ANALYSIS OF RISK OF FRAUD BY THE EMPLOYEES IN NATIONALIZED BANKS

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ABSTRACT

In the present study, an attempt is made to study the various aspects of risk of fraud by the employees in e-banking in the selected nationalized banks. A sample of 200 respondents (banks' officials) is taken on the basis of judgement sampling. The primary data were 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 were 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 poor security of records, hardware and software system is ranked as the most significant factor responsible for risk fraud by the employees in ANDRA, DENA, OBC, PNB, and little fear of exposure and likelihood of detection of frauds in SYNDI. Further, increase in complaints of the customers is ranked as the most significant impact of risk of fraud by the employees in case of ANDRA, increase in costs associated with reimbursing customers' losses in DENA, OBC, SYNDI and increase in costs associated with regeneration of customers' records in PNB. On the other hand, developing policies for adequate screening of new employees is ranked as the most significant measure in ANDRA, DENA and OBC, clear boundaries between acceptable and unacceptable behaviour of employees in PNB and assessing the relative likelihood of potential significance of inherent fraud risk in SYNDI. It is recommended that there should be an open-door policy to give employees an open line of communication with management. Internal control programmes should be monitored and revised regularly to ensure that they are effective and current with technological advances. Certified Fraud Examiners (CFE) and Certified Public Accountants (CPAs) should be hired to analyze the company's existing policies and procedures, and recommend appropriate anti-fraud policies and procedures. In addition to prevention strategies, there should also be detection methods in place and make them visible to the employees. Every employee of the organization should be aware of the fraud risk policy including the types of fraud and the consequences associated with them.

Key Words: *Exposure, Likelihood, Screening, Prevention, Consequences.*

Introduction

Indian banking is in the mid of information technology revolution these days. However, new private sector banks and foreign banks have an edge over public sector banks in the implementation of technological solutions. To be successful in the competitive environment, public sector banks are trying to find innovative ways to reduce the cost of transaction and increase the profitability by providing better services to the customers. Technology has been one of the major enabling factors for enhancing the customers' convenience in the products and services offered, which were difficult or even impossible earlier with traditional banking. Indian banks have been able to take one step in this direction - physical cash has been replaced by anytime/anywhere money, however these are more pronounced in foreign and private banks. The public sector banks are far behind in technology

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integration, therefore there is a huge scope for automation in these banks *(www.centralbank.ie)*.The security of the transactions is a major concern in the use of technology as it induces number of 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 is a distinct class of risk, and exists in each product and services offered. It differs from other banking risks in the sense that it is not directly taken in return for an expected reward and exists in the natural course of corporate activity. At the same time, failure to properly manage 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)*, increasing dependence on computers and electronic communication in banking transactions has increased the possibility of system failure, and the renewed interest of regulatory authorities in operational risk as they feel that about 25 percent of regulatory capital is needed for operational risk *(Akbari, 2012)*. The fraud by employees or bank fraud or insider fraud, which is an important component of operational risk, is the use of potentially illegal means by the employees to obtain money, assets or other property owned or held by a bank or financial institution, or to obtain money of depositors by fraudulently posing as a bank or other financial institution. The number of bank frauds in India is substantial and increasing with the passage of time and technology. According to survey by Earnest and Young (2012), the banking segment witnesses around 84 percent of reported fraud cases within the financial services sector. Banks frauds occur due to ignorance, situational pressures and permissive attitudes. It is difficult to detect the frauds in time and even more difficult to book the offenders because of intricate and lengthy requirements and processes of legal/judicial system. Moreover, the fraud cases are not always brought to light due to fear of loss of reputation the bank(s) (*Kundu and Rao, 2014)*.

Review of Literature

The articles on different aspects of risk of fraud appeared in various journals are restrictive and do not give a comprehensive picture.*Sharma ad Brahma (2000)* indicated that banks frauds could crop up in all spheres of bank dealing and emphasized on bankers' responsibility on frauds, and suggested that the need of hour is the analysis and concerted application of controls by bank management and their operations staff.*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. Beirstaker, Brody and Pacini (2005)* proposed various fraud protection and detection techniques such as fraud policies, employee reference checks, fraud vulnerability reviews, password protection, firewalls, digital analysis and other forms of software technology. *Willson (2006)* examined the causes that led to the breakdown of Barring bank, which include failure in management supervision, lack of segregation of duties, insufficient actions taken in response to warning signals, weak financial and operation control over the activities and funding of the bank. *Bhasin (2007)* examined the reasons for cheques frauds, magnitude of frauds in Indian banks and the manner in which expertise of internal auditors can be integrated to detect and prevent frauds in banks. *Ganesh and Raghurama (2008)* believed that training improved the capabilities of the employees by enhancing their skills and knowledge commitment towards their work. *Khanna and Arora (2009)* indicated that lack of training, overburdened staff, competition, low compliance level are the main reasons of fraud, and recommended that the banks should take the rising graph of bank frauds seriously and need to ensure that there is no laxity in internal control mechanism. *Kundu and Rao (2014)* highlighted that bank frauds in India are increasing with the passage of time and

technology, identified the thrust areas for fraud management and finally, with IT as fulcrum, a model of fraud management for the Indian banks has been provided. The foregoing review of literature and other articles which could not be cited here focused upon the reasons of bank frauds only, but no concerted efforts were made to examine the impact of frauds on the functioning of banks and measures initiated to control frauds in e-banking scenario. Therefore, the present study is undertaken to fill the gap in the existing literature.

Scope of the Study

The present study is conducted to examine the various aspects of risk of fraud by the employees in e-banking in selected nationalized banks in the area of Punjab, Chandigarh, Haryana, New Delhi and Rajasthan.

Research Objectives

The following are the specific objectives of the study:
 (i)   To identify the factors responsible for risk of fraud by the employees in e-banking in the selected banks.
(ii)   To examine the impacts of risk of fraud by the employees in e-banking on the functioning of the selected banks.
(iii)   To analyze the measures to overcome the risk of fraud by the employees in e-banking in the selected banks.

Research Hypotheses

The following null 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 the risk of fraud by the employees in e-banking in the selected banks.

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

H_{03}:   There is no significant difference among the bankers' viewpoint towards the measures for overcoming the risk of fraud by the employees in e-banking in selected banks.

Research Methodology

In the present study, five nationalized banks *viz.* Punjab National Bank (PNB), Dena Bank (DENA), Oriental Bank of Commerce (OBC), Andhra Bank (ANDRA), and Syndicate Bank (SYNDI) were selected. A sample of 200 banks officials (40 from each bank) was taken on the basis of judgement sampling. As the study is of exploratory-cum-descriptive in nature, therefore both types of data 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 bank officials 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. 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 technique has been used to test the hypotheses and validate the results of the study.

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RESULTS AND DISCUSSION

Factors Responsible for Risk

As exhibited in Table-1, poor security of records, hardware and software system is ranked as the most significant factor responsible for risk of fraud by the employees in ANDRA (Mean=4.32, SD=0.99), DENA (Mean=4.37, SD=1.00), OBC (Mean=4.02, SD=1.07), PNB (Mean=3.97, SD=1.18), and little fear of exposure and likelihood of detection of frauds in SYNDI (Mean=4.20, SD=0.99), followed by innocent and honest employees closed their minds to the possibility of fraud in ANDRA (Mean=4.10, SD=1.05), little fear of exposure and likelihood of detection of frauds in DENA (Mean=4.07, SD=0.76), lack of awareness about the results of fraud risk in OBC (Mean=3.97, SD=1.12) and PNB (Mean=3.87, SD=1.15); poor security of records, hardware and software system in SYNDI (Mean=4.17, SD=1.04). The mean score of all the statements, which is greater than 3.00, indicates that most of the respondents agree with the factors responsible for risk of fraud by employees in the selected nationalized banks. Statistically, ANOVA results show that the respondents of these banks differ significantly towards the little fear of exposure and likelihood of detection of frauds (p=0.006) and innocent and honest employees closed their minds to the possibility of fraud (p=0.002) as factors responsible for the risk of fraud by the employees at 5 percent level of significance; therefore the null hypothesis (H_{01}) is rejected.

Impacts of Risk

Table-2 indicates that increase in complaints of the customers is ranked as the most significant impact of risk of fraud by the employees on the functioning of ANDRA (Mean=4.35, SD=0.83), increase in costs associated with reimbursing customers' losses in DENA (Mean=4.40, SD=0.92), OBC (Mean=4.02, SD=0.97), SYNDI (Mean=4.17, SD=1.10) and increase in costs associated with regeneration of customers' records on PNB (Mean=4.10, SD=0.81), followed by increase in costs associated with reimbursing customers' losses in ANDRA (Mean=4.22, SD=0.97) and PNB (Mean=4.07, SD=1.14), possible losses from redeeming electronic money in DENA (Mean=4.20, SD=0.82), wrong perception of the public towards banks in OBC (Mean=3.95, SD=1.08) and adverse impact on the motivation of the honest employees in SYNDI (Mean=4.15, SD=0.94). The mean score of all the statements is greater than 3.00, which indicates that most of the respondents agree with the impacts of fraud by the employees on the functioning of the selected nationalized banks. Statistically, ANOVA results show that the respondents of these banks differ significantly towards the possible losses from redeeming electronic money (p=0.011) as an impact of risk of fraud by the employees at 5 percent level of significance; therefore the null hypothesis (H_{02}) is rejected.

Risk Management Measures

As exhibited in Table-3, developing policies for adequate screening of new employees is ranked at the most important measure for overcoming the risk of fraud by the employees in ANDRA (Mean=4.30, SD=0.72), DENA (Mean=4.45, SD=0.87) and OBC (Mean=4.30, SD=0.99), and clear boundaries between acceptable and unacceptable behaviour of employees in PNB (Mean=4.32, SD=0.91) and assessing the relative likelihood of potential significance of inherent fraud risk in SYNDI (Mean=4.40, SD=0.63), followed by designing internal controls including segregation of duties in ANDRA (Mean=4.22, SD=0.83) and OBC (Mean=4.12, SD=0.85), clear boundaries between acceptable and unacceptable behaviour of employees in DENA (Mean=4.15, SD=0.89), assessing the relative likelihood of potential significance of inherent fraud risk in PNB (Mean=4.25, SD=0.49), and designing of anti-fraud controls including appropriate steps to deal with relevant risk in SYNDI (Mean=4.40, SD=0.63). The mean score of all the statements is greater than 3.00, which indicates that most of the respondents agree with the measures for overcoming the risk of fraud by employees in the selected nationalized banks. Statistically, ANOVA results show that the respondents of these

banks differ significantly towards assessing the relative likelihood of potential significance of inherent fraud risk (p=0.00) and designing of anti-fraud controls including appropriate steps to deal with relevant risk (p=0.01) as measures for overcoming the risk of fraud by the employees at 5 percent level of significance; therefore the null hypothesis (H_{03}) is rejected.

Conclusion and Policy Implications

To sum up, poor security of records, hardware and software system is ranked as the most significant factor responsible for risk fraud by the employees in ANDRA, DENA, OBC, PNB, and little fear of exposure and likelihood of detection of frauds in SYNDI. Further, increase in complaints of the customers is ranked as the most significant impact of risk of fraud by the employees in case of ANDRA, increase in costs associated with reimbursing customers' losses in DENA, OBC, SYNDI and increase in costs associated with regeneration of customers' records in PNB. On the other hand, developing policies for adequate screening of new employees is ranked as the most significant measure in ANDRA, DENA and OBC, clear boundaries between acceptable and unacceptable behaviour of employees in PNB and assessing the relative likelihood of potential significance of inherent fraud risk in SYNDI. It is recommended that there should be an open-door policy to give employees an open line of communication with the management. Internal control programmes should be monitored and revised regularly to ensure that they are effective and current with technological advances. Certified Fraud Examiners (CFE) and Certified Public Accountants (CPAs) should be hired to analyze the company's existing policies and procedures, and recommend appropriate anti-fraud policies and procedures. In addition to prevention strategies, there should also be detection methods in place and make them visible to the employees. Every employee of the organization should be aware of the fraud risk policy including the types of fraud and the consequences associated with them.

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STATEMENTS AT GLANCE

(A) Factors Responsible for Risk of Fraud		5	Increase in legal problems
1	Poor security of records, hardware and software system	6	Withdrawal of approvals of the bank by the regulatory bodies
2	Lack of awareness about the results of fraud risks	7	Increase in complaints of the customers
3	Little fear of exposure and likelihood of detection of frauds	8	Adverse impact on the motivation of honest employees
4	Unclear policies with regard to acceptable behaviour of the employees	9	Intentional manipulation of accounts
5	Poor internal control system	**(C)**	**Measures for Overcoming the Risk of Fraud**
6	Ignorance of red flags and fraud warnings	1	Developing policies for adequate screening of new employees
7	Indifferent attitude of innocent and honest employees to the possibility of frauds	2	Designing internal controls including segregation of duties
8	Non-updation of customers' accounts timely	3	External audit of employees performance
8	Withdrawal of funds by the employees from customers' accounts	4	Proper control over storage of smart cards
10	Alteration of data by the employees to draw information from the records	5	Rotation in the distribution of work of the employees
(B) Potential Impacts of Risk of Fraud		6	Designing policies for developing an anti-fraud culture
1	Increase in costs associated with reimbursing customer's losses	7	Clear boundaries between acceptable and unacceptable behaviour of the employees
2	Increase in costs associated with regeneration of customers' records	8	Assessing the relative likelihood and potential significance of inherent fraud risks
3	Possible losses from redeeming e-money	9	Designing of anti-fraud controls including appropriate steps to deal with relevant risk
4	Wrong perception of the public towards the bank	10	Executing anti-fraud control measures by the competent and honest employees

Table 1: Factors Responsible for Risk of Fraud by the Employees in Selected Nationalized Banks

Factors	N	ANDRA			DENA			OBC			PNB			SYNDI			ANOVA	
		Mean	SD	Rank	Mean	SD	Rank	Mean	SD	Rank	Mean	SD	Rank	Mean	SD	Rank	F	Sig.
1	40	4.32	0.99	1	4.37	1.00	1	4.02	1.07	1	3.97	1.18	1	4.17	1.04	2	1.109	0.354
2	40	4.05	1.06	3	3.77	1.09	9	3.97	1.12	2	3.87	1.15	2	4.12	1.01	3	0.646	0.631
3	40	3.57	1.17	8	4.07	0.76	2	3.75	1.03	4	3.45	1.19	9	4.20	0.99	1	3.772	0.006*
4	40	3.75	1.25	5	3.82	1.12	8	3.60	1.15	7	3.50	1.32	8	4.10	1.08	4	1.502	0.203
5	40	3.57	1.31	9	3.67	1.24	10	3.75	1.12	5	3.67	1.20	4	3.95	1.21	7	0.525	0.718
6	40	3.72	1.28	6	3.92	1.18	6	3.47	1.26	9	3.57	1.37	6	3.92	0.99	8	1.097	0.359
7	40	4.10	1.05	2	3.95	1.10	5	3.27	1.32	10	3.27	1.44	10	4.02	1.18	6	4.514	0.002*
8	40	3.90	1.12	4	4.02	1.07	3	3.47	1.21	8	3.65	1.25	5	3.77	1.18	10	1.330	0.260
9	40	3.50	1.37	10	3.95	0.98	4	3.70	1.22	6	3.55	1.31	7	4.02	1.04	5	1.529	0.195
10	40	3.62	1.46	7	3.87	1.06	7	3.90	1.08	3	3.75	1.29	3	3.92	1.07	9	0.435	0.783

Note: *=significant at 5 percent level, Degrees of Freedom (df) = 4,195
Source: Survey

Table 2: Impacts of Risk of Fraud by the Employees in Selected Nationalized Banks

Impacts	N	ANDRA			DENA			OBC			PNB			SYNDI			ANOVA	
		Mean	SD	Rank	Mean	SD	Rank	Mean	SD	Rank	Mean	SD	Rank	Mean	SD	Rank	F	Sig.
1	40	4.22	0.97	2	4.40	0.92	1	4.02	0.97	1	4.07	1.14	2	4.17	1.10	1	0.809	0.521
2	40	3.92	1.16	3	4.05	1.01	3	3.67	1.18	8	4.10	0.81	1	4.12	0.93	4	1.281	0.279
3	40	3.42	1.53	9	4.20	0.82	2	3.67	0.94	7	4.00	0.96	3	4.00	0.87	5	3.369	0.011*
4	40	3.67	1.20	7	3.90	0.90	4	3.95	1.08	2	3.67	1.26	6	3.85	1.16	8	0.513	0.727
5	40	3.67	1.38	8	3.75	1.08	5	3.72	1.19	6	3.65	1.02	8	3.85	1.23	9	0.171	0.953
6	40	3.87	1.18	4	3.65	1.23	6	3.90	1.19	4	3.67	1.26	7	4.15	1.02	3	1.170	0.325
7	40	4.35	0.83	1	3.65	1.25	7	3.92	1.07	3	3.85	1.05	4	4.00	1.10	6	2.289	0.061
8	40	3.75	1.29	5	3.62	1.12	8	3.82	1.12	5	3.60	1.41	9	4.15	0.94	2	1.376	0.244
9	40	3.75	1.40	6	3.62	1.29	9	3.65	1.33	9	3.75	1.25	5	3.80	1.13	7	0.132	0.970

Note: *=Significant at 5 percent level, Degrees of Freedom (df) = 4,195
Source: Survey

Table 3: Measures for Overcoming the Risk of Fraud by the Employees in Selected Nationalized Banks

Measures	N	ANDRA			DENA			OBC			PNB			SYNDI			ANOVA	
		Mean	SD	Rank	Mean	SD	Rank	Mean	SD	Rank	Mean	SD	Rank	Mean	SD	Rank	F	Sig.
1	40	4.30	0.72	1	4.45	0.87	1	4.30	0.99	1	4.15	0.97	5	4.17	0.95	6	0.694	0.597
2	40	4.22	0.83	2	4.00	0.81	3	4.12	0.85	2	4.20	0.64	3	4.17	0.78	5	0.509	0.729
3	40	3.55	1.29	10	3.92	1.11	5	3.80	1.06	7	3.92	0.97	8	3.97	1.02	9	0.974	0.423
4	40	3.95	1.06	6	3.77	1.20	8	3.80	1.04	6	4.20	0.96	4	4.15	0.86	7	1.424	0.227
5	40	3.75	1.14	8	3.57	1.12	9	3.67	1.36	8	3.92	1.24	9	4.22	0.89	4	1.911	0.110
6	40	3.72	1.15	9	3.95	1.06	4	3.65	1.21	9	3.97	1.16	6	4.05	1.13	8	0.909	0.460
7	40	4.17	0.78	3	4.15	0.89	2	3.90	1.03	5	4.32	0.91	1	4.32	0.82	3	1.515	0.199
8	40	3.97	1.14	5	3.80	0.99	7	3.52	1.24	10	4.25	0.49	2	4.40	0.63	1	5.458	0.00*
9	40	3.85	1.02	7	3.57	1.29	10	3.92	1.09	4	3.95	1.01	7	4.40	0.63	2	3.294	0.01*
10	40	4.10	1.00	4	3.90	1.15	6	4.07	1.09	3	3.82	1.03	10	3.95	1.17	10	0.453	0.770

Note: *=Significant at 5 percent level, Degrees of Freedom (df) = 4,195
Source: Survey