsible for Risk

As shown in Table 1 (A), absence of performance benchmarks is ranked at the top by the respondents in all the three groups of banks i.e. State Bank Group (Mean = 4.26, SD = 1.06), Nationalized Banks (Mean = 4.31, SD = 0.95) and Private Sector Banks (Mean=4.14, SD=1.10), followed by sole dependence of one service provider in the State Bank Group (Mean = 4.05, SD = 1.08) and Nationalized Banks (Mean = 3.86, SD = 1.14); and lack of backup plans with the service providers in Private Sector Banks (Mean=3.70, SD = 1.12). Statistically, ANOVA results show that the respondents of these banks do not differ significantly in their viewpoint towards the factors responsible for risk of careless attitude of service providers at 5 per cent level of significance; therefore, the null hypothesis (H_{01}) is accepted.

As revealed from Table 1 (B), taking all the selected eleven banks together, absence of performance benchmarks (Mean = 4.25, SD = 1.02) is found as the most significant factor responsible for risk of careless attitude of service providers followed by sole dependence of one service provider (Mean = 3.84, SD = 1.15) and lack of backup plans with the service providers (Mean = 3.80, SD = 1.06). Statistically, ANOVA results show that the respondents in the selected banks do not differ significantly in their viewpoint towards the factors responsible for risk of careless attitude of service providers; therefore, the null hypothesis (H_{01}) is accepted.

(B) Impacts of Risk

As shown in Table 2 (A), accountability of the bank to the customers for service provider-induced problems is ranked as the most significant impact by the respondents in all the groups i.e. State Bank Group (Mean = 4.13, SD = 1.12), Nationalized Banks (Mean = 4.27, SD = 0.96) and Private sector Banks (Mean = 4.21, SD = 0.99), followed by possible costs associated with repairing the bank's system

Table 1 (A)

Factors Responsible for Risk of Careless Attitude of Service Providers 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.
Absence of performance benchmarks	120	4.26	1.06	1	200	4.31	0.95	1	120	4.14	1.10	1	0.471	0.909
Lack of backup plans with the service providers	120	4.03	0.88	3	200	3.72	1.11	3	120	3.70	1.12	2	1.563	0.115
Sole dependence of one service provider	120	4.05	1.08	2	200	3.86	1.14	2	120	3.63	1.22	3	1.000	0.443
Lack of relevant in-house expertise	120	3.82	1.20	4	200	3.69	1.12	5	120	3.54	1.14	5	1.507	0.134
Lack of proper delivery of services	120	3.82	1.30	5	200	3.71	1.25	4	120	3.62	1.31	4	1.267	0.247
Lack of reliability of the bank's system	120	3.62	1.31	6	200	3.45	1.33	6	120	3.50	1.34	6	1.423	0.167

Source : Survey, **Note** : * = Significant at 5 per cent level, Degrees of freedom (df) = 10,429

Table 1 (B)

Factors Responsible for Risk of Careless Attitude of Service Providers in All Selected Banks

Factors	N/P	Response						Descriptive Statistics			ANOVA	
		SD	D	N	A	SA	Total	Mean	S.D.	Rank	F	Sig.
Absence of performance benchmarks	N	18	23	12	165	222	440	4.25	1.02	1	0.471	0.909
	P	4.1	5.2	2.7	37.5	50.5	100.0					
Lack of backup plans with the service providers	N	21	51	22	247	99	440	3.80	1.06	3	1.563	0.115
	P	4.8	11.6	5.0	56.1	22.5	100.0					
Sole dependence of one service provider	N	28	47	22	211	132	440	3.84	1.15	2	1.000	0.443
	P	6.4	10.7	5.0	48.0	30.0	100.0					
Lack of relevant in-house expertise	N	25	70	22	225	98	440	3.68	1.15	5	1.507	0.134
	P	5.7	15.9	5.0	51.1	22.3	100.0					
Lack of proper delivery of services	N	35	73	13	182	137	440	3.71	1.28	4	1.267	0.247
	P	8.0	16.6	3.0	41.4	31.1	100.0					
Lack of reliability of the bank's system	N	45	86	18	183	108	440	3.50	1.32	6	1.423	0.167
	P	10.2	19.5	4.1	41.6	24.5	100.0					

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

Table 2 (A)

Impacts of Risk of Careless Attitude of Service Providers in Selected Group 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.
Accountability of bank for service providers-induced problems	120	4.13	1.12	1	200	4.27	0.96	1	120	4.21	0.99	1	1.288	0.235
Possible costs associated with repairing the system	120	3.95	1.08	2	200	4.04	0.92	2	120	3.93	0.98	2	1.211	0.281
Increase in costs associated with regeneration of customers' records	120	3.73	1.25	5	200	3.98	0.92	3	120	3.79	1.05	3	1.223	0.273
Potential adverse publicity	120	3.88	1.20	3	200	3.70	1.20	5	120	3.61	1.24	5	1.060	0.392
Loss of present and potential customers	120	3.80	1.31	4	200	3.71	1.26	4	120	3.78	1.12	4	.802	0.627

Source : Survey, Note: *= Significant at 5 per cent level, Degrees of freedom (df) = 10,429

Table 2 (B)

Impacts of Risk of Careless Attitude of Service Providers in All Selected Banks

Factors	N/P	Response						Descriptive Statistics			ANOVA	
		SD	D	N	A	SA	Total	Mean	S.D.	Rank	F	Sig.
Bank may be held accountable by the customers for service providers-inuced problems	N	16	27	12	175	210	440	4.21	1.01	I	1.288	0.235
	P	3.6	6.1	2.7	39.8	47.7	100.0					
Possible costs associated with repairing the bank's system	N	15	37	14	246	128	440	3.98	0.98	2	1.211	0.281
	P	3.4	8.4	3.2	55.9	29.1	100.0					
Increase in costs associated with regeneration of customers' records	N	23	42	19	245	111	440	3.86	1.06	3	1.223	0.273
	P	5.2	9.5	4.3	55.7	25.2	100.0					
Potential adverse publicity	N	31	64	22	199	124	440	3.72	1.21	5	1.060	0.392
	P	7.0	14.5	5.0	45.2	28.2	100.0					
Loss of present and potential customers	N	39	53	12	209	127	440	3.75	1.24	4	0.802	0.627
	P	8.9	12.0	2.7	47.5	28.9	100.0					

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

Table 3 (A)
Impacts of Risk of Careless Attitude of Service Providers in Selected Group 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.
Undertaking due diligence before entering into contract with the service provider	120	4.46	0.77	1	200	4.19	0.89	1	120	4.05	1.09	3	5.919	0.003*
Clear understanding of contractual relationship with the service providers	120	4.14	0.86	4	200	4.17	0.88	3	120	4.13	0.82	2	0.080	0.923
Clear understanding of expectations and obligations of service providers	120	4.06	0.94	5	200	4.02	0.95	4	120	3.90	1.07	11	0.958	0.384
Developing contracts that establish performance benchmarks	120	3.68	1.30	11	200	3.84	1.15	11	120	3.97	1.01	8	1.889	0.152
Developing contracts that covers auditing provisions	120	4.18	0.89	3	200	4.19	0.92	2	120	4.21	0.98	1	0.045	0.956
Developing contracts that address contingencies	120	4.20	0.90	2	200	3.90	0.91	10	120	4.04	0.92	4	4.309	0.014*
Provisions of backup plans with service providers	120	3.91	1.19	10	200	4.01	1.02	5	120	3.92	1.04	9	0.458	0.633
Contingency plans to change the service providers in a prompt manner	120	3.94	1.07	7	200	3.94	1.00	7	120	3.90	1.07	10	0.066	0.936
Regular review of performance of service providers	120	3.92	1.13	8	200	3.93	1.08	8	120	4.03	1.16	5	0.367	0.693
Compensating action in case service providers become impaired	120	3.89	1.08	9	200	3.95	1.03	6	120	4.01	1.01	6	0.432	0.649
Developing policies to limit risks arising from reliance on service providers	120	3.98	1.18	6	200	3.93	1.14	9	120	3.99	1.18	7	0.112	0.894

Source : Survey, Note: * = Significant at 5 per cent level, Degrees of freedom (df) = 10,429

Table 3 (B)
Risk Management Framework for Risk of Careless Attitude of Service Providers in All Selected Banks

Factors	N/P	Response						Descriptive Statistics			ANOVA	
		SD	D	N	A	SA	Total	Mean	S.D.	Rank	F	Sig.
Undertake due diligence before entering into a service contract with the service provider	N	11	25	12	197	195	440	4.22	0.93	1	2.346	0.011*
	P	2.5	5.7	2.7	44.8	44.3	100.0					
Clear understanding of contractual relationship with the service provider	N	9	24	9	247	151	440	4.15	0.86	3	0.340	0.970
	P	2.0	5.5	2.0	56.1	34.3	100.0					
Clear understanding of expectations and obligations of service provider	N	8	48	20	223	141	440	4.00	0.98	5	1.196	0.292
	P	1.8	10.9	4.5	50.7	32.0	100.0					
Developing service provider contracts that establish performance benchmarks	N	27	55	14	212	132	440	3.83	1.16	11	1.450	0.156
	P	6.1	12.5	3.2	48.2	30.0	100.0					
Developing service provider contracts that covers auditing provisions	N	11	26	11	210	182	440	4.19	0.92	2	1.048	0.402
	P	2.5	5.9	2.5	47.7	41.4	100.0					
Developing service provider contracts that address contingencies	N	8	37	22	243	130	440	4.02	0.92	4	1.250	0.257
	P	1.8	8.4	5.0	55.2	29.5	100.0					
Provisions of backup plans with service providers	N	17	50	13	213	147	440	3.96	1.08	6	1.026	0.420
	P	3.9	11.4	3.0	48.4	33.4	100.0					
Developing contingency plans to change the service provider in a prompt manner	N	18	43	18	234	127	440	3.92	1.04	10	0.652	0.769
	P	4.1	9.8	4.1	53.2	28.9	100.0					
Regular review of performance of the service provider	N	23	42	19	202	154	440	3.95	1.11	9	0.771	0.657
	P	5.2	9.5	4.3	45.9	35.0	100.0					
Compensating action in case service provider become impaired	N	20	35	24	228	133	440	3.95	1.04	8	0.735	0.691
	P	4.5	8.0	5.5	51.8	30.2	100.0					
Developing policies to limit risks arising from reliance on service provider	N	31	36	13	198	162	440	3.96	1.16	7	0.721	0.705
	P	7.0	8.2	3.0	45.0	36.8	100.0					

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

in all the groups i.e. State Bank Group (Mean = 3.95, SD = 1.08), Nationalized Banks (Mean = 4.04, SD = 0.92) and Private sector Banks (Mean = 3.93, SD = 0.98). Statistically, ANOVA results show that the respondents not differ significantly in their viewpoint towards the impacts of risk of careless attitude of service providers on the functioning of the selected groups of banks do at 5 per cent level of significance, therefore the null hypothesis (H_{02}) is accepted.

As revealed from Table 2 (B), taking all the selected eleven banks together, accountability of the bank for the service provider-induced problems (Mean = 4.21, SD = 1.01) is found as the most significant impact of the risk of careless attitude of service providers followed by possible costs associated with repairing the bank's system (Mean = 3.98, SD = 0.98) and increase in costs associated with regeneration of customers' records (Mean = 3.86, SD = 1.06). Statistically, ANOVA results show that the respondents in these banks do not differ significantly in their viewpoint towards the impacts of the risk of careless attitude of service providers; therefore the null hypothesis (H_{01}) is accepted.

(C) Risk Management Measures

As shown in Table 3 (A), undertaking due diligence before entering into a service contract with the service providers is ranked as the most adopted measure by the respondents in State Bank Group (Mean = 4.46, SD = 0.77) and Nationalized Banks (Mean = 4.19, SD = 0.89); and developing the service provider contracts that covers auditing provisions in Private Sector Banks (Mean = 4.13, SD = 0.82); followed by clear understanding of contractual relationship with the service providers in State Bank Group (Mean = 4.14, SD = 0.86) and Private Sector Banks (Mean = 4.13, SD = 0.82); and developing service providers contracts that covers auditing provisions in Nationalized Banks (Mean = 4.19, SD = 0.92). ANOVA results show that the respondents differ significantly in their viewpoint towards undertaking due diligence before entering into a service contract ($p = 0.003$) and developing contracts with the service providers that address contingencies ($p = 0.014$) as the risk management framework provided for overcoming the risk of careless attitude of service providers at 5 per cent level of significance; therefore, the null hypothesis (H_{03}) is rejected.

As revealed from Table 3 (B), taking all the selected eleven banks together, undertaking due diligence before entering into a service contract (Mean = 4.22, SD = 0.93) and developing contracts with the service providers that address contingencies (Mean = 4.19, SD = 0.92) and clear understanding of contractual relationship with the service providers (Mean = 4.15, SD = 0.86) are the most significant measures used for overcoming the risk of careless attitude of service providers in the

selected banks. Statistically, ANOVA results show that the respondents in the selected banks differ significantly in their viewpoint regarding undertaking due diligence before entering into a service contract ($p = 0.011$) as the risk management framework provided for overcoming the risk of careless attitude of service providers at 5 per cent level of significance; therefore, the null hypothesis (H_{03}) is rejected.

CONCLUSION

To sum up, absence of performance benchmarks, sole dependence of one service provider and lack of backup plans with the service providers are the main factors leading to the risk of careless attitude of service providers in the selected groups of banks. On the other hand, accountability of the bank to the customers for service provider-induced problems and possible costs associated with repairing the bank's system are the most significant impacts on the functioning of the selected banks. However, undertaking due diligence before entering into a service contract with the service providers, developing the service provider contracts that covers auditing provisions, and clear understanding of contractual relationship with the service providers are the measures being used by these banks for overcoming the risk of careless attitude of service providers in e-banking.

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