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FORENSIC ACCOUNTING: FRAUD DETECTION IN BANK OF MAHARASHTRA

Milan Bharatkumar Undavia
Research Scholar, S.D. School of Commerce,
Gujarat University, Ahmedabad.

ABSTRACT

Financial fraud is a big business & a very sensitive issue. Fraud is a worldwide phenomenon that affects all sectors of the Indian economy. The objectives of this study are to examine forensic accounting as a tool for fraud detection in the Bank of Maharashtra (Public Sector Bank). After the Satyam, PNB and PMC Bank scams, forensic accountants are much demand in many companies to detect fraud. Provisions of Companies Act 2013 and Indian Accounting Standards examined by forensic accountants. RBI has made a compulsory forensic audit for banks in India. The concept of forensic accounting still develops in India. A forensic audit is a tool for fraud detection and prevention. The Secondary data has used for the investigation and the annual reports of bank collected from 2011-2012 to 2020-21. The highest number of fraud cases and the highest amount of fraud in public sector banks, Private sector banks, and foreign banks. Descriptive Analysis used for this study. Benford's Law (Mathematical tool) and Chi-Square Test (Statistical tool) is used for a detection tool for fraud analysis. In Benford's Law, the First Digit & Second Digit methods are used. The study helps to find out the financial fraud in the Indian banking sector.

Keywords: Fraud, Forensic Accounting, Bank.

INTRODUCTION

At present India predicted to emerge as a global economic power in the near future. The Indian financial system, particularly, the Banking Industry, will have to attain global standards. The challenges Indian Banks face in their quest to attain global standards and become truly global banks is the main focus. Only a sound and strong banking system, which has a global presence and is backed by advanced technology and expertise can effectively support

the growth of the Indian economy. Forensic accounting is an emerging concept. Forensic accounting is known as investigative accounting.

What is Fraud?

" Fraud is a type of criminal activity, defined as abuse of position, or false representation, or prejudicing someone's rights for personal gain. Simply, fraud is an act of deception intended for personal gain or to cause a loss to another party. (STUDY ON FORENSIC ACCOUNTING AND FRAUD DETECTION, 2017)

Meaning and Definition under Companies Act, 2013.

Section 447 of companies Act 2013 defines Fraud and related terms as below:

(1) "Fraud in relation to affairs of a company or anybody corporate, includes any act, omission, concealment of any fact or abuse of position committed by any person or any other person with the connivance in any manner, with intent to deceive, to gain undue advantage from, or to injure the interests of, the company or its shareholders or its creditors or any other person, whether or not there is any wrongful gain or wrongful loss;

(2) "wrongful gain means, the gain by unlawful means of property to which the person gaining is not legally entitled;

(3) Wrongful loss means, the loss by unlawful means of property to which the person losing is legally entitled." (Forensic Audit, Module-3)

"Forensic Accounting is the science of gathering and presenting financial information in a form that will be accepted by a court of jurisprudence against perpetrators of economic crimes."- George A. Mannie. (Maheshwari & Maheshwari, 2015)

As per section 5(b) of the Banking Regulation Act,1949 "Banking means the accepting, for the purpose of lending or investment, of deposits of money from the public, repayable on demand or otherwise, and withdrawable by cheque, draft, order or otherwise"

LITERATURE REVIEW

(Khanna & Arora, B., 2009)Suggested various other causes responsible for bank frauds. The study was based on a questionnaire-based survey. They were used non-parametric tests, the Mann-Whitney Test, and the Chi-Square Test. Training positively affects the compliance level of employees.

(Soni & Soni, N., 2013)has investigated banking cyber frauds special in public and private sector bank. Secondary data has taken published by RBI. Table and graphs used for comparative analysis. Their study revealed that big frauds in online Banking and other digital banking transactions in private banks and foreign banks.

(Rajdeepa & Nandhitha, D., 2015) has investigated fraud prevention and detection in the banking sector with the help of data mining techniques and revealed 10 types of banking frauds in the Indian banking sector.

(Sharma & Sharma, D., 2018) examined the various frauds in the banking industry. They used content analysis and to identify parameters through a detailed literature review. They explained that very few studies in the Indian context for banking fraud analysis.

Need of the Study

The present study is important because the internal audit system fails in many banks. The bank must introduce a forensic audit, to investigate high-value frauds.

RESEARCH METHODOLOGY

Research Design

The present study entitled Forensic Accounting: Fraud Detection in Bank of Maharashtra for the period from 2011-12 to 2020-21.

Objective: To Know chances of fraud in financial statements of the Indian Banking Sector.

HYPOTHESIS

Null Hypothesis

Ho: There is no significant association between observed frequency and expected frequency data.

Alternative Hypothesis

H1: There is a significant association between observed frequency and expected frequency data.

Nature and Sources of data

The present study is mainly based on secondary data. An annual report (Consolidated Financial Statements – Consolidated Balance Sheet, Consolidated Profit & Loss Account, Statement of Consolidated Cash Flow data) has been collected from BSE (Bombay Stock Exchange- Website).

Period of Study

The present study covers a period of 10 years from the year 2011-12 to 2020-21.

Tools and Techniques

For the purpose of fraud detection of selected Indian companies of the Banking sector, following mathematical and statistical, tools and techniques are used.

- Benford's Law (Mathematical Technique – First Digit & Second Digit)

Benford's Law, also called the First –Digit Law, refers to the frequency distribution of digits in many (but not all) real-life sources of data. In this distribution, the number 1 occurs as the leading digit about 30% of the time, while larger numbers occur in that position less frequently.

(Basu S. , 2014)

- Chi-Square Test (Statistical Technique)

Chi-Square is a test statistic used to test the hypothesis that provider a set of theoretical frequencies with, which observed frequencies are compared. Hence, it is a non-parametric test of statistical significance, which compares observed data with expected data and testing the null hypothesis, which states that there is no significant difference between the expected and observed results. As a test of Goodness of Fit Karl pearson developed a –test for significance called chi-square test of goodness of fit, which is used to test whether or not the observed frequency results support a particular hypothesis. The test can be used to identify whether the deviations, if any, between the observed and estimated values can be because of a chance or some other inadequacies.

Scope of the Study

One Public sector bank (Highest number of fraud cases and amount) selected from published banking fraud data.

Fraud in Bank of Maharashtra

It is alleged that "during 2012 to 2014, Bank of Maharashtra had sanctioned various credit facilities to Siddhi Vinayak Logistics Limited, including working capital limit, term loans and loans to 2,802 drivers for purchase of trucks. The CBI has arrested Bank of Maharashtra officer from Pune along with the director of private logistics company from surat in connection with a Rs.836 crore bank fraud case. (Rani, Rani, & Nemani, 2019)

Rotomac Pen Scam

Fraud Amount: Rs.49.82 crore. The Promoter of Rotomac Pen, Vikram Kothari, allegedly fraudulently cheated Rs.49.82 Crore with Bank of Maharashtra. (Upadhyay, 2018)

Table-1

Digit Calculation from Income Statement, Balance Sheet & Cash Flow Statement.

Determining First Digit Test of Benford's Law, Chi-Square Test & Z Test

BANK OF MAHARASHTRA

FIRST DIGIT	Observed Data (Count)	Actual Proportion (AP) %	Benford Data	Expected Proportion (EP) %	ABS	Chi-Square	Z Test
1	896	36.28999595	743.24307	30.103	6.18699595	31.39575814	6.680091
2	327	13.24422843	434.76621	17.609	4.364771567	26.71218634	5.667547
3	270	10.93560146	308.47686	12.494	1.558398542	4.799286259	2.311473
4	211	8.545970028	239.27079	9.691	1.145029972	3.340305631	1.8892
5	179	7.249898744	195.49542	7.918	0.668101256	1.39184274	1.192175
6	155	6.277845281	165.29955	6.695	0.417154719	0.641748451	0.789074
7	168	6.804374241	143.17731	5.799	1.005374241	4.303516659	2.094338
8	141	5.710814095	126.28935	5.115	0.595814095	1.713550853	1.2980171
9	122	4.94127177	112.98144	4.576	0.36527177	0.719891909	0.820415
	2469	100	2469	100		75.01808698 Calculated Value	
					alpha	0.05	
					Table Value	15.50731306	

(Source: Benford's Law & Accounting Fraud Detection, 2011)

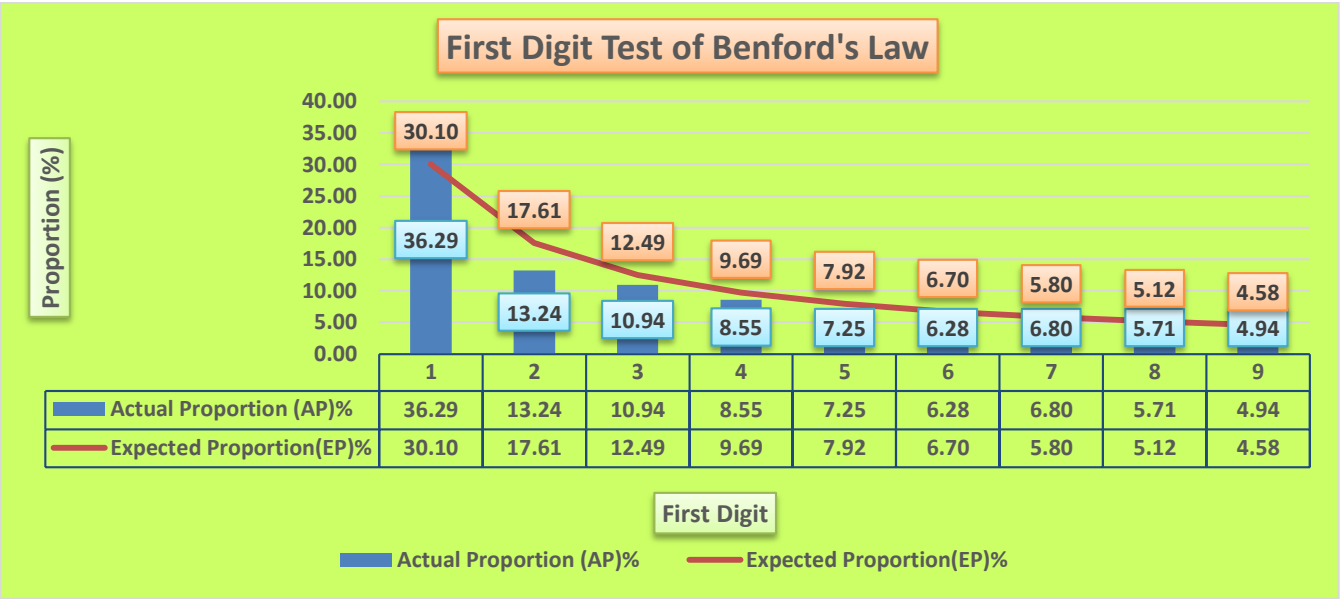

Figure -1 First digit test of Benford's Law

BANK OF MAHARASHTRA

Interpretation (Chi-Square Test):

As shown above, the Chi-Square calculated value 75.01808698 is more than the Chi-Square table value 15.5073 (75.01808698 >15.5073). So, H0 is reject because the first digit frequency distribution of observed data does not follow to Expected data. The rejection of H0 shows that the possibility of financial manipulation can not be rejected. It is essential to examine the lending policy of the management of Bank of Maharashtra. Regular financial checking of borrowers should be done, so that Bank of Maharashtra can change its future results performing to Benford's analysis.

BANK OF MAHARASHTRA

Interpretation (Z Test):

In case of Consolidated Income Statement, Balance Sheet and Cash Flow Statement appears to deviate from Benford's Law. Here, digit 1,2,3 & 7 the value is more than 1.96. So, H0 is rejected and digit 1,2,3 & 7 creates suspicious in the minds of the stakeholders, overall performance is already suspicious because H0 is rejected. Hence, it is concluded that digit 1,2,3 & 7 important digits from the viewpoint of financial manipulation. It is suggested that all transactions which are part of digit 1,2,3 & 7 are to be reexamined by the forensic accountant to check their reliability, True and fair presentation also must be checked, so that in the future, if any loss it can be presented for concerned stakeholders.

Table-2

Digit Calculation from Income Statement, Balance Sheet & Cash Flow Statement.

Determining Second Digit Test of Benford's Law, Chi-Square Test & Z Test

BANK OF MAHARASHTRA

SECOND DIGIT	Observed Data (Count)	Actual Proportion (AP) %	Benford Data	Expected Proportion (EP) %	ABS	Chi-Square	Z Test
0	280	11.38211382	294.4128	11.968	0.585886179	0.70556988	0.864203
1	276	11.2195122	280.1694	11.389	0.169487805	0.062047805	0.232885
2	284	11.54471545	267.6972	10.882	0.662715447	0.992842988	1.023127
3	284	11.54471545	256.6518	10.433	1.111715447	2.914158573	1.770798
4	221	8.983739837	246.7626	10.031	1.047260163	2.689676469	1.695477
5	289	11.74796748	237.8328	9.668	2.07996748	11.00807944	3.456768
6	233	9.471544715	229.6902	9.337	0.134544715	0.047693702	0.19471
7	200	8.130081301	222.261	9.035	0.904918699	2.22959548	1.530418
8	204	8.292682927	215.4222	8.757	0.464317073	0.605632348	0.77905
9	189	7.682926829	209.1	8.5	0.817073171	1.932137733	1.416996
	2460	100	2460	100		23.18743442 Calculated Value	
					alpha	0.05	
					Table value	16.9189776	

(Source: Benford's Law & Accounting Fraud Detection, 2011)

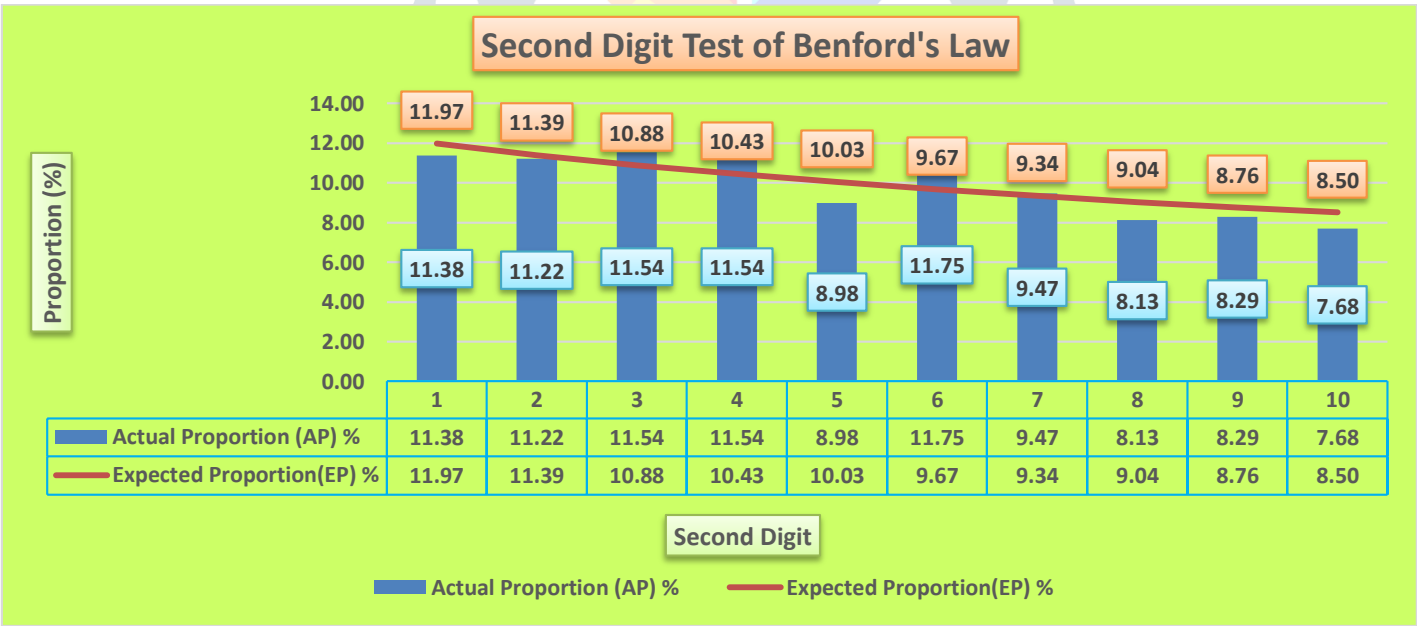

Figure -2 Second Digit test of Benford's Law.

BANK OF MAHARASHTRA

Interpretation (Chi-Square Test):

As shown above, the Chi-Square calculated value 23.18743442 is more than the Chi-Square table value 16.9189 (23.18743442 >16.9189). So, H0 is reject because the Second digit frequency distribution of observed

data does not follow to Expected data. The rejection of H0 shows that the possibility of financial manipulation can not be rejected. It is essential to examine the lending policy of the management of Bank of Maharashtra. Regular financial checking of borrowers should be done, so that Bank of Maharashtra can change its future results performing to Benford's analysis.

BANK OF MAHARASHTRA
Interpretation (Z Test):

In case of Consolidated Income Statement, Balance Sheet and Cash Flow Statement appears to deviate from Benford's Law. Here, digit 5 the value is more than 1.96. So, H0 is rejected and digit 5 creates suspicious in the minds of the stakeholders, overall performance is already suspicious because H0 is rejected. Hence, it is concluded that digit 5 important digits from the viewpoint of financial manipulation. It is suggested that all transactions which are part of digit 5 to be reexamined by the forensic accountant to check their reliability, True and fair presentation also must be checked, so that in the future, if any loss it can be presented for concerned stakeholders.

CONCLUSION

We all know that crimes and frauds are serious issues for banks and businesses. Internal audit plays a crucial role in the detection of frauds. Benford's Law is a mathematical tool which is used for fraud detection. In India, Many auditors, investigators, and accountants are not using Benford's Law technique. It is suggested that all transactions of Bank of Maharashtra which are part of digit 1,2,3 ,5 and 7 are to be reexamined by the forensic accountant to check their reliability, True and fair presentation also must be checked, so that in the future, if any loss it can be presented for concerned stakeholders. With the help of Benford's analysis, auditors to identify manipulation in corporate financial statements. It is not a signal of fraud, but an indication of further investigation of books of accounts.

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