CHAPTER 2

REVIEW OF LITERATURE
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CHAPTER 2

REVIEW OF LITERATURE

2.1 INTRODUCTION:

A review of literature is a text of scholarly papers, articles which includes the status of knowledge of the research area including substantive findings as well as theoretical and methodological contributions in the study. This review of literature deals with past studies conducted on the subject, to generate understanding in the area, extensive review of literature was carried out by the researcher. All the sections of the study have undergone gradual change and evolved at present level.

To generate depth knowledge of the subject, extensive review of literature was carried on by the researcher. Past research work relating to forensic accounting was deeply analyzed to frame objectives of the study. Since the studies related to forensic accounting and its application in Mumbai Industries was found limited, international studies were also referred to. Various aspects of application of forensic accounting were found in different studies and that are consolidated here in this chapter. Researcher has also reviewed some literature relating to other application of forensic accounting in industries report issued by various agencies. Hence this chapter deals with comprehensive review of literature relating to forensic accounting and its application in selected industries. The studies are also conducted to know Forensic Accounting tools to control and prevent frauds.

This study is conducted in the field of Forensic Accounting and its application of its tools to identify and prevent fraud in selected Industries and relevant literature is reviewed to find the gap in the literature and accordingly frames the problems, hypothesis and objectives for the research study.

The focus of the literature review is:-

i. Providing background of study focused on different aspects of Forensic accounting in relation to auditing.

ii. To study and understand techniques of forensic accounting and its application to examine fraud.
iii. To study the various method used by forensic accountant to prevent occupational fraud.

iv. To study various computer forensic techniques so as to prevent and reduce technological fraud.

Review of literature was classified in following categories for better understanding and Presentation.

2.2 COMPARISION BETWEEN FORENSIC ACCOUNTING & AUDIT

INTERNATIONAL LEVEL:

i. Owojori & Asaolu (2009) it focus on the expertise of fraud examiner to prevent and control fraud taking place in the organization. However the article ignores on the computer frauds, as data can be easily manipulated with help of computer and other input devices. Further the articles have not discussed the Forensic accounting tools with whom the frauds can be detected.

ii. Manning (2005) studies about the opportunity available for forensic accounting professional in public and private sector. It further discussed the professionalism to be followed by forensic accountant during render their services.

iii. Telpner & Mostek (2003), analyses the actual disputes cases of calculation of damages, valuations of organization, discussions on fraud examiner. It also covers the limitation of the same.

iv. Bonner, Palmrose, & Young (1998) study examines whether the auditor is liable for professional negligence on part of financial fraud which are not detected during the course of audit.

v. Beasley (1996), study observe that the composition of outsider as director in the board of director will helps in reducing fraud as these directors are unbiased. Furthermore, given that the results do not confirm previous references supporting the effectiveness of audit committees for the prevention of financial statement fraud, additional study is needed to provide increased understanding of issues related to the nature and processes unique to audit.
committees, similar to those board specific issues previously noted. Such knowledge would contribute to increased understanding of how audit committees effectively fulfill their financial reporting oversight responsibilities.

vi. **Ramazani (2012)** survey was conducted to understand the awareness regarding fraud examiner among accountants. If these skills are used than the fraud can be detected and prevented on time and hence will eliminate the cases on fraud in the court. The research results indicate that the low knowledge of accounting awareness is the main reason of fraud. Further the researcher has advised the different methods to increase awareness of accounting.

vii. **Islam, Rahman,& Hossan (2011)** They have mention that the application of fraud examination should be used in detecting frauds in their country. Further they also suggested that the use of these techniques of applications applied by accountants can fight and prevent against fraud and corruption in Bangladesh.

viii. **Srivastava (2014)** study about the based on the Theory of belief functions, auditors follow three steps:(1) fraud risk assessment at the overall financial statement level, (2) fraud risk assessment at an account level, and (3) assessment of account, transaction and evidence schemes used to perpetrate fraud. High aggregated assessments of fraud involvement or credibility of fraud which exceeds the thresholds established by the audit firm requires the auditors to engage in further investigation, to heighten the level of professional uncertainty, and, where appropriate, to adopt a forensic audit approach.

ix. **Bhasin (2012)** paper discussed the various scam of ERON; World COM further states that increase in the number of frauds had a bad effect on the investors as all frauds were created by manipulation of accounts. Therefore reliability of financial accounted though audited is still in doubts.

x. **Bhasin (2016)** deals that while framing the accounting policy the help of expert should be taken as this will help in reducing fraud. Recent fraud (WorldCom, Satyam) was due to failure of Corporate Governance. Therefore paper discussed the key role of Forensic Accounting professional to have strong internal controls.
xi. **Temitope, Muturi, & Nasieku (2016)** the study revealed that there was significant and negative connection between fraud examiner responsibility and as a capacity of auditor which has lead a wrong impact on the Nigerian Banks. Therefore, the study finally endorsed that there is the duty and requirement to be more careful when they are dealing with people of that country. Both the auditor as well as the other responsible people connected should play a important role in the area of prevention and detection of fraud to so that the people can keep faith and trust on them. Banks deals in money of people therefore it is their duty to maintain trust on them. If the auditors adapt the skills of forensic accounting this will help him to fight against the financial crimes.

xii. **Suen (2016)**, analyses the forensic accounting environment in China and to study the global impact of it. Further its study the educational aspect among the business students of China and International students relating to forensic accounting curriculum.

xiii. **Temitope, Nasieku & Muturi, (2016)** analysis of the article shows that the role of fraud examiner professionalism can decrease the the short coming of auditor among Nigerian Banks. The article highlights the facts that there is a requirement of a legal statute so that the financial crimes can be control with the help of investigating expert. These should be backed by legal support.

xiv. **Udoayang (2012)** the goal of this article was to understand the parts of internal control layout to understand how it can be effective in controlling the employee related fraud. They further focuses on the life style of the staff in order to detect fraud in Nigeria. The article further showcase that internal control layout can be effective towards staff behavior and their responses towards frauds. A weak internal control can be misused by the staff and hence gave them an opportunity to deal with variety of frauds which includes financial loss. Therefore it is advisable to develop a system which can exposed the fraud and do not give any chance to employee to misuse the cash or asset of the organization. Therefore in order to control fraud internal control of the bank should be strong.
xv. **Okoye & Gbegi (2013)** the study focuses on public sector to examine the role of forensic accountant in detecting and preventing. Further the study says that the Forensic accountant has better skills, knowledge and expertise as compare to auditors. Hence they insist in that the auditor should be given proper training so that he can possess the same quality of the forensic accountant. The article is based on the government organization of Kogi state. They suggested that if the training is given properly than it becomes easy to deal with fraud.

xvi. **Kasum (2007)** the article analyses the frauds condition in the developing countries. It is observed that frauds, bribery corruption has given a negative impact on the life of the people of these countries which has further led to a dangerous position and it has vigorously scored in the systems as the red flag should be raised to protect the interest of the people. The method of frauds both in private and public sector are different fraud can be against the company which generally happens in the Government Company and also fraud for the company which mainly occurs in private companies. However role of fraud investigator is required in both the case. The nature of the fraud in both private and public are same. If the expertise of investigator is taken, this can be great helpful to avoid and control fraud.

xvii. **Khani (2014)** study about the meaning of ethics and its role in accounting and audit. Paper Suggest that professional ethics is also important for auditor to perform his duties. Further auditor is answerable to all the stake holder of the company and to the society. Author has mentioned various reason of ethics in accounting, fundamental principle of ethics and need of professional accountant to ethics.

xviii. **Gray (2008)** Studies about the comparison between Forensic Accounting and Auditing, the article covers characteristic, symptoms, and indicators of fraud. In order to identify these fraud various techniques such as interviews, interrogations techniques to identify fraud, However the articles does not covers the various tools of forensic accounting to identify these fraud.

xix. **Noh Syed (2005)**, studied from the point of view of Malaysian Country, where the focus is on the need of forensic accountant and the training of the officers so that they can develop the skills, quality, temperament and most important the ability to identify fraud. The article insists in the training of the officer to become professional in the field of investigation.
Further they advise that training on accounting and law should also be given so that they have strong hold on the subject. They can perform their duty more sincerely and can be confident enough as an officer to handle their cases.

**NATIONAL LEVEL:**

xx. **Yadav & Yadav (2013)** has discussed the basic of forensic accounting and its application to detect fraud in the industries article further discussed the use of experts in the field of book keepings so that all kind of the case in the court of law can be handle by them. It article also discussed the various fraud cases of India in short.

xxi. **Chakrabarti (2014)** Forensic accounting has been in limelight after Satyam case, which urges a need of forensic accounting professional to detect and prevent fraud on time so as to control the white collar time. The study focus on the challenges to be handle in future as an expert in this profession.

xxii. **Singh (2012)** study about Forensic Accounting concept in India in the field of profession where lots of quality skills are required to controls such frauds and prevent them. Mostly all fields forming part of the investigation requires this support. Further it discusses various uses of forensic accountant and shows why it is more popular than traditional accountant.

xxiii. **Mehta & Mathur (2007)** in their article it has been mentioned that there is an increase in fraud due to various competition among the organisation as well as between the individuals. Therefore there is a requirement of specialist who can control these frauds with the help of their skills and professionalism. They undergo training and become expert to locate the fraud happening in the organisation. Therefore there is a high requirement of these kind of professional
APPRAISAL:

Researcher while carrying out review of literature in the field of Forensic accounting professional, from above review on basis of literature available, researcher has noted out the following key observation(s):

a. Forensic accountant has accounting skill, investigative and analytical skills to identify fraud as compare to traditional auditor.

b. Forensic accounting control all possible fraud and mismanagement what traditional audit fails to do.

c. Accounting policy prepared by the experts helps in identifying possible fraud.

d. Risk calculation helps the professional to specifically locate frauds.

e. Methodology applies in Forensic accounting and audits are different.

f. Forensic accounting is stronger than audit to control fraud.

g. Forensic accounting engagement can be specifically tailored to deter fraud and potentially prevent it what audit fails to do.

h. Investigation report under forensic accounting is the good evidence and accepted under court of law.

i. The experts take more involvement and have different approach in verifying the books of accounts.

j. Forensic accounting is more dynamic than Audit.

Hence from the above study it is clear that experts in these field have different role to play as when compare to auditor. Their skills are better and have better scope in future in this field of prevention of frauds. The main purpose of audit is to report true and fair view which different from the assignment of an investigator who focus on fraud. Hence it can be concluded that objective of forensic accounting is different from auditing.

2.3 TECHNIQUES OF FORENSIC ACCOUNTING & ITS APPLICATION.

INTERNATIONAL LEVEL:

i. Silverstone (2007) analyses that if the organization needs to be protected from frauds, it is the duty of all level officers and managers to protect them. An extensive training is required
to understand various application and techniques along with they should also know the accounting concepts and legal requirement. A part from the professional even others should be made aware regarding these techniques so that these will help them to tighten the internal control which helps them to identify the field where fraud can be identified.

ii. **Singleton (Dec 2006)** study the how fraud can be detected with the developed techniques Conduct an efficient, systematic fraud investigation. However in India we still have to research on the Forensic Accounting Basics, Forensic Accounting cases, and how industries can use the various techniques as tools to control fraud at all level of management.

iii. **Tucker (1992)** articles examines the consequences of four independent element: (1) auditor's punishment, a monetary loss on account of non-detection of frauds, (2) auditing standard requirements, which reflect the ability of auditing standard setters to increase auditors responsibility for detecting fraud or other irregularities, (3) the quality of the internal Control structure, which is represented by a distribution of unintentional clerical errors that the auditor must investigate to detect an irregularity, and (4) audit fee, which reflects increased competition in the market for auditing services. However, the model actually encompasses all irregularities. Irregularities come in two varieties: falsification of detail and misappropriation of cash or goods. The situation modeled is sufficiently general to fit both types of irregularities, yet not so specific as to exclude either one. Management fraud possesses many unique features that are only implicit in the model (e.g., reporting). Hence, any generalizations should pertain to the detection of irregularities rather than to specific aspects of management fraud. Further is that the article emphasis on financial fraud and to control it but ignore the ethical area to prevent them.

iv. **Houghton, Dean & Luckett (1999)** model was designed to deal with cross guarantees in liquidations as per English law and regulation. Administrators and the Courts in these jurisdictions retain substantial freedom in determining an equitable distribution of assets to creditors. Consequently, while the model and the Administrator's settlement were in close proximity in the case study, whether this holds for other. Further there is a scope for forensic accountant in liquidation of assets. However it ignores other aspects of forensic accounting.
v. **Smith (2003)** article focus on the materiality concept which explains the if these concept is not identified that these would be audit risk where frauds and error remains undetected. Though he focuses on the documentary evidence which is not sufficient to draw an opinion regarding true and fair view. The concept is unearth than there is more chance of audit risk where the profit may be either overstated or understated. The employee of the company may take chance to benefit himself from these materiality event. Even accounting standard 1 disclosure of accounting policy mentioned that the materiality should be disclosed. Even 5% of the total expenses need to be shown in separate head in the financial statement. Hence he has to apply strategy to identify those materiality event.

vi. **Gaines (2007)** Benford Law is use widely and hence now the data has been tempered so that fraud cannot be detected by Benford Law and hence in future better data collection and facilitate more careful scrutiny of these important data.

vii. **Mair (1992)** the article states the simple steps lenders can take to verify financial information from borrowers. However there are various methods in forensic accounting with the help of which the financial information can be cross verified for the prospective borrower.

viii. **Dorrell & Gadawski (2005)** the authors has discussed the use of techniques forensic accounting to understand, its effects in collecting, scrutiny, examination and proceeding of anti-social elements and their related organizations. These techniques can be applicable to almost all transaction dealing with a money laundering and illegal organization group dealing with financial illegal activities. Therefore the antisocial group are very alert and they route their money laundering through various sources either they transfer their money into genuine and unlawful businesses to safeguards themselves from any inquiry of the country. Forensic accountant possess various quality and skills. They are the blend of art and science. Hence they play important role actively when their application are systematically applied to many cases which are unique in nature. However though every case is unique the application helps the expert to deal with the situation. Expert in different fields of accounting, army, or law are getting benefitted from these application technique. They are well equipped with proper training and hence gets an upper hands to deal with
any kind of frauds taking place in the country and organization. There evidences are really useful in proceeding and giving judgment in the Court. Therefore they are great help to the lawyer in dealing with any kind of crimes.

ix. Anastasi (2004) discusses forensic accounting techniques used by the U.S. intelligence community. The program can be used to find evidence of secret messages embedded in digital images.

dx. Nigrini (2011) study about various forensic accounting tools such as Access, Excel, high level data Overview Test Benford Law. Further application such as the subdivision and big development test, Relative Size factor, Time series analysis, and Correlation.

xi. Stahl (2013) in this article there is a hypothetical case study on Hypo Corporation which helps to understand the techniques of application based on different forensic tools to make awareness of the course in accounting course. Internal as well as external tools were used for better understanding of the topic. This kind of study is a best example to explain and teach dealing with different kind of frauds. These were applied in the accounting of the Hypo Corporation case study.


xiii. Durtschi, Hillison, & Pacini (2004) studied about the application of Benford Law in helping to identify and prevent fraud in accounting related data. Paper shows the how Benford Law calculation identify fraud whereas other application fails to detect. Further the paper demonstrates with the example to prove successful in identifying fraud in a population of accounting data.

xiv. Nejad (2015), studied on the fraud taking place in Banks. The focus of the studied was regarding various payment method. Banking transaction are more expose to technology and hence there are chances that fraud can be taken place with the help of the technology. Hence the researcher is the opinion that the software analyst can play a major role in
prevention of fraud. Researcher has discussed various method such as various statistical tools like time series analysis, matching of algorithms for detecting unusual cases, statistical indexing, Models and probability distributions and method of identify fraud at the time of preprocessing of the data. However depending upon the statistical tools can be risky, personal judgement and skills need to be apply.

xv. Lata, Koushika & Hasan (2015) study is based on the new techniques applied to detect frauds taking place in the economy. There is a huge financial loss and threat and hence frauds detection technique will play an important role. The study has discussed various techniques focusing on Computer, insurance and credit card fraud detection. Study has discussed various method of Statistical based such as Univarte method, Multivariate methods, time series etc. However the main issue is of ethics, in the organization parallel focusing on the various tools, employee should be motivated to attend ethical program. This aspect is uncovered in the article.

NATIONAL LEVEL:

i. Wadhwa & Pal. (2012) study various increase in the forensic accounting techniques used by bank, insurance and police agencies to investigate the fraud. Forensic accounting is a new term in accounting hence the paper discussed the new area to explore with the help of Forensic accounting.

ii. Sharma (2014) paper study about the need of Forensic accounting in India, further it studied about various tools to control fraud. Paper discussed the various scams and fraud in India.

iii. Shaheen, Pranathi, Sultana, & Noor (2014) study about the forensic accounting and its use in India. Further it states that forensic accounting tools are effective to control fraud and hence the author suggest that forensic accounting should be made compulsory in public sector and large scale companies to control white crimes.
iv. **Ghosh & Banerjee (2011)** The authors have covered different aspects of forensic accounting starting with the basic introducing about forensic accounting further the have explain the relevance of it in the changing world. They also assured that the various regulator bodies will get benefited from the techniques of their application to control frauds at all well in the organization. Even they can benefit the organization dealing in framing law and protecting the interest of the people. However, the article focuses on the advantages some of the tools of forensic accounting and has not given the challenges and limitation in implementing the forensic accounting in the organization.

v. **Chintalapati & Jyotsna (2013)** discussed about the techniques of data mining in for Financial Accounting data to detect fraud Detection as per past cases of fraud these techniques build the model to detect fraud. Further paper discussed how the financial crimes at all level lost the relevance of audit committee, corporate goverance and the reporting structure. The auditor has failed to report and identify these crimes as they are not well equipped to discover this fraud.

vi. **Nena (2015)** paper discussed the need to control fraud as it damages to the business concern and as a result forensic accounting and its techniques is an important tools to control Fraud. Further it discussed the characteristic and importance of forensic accounting in that support the paper also discussed the Satyam Computers fraud.

vii. **Agarwala (2014)** studies about the various techniques of Forensic accounting, to control different types of fraud. Techniques like Theory of relative size factor, Ratio Analysis, Data mining techniques, Computer Assisted Auditing Tools and Benford Law. Paper supported the techniques can reduced the fraud accounting as well as financial dispute in India.

viii. **Dhami (2015)** Study about the forensic accounting techniques to identify fraud and prevention of fraud. It has shown how chartered accountants are engaging the services of Forensic accountant to their client. It has listed of skills required by the forensic accountant to identify fraud. However study has not shown the cybercrime aspect and technological fraud increase in business transaction.
ix. **Singh, Grewal & Singh (2015)** it examines the role of forensic accounting and its application in India. It further suggests that the forensic tools should be used so that fraud can be controlled. The author has done research which shows that most of professional are aware about the forensic accounting.

x. **Saxena (2015)** study about the corruption in India, and identifies the main reason of corruption in India i.e. poorly governed may be the main reason. Paper study about the various fighting corruption techniques such as maintaining law and order, Whistle blowers and civil society organizations, free access to information and data. Paper further discussed characteristic of Corruption such as Extortion, Lubricant of society. Corruptions are divided in to various categories Corruption in Media, Corruption in Judiciary, Corruption in Police, Corruption in Private Sector, and Corruption in Religious Institutions. However the study has not cover the computer related corruption taking place in India.

xi. **Soni & Soni (2013)** study about the facility provided by the Bank to their customer it also focuses the facility provided by the public and private bank. The paper has shown the details of Calendar year wise cyber fraud in public sector bank and private sector bank. Further report shows that as we move forward and using technology, fraud has also increased as a result huge losses of money to people and institution.

**APPRAISAL:**

Researcher while carrying out review of literature in the field of investigating accounting, from the above review of literature, researcher has noted out the following key observation(s):

a. Benford Law Techniques is to determine whether elements cover the case of actual fraud or it is an error

b. All big data when compare to previous years shows that unusual transaction and hence here relative size factors helps to understand that whetehr the data are manipulated or its an effect or unintentional errors.

c. Testing details of transactions and balances will examine fraud.

d. Computer based application like testing data system will examine fraud.

e. Redoing calculations performed by accounting system will help to examine fraud.
f. Data mining one of the application helps in layout of spontaneously finding and hunting exceptional and unusual transaction from the big data of the organization.
g. Ratios analysis on financial transaction shows indication of the financial condition of a company and hence keep examine the fraud.
h. Ratios analysis report plays important role to alert and prevents all occurring fraud in the organization.
i. Timelines Application helps in examine fraud.
j. Genogram Analysis helps in examine fraud.

Hence from the above review it’s clear that some of the tools i.e. Benford law, Statistical tools, Data mining techniques, Ratio analysis helps in detecting frauds.

2.4 OCCUPATIONAL FRAUDS CAN BE CONTROLLED AND REDUCE WITH THE HELP OF FORENSIC ACCOUNTING.

INTERNATIONAL LEVEL:

i. Vázquez & Watt (2006) analysis the bonus effect on the insurance related contract. A model was developed to review the customer insurance contract to review the same. It was suggested that the only tools applied to remove this frauds bonus elements should be removed. In short there should be no bonus paid so that any situation fraud related to bonus can be removed from the renewal of the contract. Therefore no bonus will help the insurer to get profit and at the same time the contract will be genuine.

ii. Tsung, Zhou & Jiang (2007) study about the problems in cases related to manufacturing based on batch process. However these techniques will reduce fraud in manufacturing which uses batch process further this can be linked to the fraud identification problem in the service sector.

iii. Derrig (2002), study focus on fraud related to insurance which was a prime concern in America. These main issues were that whether these policies are written or actually exist. There was an illegal sources which were didn’t made any doubt in the mind of people whether these are taken with the intention of fraud. These were done without any
suggestion that the activities are unlawful with trial and prohibitions as the susceptible results. These covers more recent much more delayed idea of fraud that concealments of needless, uninvited, and chances of handlings of the process that drop little of illegal action. The reason of this article was to make and create awareness in the mind of the organization as this final section of the insurance fraud. Further it lays down the new avenue to study future related material on fraud.

iv. **Hansen, McDonald, Messier, & Bell (1996)** it is observed in the articles that it try to detect the various frauds taking place in the organization on the basis of its probability level. Hence this probability helps the employer to detect frauds in various fields. Different models are set to predict the behavior of frauds. However, these kinds of frauds remain undetected if the auditing basic principles are used as the documents which are audited are based on and hence audit procedures that are good at detecting errors may not be as effective at detecting irregularities such as management fraud.

v. **Gerety & Lehn (1997)** this paper tests several hypotheses concerning the reason of fraud taking place in some organization when compare to other organization. They have further investigated that the controlling position in the controlling position in the organization are capable and has power to influence these fraudulent transaction. These are observed by the author that the external environment influences the frauds occurrence more than the internal environment. It has been further gives the idea that internal payment system and the controlling policies can minimized internal frauds. However the external influences can commit accounting related financial crimes.

vi. **Farber (2005)** the article focuses on the corporate governance issued in the companies. Corporate governance’s reports play an important role in building the image of the company. The composition of the audit committee is also important if it includes more external board of directors along with financial experts and number of frequent meeting can majorly reduce the occurrence of fraud. The high number of Chief Officer in these committee can influence the quality of report as they are more concern to show better image to the society. The article gives bench mark to resolved with future research is whether these composition and frequent meeting can increased the reporting quality.
vii. **Schnatterly (2003)** highlights the corporate crimes done at top level and suggest the different approaches to make corporate governance more active and effective in the organization. This kind of environment will definitely be useful to control the financial crimes in the organization. Hence this will further guide the stakeholder of the company who cares for the company progress as they have invested their money in the company. The article also indicates the probability of increase in the financial crime.

viii. **Barnes & Webb (2007)** articles focuses on the size of the firm when comparing with the probability of frauds taking place in the organization. If the company size is bigger than there is a chance of more frauds as the control cannot be maintained properly by the authorities. However if the firm size is relatively is small than better control can also be maintained. More people in the organization there are more chances of disagreements and conflicts. Hence it is suggested that top management plays important role in bigger organization. They can monitored even they can control the conflicts between the employees.

ix. **Albrecht & Albrecht (2008)** the article talks about the various fraud and reason behind it. It also shows the characteristics of financial statement fraud. Further it shows the relationship between fraud triangle and fire triangle. In the article with the help of illustration that how management are involved in such fraud. However the article does not suggest any measure and control to detect and prevent fraud.

x. **Albrecht & Albrecht (2007)** the articles focuses on the reason of fraud committed by and individual there are different types of frauds taking place in the organization. The reasons why an employee does the fraud can be different. However the major three concern areas why an employee does the fraud is the first authority and position he is incharge , secondly the pressure to commit frauds and thirdly the rationalization approach not to feel guilty. People with low rationalization should be not hired for any position in the organization. However the technological frauds are not covered in the article.
xi. **Fisher & Hoffmans (2009)** the article covers different signal of financial misappropriation. Every signal mentioned in the article shows that how people ignorance in the financial related topics are target by the consultant. They undue influences the buyer of financial instruments and portrait wrong calculation so that they can invest their money. Hence it is advisable to always redo calculation, recheck before buying any investment plan. The article is restricted to investment fraud and its prevention only. It does not cover other type of frauds and its prevention.

xii. **Nenyiaba & Charles (2012)** the articles focus on the importance of accounting standard part for preventing the frauds. It states further that if these accounting standards are not followed there is a possibility of fraud taking place in the organisation. The base taken by the author is the public sector unit of Nigeria. As the fraud examiner are not available and limitation of auditor to detect fraud is the main reason of increase in fraud in these sector. Hence it is observed that forensic accounting will play important role in Nigeria public sector to control fraud.

xiii. **Sbachtiar (2005)** the study about the interrelated companies and their functioning corporate governance. In an weak environment and reporting structure there is a chance of accounting fraud taking place through the misstatement of its incomes. Further it focuses that good corporate governance can helpful to reduce and prevent fraud.

xiv. **Okoye & Gbegi (2013)** the study is about the procedure to be followed by the auditor lay down by the forensic accountant in the dynamic environment to control frauds. Hence the article support that the audit planning and programming should be reviewed and modified by the expert on the basis of the fraud taking place in the organization. Finally it has been suggested the requirement of expert and proper training in Nigeria to avoid frauds.

**NATIONAL LEVEL:**

i. **Khanna & Arora (2009)** paper study about the various reason of accounting fraud in banking sector. The paper further studies the reasons of increase in fraud like lack of training, over burden on staff, competition etc. Better internal control can minimize and prevent the fraud.
ii. **Chudgar & Asthana (2013)** study about one of the serious problem in Insurance sector. The effect of insurance fraud is that it has increase the Overall Cost of insurer and increase in the premium of the policy holders. Paper suggests more strict and wide policy to manage risk that involves assessments and prevention of fraud regularly in the organization.

iii. **Chaturvedi (2015)**, Forensic Accounting can be solution for all kind of white collar crime which is caused by financial mismanagement in corporate organization. It further studies the meaning nature and its validation and prospects in India.

iv. **Lohana (2013)** study about the forensic accounting importance in India, it further study the nature meaning and the benefits to identify and control fraud in the growing complexities of the corporate environment.

v. **53rd Reports issued by the ministry of Corporate Affairs (March 31, 2009)** The report issued by (page 40-52) by Ministry of Corporate Affairs Government Of India there were So far, 68 cases including Satyam Computer Services Ltd, have been referred to investigation officer. Investigation officer has submitted reports on 37 cases till 31\textsuperscript{st} March 2009 and 756 incident of prosecution has been submitted against the person found guilty. Such incident are filed and reported against the defaulting parties. 7 cases were filed for Penalty of fraudulently inducing persons to invest money in 2008-2009.

vi. **54\textsuperscript{th} Annual Report issued by the Ministry of Corporate Affairs (March 31, 2010)** the highlights of the reports were (page 12) appointments of Investigative officer Serious Fraud Investigation Office (SFIO) as the fraud in the Indian companies were increasing. Certain bench mark were fixed to control : (i) If the value of frauds increased by the Rs 50 crores or more, or; (ii) Share paid-up capital were the other criteria fixed mark i.e. Rs.5 Crores, and one fifth or more capital is contributed by the invitation to public; or (iii) Where the masses of the country were affected here also limit was setup by at least more than 5000 persons; or (iv) If the investigation requires certain expert skills and other field related study method like technology or law or in the field of accounting. The reason of such appointment was to locate and identify company frauds which are of grave
and difficult to trace. The investigating officer are blend of various field of study and are from various industrial sector like Insurance, banking, capital market, professional practicing in the field of taxation, law, technology, software and other relevant field. They work as a team and try to figure out the fraud which has not been discovered in the company. They are governed and their right and duties are mentioned in the companies act. However government is serious for the frauds happening in the company as they affect the economy badly and hence they have decided to make a spate legal frame work in the second phase. Investigating officer has started functioning and they have started registering the case and started submitting reports almost 55% of the cases have been submitted and few cases are are under investigation. Slowly the situation is getting under control but it will take some more time for these agencies to come in shape and start functioning in effective manner. Regular training and assistant are required for better functioning. Biggest challenge is that they have to advance themselves with an increase in advance level of fraud. These shows that Government is taking serious and necessary steps to make sure the fraud should be identified and the person guilty in such activity are punishing. However the report does not focus on how to prevent fraud and how the forensic tools should be used to prevent such fraud. We should appreciate the step taken by the government to control the top management of the company.

vii. E& Y Report Survey 2010-2011 the report are based on insurance industry survey. This industry is getting affected badly affected due to rise in fraud. The ownership that fraud has occurred lies on the company and hence become difficult for them to unearth such kind of fraud. The survey covers the misappropriate claims value and surrenders value received by the insurance company with whom they have taken policy. Different kind of frauds are included in the survey report examples of such frauds are fake claimants and fake surrenders of the policy. Most of the document tempered documentation, error in spelling, conspiracy between parties, etc. Further these frauds are divided in to two part soft and hard fraud. Most of the frauds are done in this kind of industry to get monetary benefit and hence a huge loss is to be bear by these companies. Proper recruitment of agent should be done to avoid such fraud. However many occupational fraud also incurred which have not yet discussed.
viii. Agrawal & Medury (2013) study about need of Good governance to avoid fraud such as Enron, World Com and Satyam Computers. Further it emphasis the role of professional to ensure good corporate governance as eliminating ineffective, mischievous and unethical role of them.

ix. Narayanaswamy K. Raghunandan, (2014) study about the role of Indian audit committee in controlling fraud. Further it studies about the failure of corporate governance Satyam Case. The author done research after the Satyam case found that there was no improvement in the functioning of audit committee after such big accounting fraud.

x. Goyal (2014) study about the financial fraud and the concept of forensic accounting and investigation procedure, further it shows that how the demand of forensic accountant has increase, and also to meet that demand several institutes has started with the course on forensic accounting. Paper has discussed the types of Forensic audit, Investigation procedure such as Acceptance, Planning, Collecting Evidence, Reporting and Court Proceeding. However it ignores the computer forensic area which is also prominent and high in demand.

xi. Singhvi (2006) has discussed regarding the fine paid by corporate in case of criminal liability and sentencing, the author has further discussed the Indian laws with other country law and arrived the conclusion that Indian law only provide fines and not severe punishment in case of Criminal liability. It gives suggestion to amend laws of India to make strict law to control the corporate criminal liability.

xii. Singh & Nagar (2012) study about Nutek India Ltd, Regarding Deep Fall in share price. Study shows that how manipulating the security price is an act of artificially inflating or deflating the price of security. Paper study the factor such as price manipulation by operator, GDR Dumping, and Management is not trustworthy to investor is reason why the share price has gone down.

xiii. Rajak (2013) paper discussed and study the reason of Corruption and also mentioned the major corruption taken place like Coal Allotment Scam, 2G Spectrum Scam, Common
Wealth Games, Adarsh Housing Scam, Stamp paper Money. Major reason of corruption is because of change in Value system and ethical qualities of men who administer, vast size of population coupled with widespread illiteracy and poor economics infrastructure lead to endemic corruption in public life. Further it gives suggestion and remedial measures but it is difficult to follow in this inflated economy.

xiv. **Gupta (2015)** study about the nature and perception of corporate frauds in India, the finding of the study was that regulatory system is weak; coordination among different regulatory authorities is poor. The study highlight the most important aspect that reporting of fraud and publication of fraud prevention policy are missing. Auditor and executive level in the companies are ineffective due to lack of professionalism. Reasons of fraud are due to fraud triangle Opportunity, Motivation and rationalization. However it ignores the fraud committed by the Computer Forensic.

xv. **Mehta, Patel, Patel, & Purohit, (2012)** the article explains different financial ratios which can be helpful to finding out misstatement in the fraud. These can be used by the external auditor to give opinion regarding true & fair view. Banks providing loans to their customer can use these ratios find out the misstatement such as window dressing of books of accounts. Even with the comparison between the years of ratio tax authorities can also find out the tax evasion done by the assesse. This ratio plays important role while investigating different frauds as unusual increase or decrease in ratio can immediate draw attention of the management. However study has not given tools to prevent fraud and even it has ignored the use of cybercrime to conduct fraud.

xvi. **KPMG Survey (2011)** Survey was conducted on the bribery and corruption in India. There has been an increase in the cases of bribery and corruption because of unequal growth in the development of the country. Further there is no equal increase in the income of an individual. Keen competition among the competitor of the goods and services has been also a strong reason of the increase. Nearly 50% of the survey agreed that there would not be any change in the corruption in this country. Survey identified that weak internal control and the unrealistic target to be achieved were some of the main reason.
The study concludes that unless concrete steps are taken in the enforcement of existing provisions under law to prevent bribery and corruption it difficult to control.

APPRAISAL:

Researcher while carrying out review of literature relating to Investigative accounting, from above review literature, researcher has noted out the following key observation(s):

a. Occupational fraud is a significant threat to all organization.
b. Fake purchase billing can create a great loss to organization.
c. Forensic accounting identifies those areas where the occupational frauds are susceptible to fraud.
d. Background check of employee at the time of recruitment will filter the bad applicant and prevent fraud.
e. Employee working with the close association with their vendor gives a signal to have more chances of fraud.
f. Forensic accountant services can prevent identify and reduce occupational fraud.
g. Reporting from other employee will reduce the occupational fraud.
h. Implementation of Internal controls and internal check will prevent occupational fraud.
i. Documentation of the record properly will reduce occupational fraud.
j. Monitoring Vacation Balances will help to reduce Occupational fraud.

Hence from the above review it is clear that occupational frauds can be controlled if forensic accounting policies are applied.

2.5 COMPUTER FORENSIC TECHNIQUES WILL REDUCE AND PREVENT THE FRAUD.

INTERNATIONAL LEVEL:

i. Ritter (2008) the paper discussed about the misuse of information in the computer database by the third party. The database is easily available and store in the computer and
hence can be easily manipulated and shared with any other company. Computer especially in capital market can be easily misused as the shares can be wrongly allocated to the top management. Hence a strong access policy should be maintained in such allotment.

ii. **Kosse (2012)** the article focus on the usage of debit card in Netherlands. Due to increase in the online transaction and less use of cash transaction debit card are used more often. Though plastic money considered being easy to handle and safe, there were instances of frauds. The author observed that when there was any news of debit card frauds in the newspapers there was an decrease in usage of debit card on that day in shopping mall and use of cash was increased during those period. These changes were temporary and again people started using debit card on other day when there was no news regarding the debit card fraud. Thus information published in the newspaper was influencing the use of cash transaction and debit card transaction. Consumer use to get influence and become alert temporary when they use to read about the debit card fraud and started using the cash for their shopping purpose. Hence consumer find easy to use debit card instead of cash but restrict them using it when they learn or come across near to some other debit card fraud.

iii. **Askelson, Lanza, Millar, Prosch, & Fraud (2009)**, discussed various accounting standards. Every day technology are getting updated and new means of frauds are taking place. Further it overview fraud and how it can be control with the help of new technology. However as one technology is made to prevent fraud, the fraudulent find the means to break it, and hence it needs to be updated regularly.

iv. **Aduwo (2016)** paper details with the accounting fraud and corporate scandal in recent past year and it talk about the new role of forensic accountant in order to identify the fraud. Further it states that with personal judgments, accounting and legal proceeding can fight against the company frauds. However being new technology it has to be updated regularly.

v. **Meike, Lybae, & Vanhoof (2009)** study discussed impact of fraud on the economy further it states that external fraud are focused and control however the internal fraud are not taken seriously. The paper highlights the need of important to control internal fraud. It
also suggests the framework of data mining technique should be used in external fraud methodology.

vi. Bay (2008), the study focuses on internet related sale. There is no control on the internet sale the buyer and seller don’t know personally and hence there is a high risk of fraud. Similarly the author discussed about the auction sale which is the personal goods of seller and fooling the buyer. These goods are sold at higher price as in auction the price is increased through manipulation. Therefore it is advised that there should be some authority or regulator who can handle such kind of sale to safeguard the interest of the buyer.

**NATIONAL LEVEL:**

vii. Nagarajan & Sheriff (2012), study that growth of technology and education has lead to increase in white collar crime. It further states that professional loopholes in judiciary and support from the government have also played a role in increase of such crime. The paper studies the various white collar crimes and suggests method to control it.

viii. Rajakumari (2014) information regarding the evolution of big data analytic and methodology of forensic analytic model. The paper has survey and discussed about use of Computer Forensic, Material and method to handle big data.

ix. Rohra (2013) paper study about the financial fraud and type of fraud. Paper further shows the history of fraud and its beginning in India. Use of technology and internet has also played an important role to increase fraud.

x. Biswas, Hiremath, & Shalini, (2013) analysis significance of forensic accounting and scams in India, paper discussed the services provided by the Forensic accountant by using various forensic accounting tools. However the author has discussed the problems and limitation of Forensic Accounting. Such as hiring forensic accountant is costlier, fraud done with technology and if the fraud is done by the person who is not in India than it becomes difficult to arrest and bring them in court of law.
xi. Kumari & Godara (2011) the article covers the industry dealing with the medical stream. However these data cannot be find easily because they are huge in number and difficult to identify. However there are various techniques in data mining which can be useful to discover the pattern of data in which are specific, accurate, and error free. There are various method of drilling the data and on the basis doctor can make decision faster. Here data mining techniques can be useful with the help of various tools which can be created with the assistance of the software. These software helps to detect the data on time.

xii. Gupta & Gupta (2013), study about the payment banking system in India and the modernization of banking Industries in the country. Further it analysis the benefit of MICR clearing, Electronic system, Real Time Gross Settlement System, Card Based Clearing and on line Tax Accounting System.

xiii. Mudhokar & Bharambe (2013) study about the use of internet and increase in cybercrime such as fraud, Internet pornography, illegal trade, false advertising, violations of privacy. Internet is an easy medium for criminal to do illegal activity such as creating wrong identity, providing wrong information, threatening through the hacking mails and online bank account.

xiv. More (2015) discuss the current scenario of Online Banking and Cyber-attacks, with the change in the banking sector recently regarding payment mode and other facility using mobile banking, E-banking has also increase the technological fraud. Further it says that due to large information available on net may not be correct. The author has analyze that an increase in the use of technology there is an increase in fraud and also most of these fraud are done by the youngster between 18-30 years. It has been further discussed the prevention of such cybercrime.

xv. Dalla & Geeta (2013) discussed how the Cybercrime is a threat to person, property, Government and Societies. Cybercrimes are explained with an example in the article and it gives suggestion and various preventive measures are taken to control such crime.
xvi. **Sujatha, Shimi & Gomez (2013)** discussed the element of fraud and also analysis the impact of fraud on the societies and business. It recommended that how the procedure can be followed by investigator with its tools will help to detect and prevent fraud. However the articles do not put focus on computer fraud and use of computer forensic accounting.

xvii. **Niranjana (2013)** study about the issues relating to Ecommerce especially in the area of Information Security and protection of ecommerce assets from unauthorized access, use, alteration, or destruction, Dimension of ecommerce security – Integrity , Non repudiation, Authenticity, Confidentiality, Privacy, etc. Further it analysis and give suggestion on the online shopping and payment mode.

xviii. **Patidar & Sharma (2011)** study about the Credit card fraud, as in the business world today payment are made in electronic mode, regardless of location, consumer can make the purchase. Purchaser pay for goods or bills through Internet and find its convenient to pay them. Usage through plastic money has increased but at the same time frauds has also taken place with the change in technology. However using Internet also brings risk of online fraud such as Merchant Collusion, Triangulation. Site cloning, False Merchant sites, Fake and Counterfeit cards and erase the magnetic strip. However author ignores other preventive Computer forensic tools to detect and prevent fraud.

xix. **Goyal (2012)**, study about various ethics in the field of business like engineering ethics, computer ethics, legal ethics etc. paper further focuses that as the technology is used for business transaction there is an increase in the cybercrime which is emerging threats are taking place. Cybercrime such as Cyber stalking, hacking, Phishing, Cross Site Scripting, Vising. Paper has not focus on computer forensic tools to control such fraud.

xx. **Safeena, Date & Kammani (2011)** paper discussed about the Internet Banking adopted in an Emerging Economy from Indian Consumer Perspective, it study about various facilities such as ATMs, Tele–Banking, Credit cards, Debit cards used by Account holder. The study finds that though Internet Banking is useful to the account holder still most of them are reluctant to use because of online fraud. Paper suggest that the more awareness is required in account holder and built the confidence in them to use more and more banking techniques.
xxi. **Chhaterjee (2010)** study about Corporate Governance and Corporate Social Responsibility the three Indian firms, ITC LTD, Reliance Ltd and Infosys Technologies Ltd, the paper discussed such as the Governance Structure, Meeting and Attendance, Board Committee, Corporate Social Responsibility Practices. Among these it found that all three companies are doing well. Hence therefore it is important for the companies through corporate governance and responsibility towards society helps in long term shareholders value.

**APPRAISAL:**

Researcher while carrying out review of literature in the field of Investigative accounting, from above review literature, researcher has noted out the following key observation(s).

a. Economy suffers from Technological fraud.
b. Using Active Data Add in will identify the fraud.
c. Chip Technology will help to prevent the technological fraud.
d. Encryption prevents the technological fraud.
e. Tokenization prevents the technological fraud.
f. Hot pepper technologies (Email detective) prevent fraud.
g. Belka Soft (Evidence Centre) prevents fraud.
h. Passware Soft prevents fraud.
i. Dynamic Interconnection Software prevents fraud.
j. Forensic Write Blocker (Ready only access) prevents fraud.

**2.6 CONCLUSION:**

It is observed from the above list of review of literature, that there is very limited research available on the topic of Forensic accounting in Indian Context. Researcher could collect certain international studies related to forensic accounting and which has paved a guiding path for the current study. Studies reveal various forensic accounting needs and its application in the industries either due to occupational fraud or due to technological fraud. Extensive review of
literature has helped in framing the hypothesis for the study. Past studies show that how fraud has affected the economy and auditing has failed to detect such fraud as compare to forensic accounting. Therefore hypothesis are framed that Forensic accounting significantly helps in reducing frauds as compare to auditing. The study has shown that forensic accounting tools and techniques have significantly impact in controlling and preventing the Fraud hence researcher has frame hypothesis between forensic accounting and examination of fraud. The studies has shown how the occupational fraud is significantly affecting the internal fraud in the corporate leading to a bigger impact on the shareholders wealth as well as on economy hence the researcher had frame the hypothesis between forensic accounting and prevention of occupational fraud. The study has shown as the technology is changing in the world of information and communication cybercrimes have also increased which has significantly affected the economy hence the researcher has framed hypothesis stating the computer forensic significantly affected and control the technological fraud. Though the study focused on Forensic accounting application in the selected industry, the researcher has given the base study in the following chapter explaining the conceptual frame work of the study.

Therefore the researcher has justified the linkages between the title, objective, problem and hypothesis. The efforts taken on review of literature are worthwhile.
REFERENCE:


27. Fraud in insurance on rise Survey 2010-2011 Ernst & Young.


