Chapter 2 – Review of Literature

2.1) Research Gaps

Forensic Accounting has gained importance after the discovery of major corporate frauds. From the literature examined, the following gaps were discerned:

2.1.1) There are no known research publications on the extent of usage of Forensic Accounting tools and techniques adopted by accounting professionals in India.

2.1.2) There is no known comprehensive literature on the availability of methods for Forensic Investigation in the accounting profession.

2.1.3) There is no formal data on the training requirements in the Forensic Accounting area.

2.1.4) There is no formal research conducted on emerging areas of work and employment in the Forensic Accounting work domain that can be actively pursued.

2.1.5) There has been no research on the inclination to use Forensic Accounting tools by auditors and other financial certifiers.
2.2) What Constitutes a Fraud

Lindley (2010)\(^1\) quoted Mahatma Gandhi and stated “there is enough in this world for every man’s need but there isn’t enough for every man’s greed”. The “greed” is synonymous with fraud.

The Legal Dictionary\(^2\) defines a fraud as a false or incorrect representation of a fact. Such a false representation may be conveyed orally, in writing or by conduct. It includes misleading allegations, non-disclosure or concealment of matter that should have been disclosed in normal business or any other act that causes deceit or is intended to deceive another.

Chakrabarty (2013)\(^3\) defines fraud as “any behaviour by which one person intends to gain a dishonest advantage over another. It is an act or omission intended to cause wrongful gain to one person and wrongful loss to the other either by way of concealment of facts or otherwise.”

Section 17 of the Indian Contract Act 1872 defines fraud as meaning and including any of the following acts committed by a party to a contract, or with his knowledge

- The suggestion of an incorrect fact with full belief in its falsehood.
- The active concealment of a fact with knowledge of the fact.
- A promise made without intention of performance.
- Any act committed with the intention to deceive.

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\(^1\) Mark Lindley; “Gandhi on Providence and Greed”; http://academia.edu/303042/Gandhi_on_providence_and_greed ; (2010)

\(^2\) Legal Dictionary; http://legal.dictionary.thefreedictionary.com/fraud

\(^3\) Chakrabartty; Frauds in the Banking Sector: Causes, Concerns and Cures; http://cfoplus.com/cfo/2013/02/x-ray-vision-the-m-score-to-detect-fraud.html; (2013)
• Any act or omission legally declared as fraudulent.

The acts of deceit also extends to any person acting on behalf of the person and includes his agent.

The Contract Act proceeds to state that mere silence as to facts likely to affect the willingness of a person to enter into a contract is not fraud, unless the circumstances of the case are such, it is the duty of the person keeping silence to speak or unless his silence is, in itself, equivalent to speech.

The Business Dictionary (2013)\(^4\) states that Fraud is dishonesty conducted for an advantage. A person who is dishonest is often called a “fraud”. In the United States, State and Federal statutes criminalize fraud, but not all cases are of a criminal nature. Prosecutors have been given the discretion in determining which cases to pursue that implicate fraud. Alleged victims may also seek redress in civil court for damages.

Fraud must be proved by showing that the defendant's actions involved five separate elements:

• A false statement related to a material or significant fact,

• The knowledge on the part of the person making the statement that the statement is untrue.

• The intention to deceive on the part of the person making the statement.

• Reliance on the allegedly false statement by the victim.

\(^4\) http://www.businessdictionary.com/definition/fraud.html
• Financial detriment, harm or injury to the alleged victim who relied on the purported false statement.

Fraudulent transactions are rampant in the areas of property, credit cards and impersonations. The study restricts itself to the application of forensic accounting techniques only in business operations and its associated activities.

In accounting, fraud takes place with a “multiplier effect”. The effect of a fraudulent transaction has a cascading effect in other areas leading to catastrophic situations. For instance a fraudulent cash receipt system can lead to cash shortages, cover up of shortages, eventual erosion of net worth and liquidation of the company. The situation has been compounded with the advent of computers and automation. Fraudsters gain deep insights into the intrinsic working of automated systems that the conventional auditor does and cannot. The speeds of execution have exponentially increased and therefore the time frame for committing the fraud has also expanded.

Investigation of accounting frauds requires the skills of a disciplined and shrewd auditor combined with the traits of a criminal investigator. This is an acquired skill.

The legal requirements of Companies Auditors Report Order 2015 (Clause xii) places the auditor in an arduous situation. There is a clear and unambiguous requirement for the auditor to state whether any fraud has taken place in the company. This means even a minor fraud irrespective of materiality must be
reported. The use of forensic tools will facilitate confidence in audit and financial reporting.

2.3) The Causes of Fraud

Donald (1953)\(^5\) has postulated that there are three factors present at the same time for an ordinary person to commit a fraud. These are

- Pressure
- Opportunity
- Rationalization.

2.3.1) Pressure is the first stage that motivates the crime. In most cases this is financial pressure that cannot be solved in a legitimate manner. The culprit therefore resorts to illegal acts like stealing cash or goods or falsifying statements to solve his problem. The Association of Certified Fraud Examiners (ACFE) (2015)\(^6\) has stated in its commentary that the pressure syndrome always results in the financial problem being “too personal” or an individual who is too deep in personal debt or one who is in professional jeopardy. Some examples of pressures are

- Inability to pay bills
- Drug or Gambling Addiction
- Need to meet productivity targets at work

Need to meet earnings expectations to sustain investor confidence

Need to meet productivity targets at work

Desire for status symbols like a bigger house, fancy cars etc.

2.3.2) Opportunity is the second leg of the fraud triangle. This is the method by which the crime is committed. ACFE is of the view that this implies that the person must find a method to use or abuse his position to solve his financial problem without being implicated. A fraudster of this type normally operates in isolation without the participation of others. Such “white collared crimes” are committed to maintain social status and standards of living.

2.3.3) Rationalization is the last stage of the fraud triangle. ACFE indicates that the majority of those who commit a fraud are first time offenders with no previous history of criminal activity. They tend to view themselves as ordinary honest people who were apprehended under bad circumstances. The fraudster justifies his crime in a manner to make it justifiable or acceptable. Some of the more common rationalization for the act were

- Only borrowed the asset or money.
- Was entitled to the asset or money
- Was underpaid
- The employer had made false pecuniary promises.
- The employer is dishonest and deserved to be cheated.
The Fraud Triangle as described by Donald's depicted in Figure 2.1

![Figure 2.1-The Fraud Triangle](image)

Wells (2007)\(^7\) states that in the insurance sector in the USA, an analysis of data from 2004 to 2006 indicated that

- 60% of the people committing the fraud were looking for profits on insurance premiums paid and
- 33% were forced to commit fraudulent acts to obtain profits on property insurance.

Coleman (2005)\(^8\) conducted an experiment on criminal deviant behaviour. His conclusion was that white collared crimes in the United States tend to conform to the middle class morals of American culture of not tampering with enacted law even though it is often unjust. To validate his theory he conducted a student experiment where the actions of a pharmaceutical company in not withdrawing a profitable but dangerous drug were demonstrated. This involved deliberate

\(^7\) Joseph Wells; *Encyclopaedia of Fraud.* Obsidian:London:(2002); Pages 62-65.

obstruction of the drug regulators in the court and the active lobbying in the legislature. Nearly seventy nine present of the students supported the methods adopted by the drug management. He suggested that a particular personality or trait will encourage criminal activity in one occupation but will discourage it in another. He found that non-conformists are more likely to be involved in a crime committed against the employer but less likely in an organizational crime demanded by the employer. However, there has been no definitive set of characteristics that were found conducive for crime in all situations.

Skinner (1953)\textsuperscript{9} theorises that behaviour over time is conditioned by the individual’s interaction with the environment. Any act whether criminal or otherwise can be explained as a product of the individual’s desires and his understanding of the consequences. He hypothesized that a person will perform any act that will gratify desire without inflicting pain or causing deprivation. Behaviour to a great extent is learnt but can also be modified.

The Encyclopaedia of Criminological Theory (2010)\textsuperscript{10} credits Edwin Sutherland with coining the term “White Collared Crime” in 1939 defining it as a crime committed by a person of high respectability and social status in the course of his vocation violating the “implied or delegated” trust of others. In seventy of the large corporations in the United States that reported white


\textsuperscript{10} Encyclopaedia of Criminological Theory; http://study.sagepub.com; (2010).
collared crimes. Sutherland found that ninety seven percent were recidivist or repeat offenders.

This suggests the inane human capacity to not atoning for a past crime despite its discovery. He was of the opinion that in the theory of differential association, white collared crimes are driven by peer pressure.

KPMG (2011)\textsuperscript{11} has supported Sutherland’s conclusion and added that in addition to peer pressure, white collared crimes were also a result of social structural factors like capitalism, profit motive and business cycles. The influence of corporates over legislators or politicians was an important factor to be considered where the law legitimately endorses a social crime.

Albert, Howe and Romney (2010)\textsuperscript{12} have classified nine motivators of fraud

- Living beyond personal means
- Extraordinary desire for personal gain
- Unusually high personal debt
- Close association with customers
- Perception that remuneration is not commensurate with duties
- “Wheeler-Dealer” attitudes or acts that circumvent difficulties in an unethical manner.
- An attitude to beat the system
- Excessive Gambling Habits

\textsuperscript{11}Kpmg; http://kpmg-institutes.com/institutes/advisory-institute/articles/2013/07/integrity-survey-2013.html
\textsuperscript{12} Albert, Howe& Romney; “Deterring Fraud: The Internal Auditor’s Perspective”; IIARE; Florida;2010; Pages 45-47
- Undue Family or Peer Pressure

They created a Fraud Scale as illustrated in Figure 2.1. The figure indicates the tendencies to commit fraud with three major variables.

![Figure 2.2-The Fraud Scale](image)

**Figure 2.2-The Fraud Scale**

Three variables or factors are of cardinal importance are

1. Situational Pressures or personal debts workplace pressures that create pressure on the individual to commit a fraud.

2. Perceived Opportunities of the identification of a possibility method of committing a fraud without the possibility of detection.

3. Personal Integrity or the lack of it could lead to compromising with the moral and official rules and regulations leading to a fraud.

The model suggests that frauds are likely to occur where there are high degrees of situational pressures and perceived opportunities combined with low personal integrity.

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13 Albert, Howe& Romney; *Perspective Deterring Fraud: The Internal Auditor’s Perspective*; IIARE; Florida;2010; Page 6.
Hollinger and Davis (2009)\textsuperscript{14} conducted a survey of approximately ten thousand workers on the employee perception of fraud and concluded that employees steal as a result of “Work Place conditions”. The single most common cause for stealing was “Worker Dissatisfaction” Other causes for dishonest behaviour were paucity of funds to repay debts and feeling of being underpaid. Frauds were also being committed even though there was no financial need but revelled in the danger of committing such acts.

Hollinger also found evidence to conclude that the following are likely traits for employee thefts

- Slow or Sloppy work habits
- Sick Leave Abuses
- Long Coffee Breaks
- Alcohol/Drug usage at work
- Inconsistent Attendance

Other significant findings from the Hollinger survey were

- There is an inverse relationship between fraudulent activity and the probability of getting detected for the act. The single most effective way to prevent thefts was the employee perception of “getting caught”. Higher the feeling the employee had of indictment, the lower the probability of deviant behaviour.

• The likelihood of losing respect with peers or informal social control is a major deterrent for fraud.

Peer pressure could also lead to fraud. In developing countries with a highly corrupt bureaucracy there is informal pressure among peers to be part of the corrupt system to subvert the probability of discovery. This needs to be substantiated with further research.

The Encyclopaedia of Criminological Theory (2010)\(^{15}\) cites that Robert Merton who is of the view that in the modern industrialized societies, emphasis on making money rather than ethical earnings produces a state of anomie or “normlessness” among citizens. In the absence of ethical guidance, a person deploy all means necessary to achieve money power.

Kinyanjui (2015)\(^{16}\) asserted that the American Society has created “Capitalism with a Vengeance” or a situation where individualism, competition and profit are revered to such an extent that incentive to commit a crime is an inevitable consequence.

2.4) The Personality of a Fraudster

Psychologists have found various personalities attributed with convicted fraudsters. Bromberg and Thompson (1937)\(^{17}\) conducted studies on convicted bankers during a period of manual accounting and concluded that two

\(^{15}\) Encyclopaedia of Criminological Theor; “Social Structure and Anomie”; http://www.study.sagepub.com; (2010).

\(^{16}\)Stanley Kinyanj; “Analysis of Fraud from a Criminologist Perspective”;http://academia.edu/11520054/An_Analysis_of_Fraud_from_A_Criminologist_Perspective; (2015).

\(^{17}\) Bromberg and Thompson; The Relation of Psychosis, Mental Defect and Personality to Crime; http://scholarlycommons.law.northwestern.edu/cgi/viewcontent.cgi?article=2703&context=jclc
outstanding features were ego-centricity and an unconscious feeling of omnipotence.

Wheeler (2013)\textsuperscript{18} in a study of white collared workers found the following characteristics as typical of a convicted fraudster -

- Ambition
- Drive
- Desire to mix with others of a higher social status
- Desire to give their children an expensive education
- Willingness to take a financial risk in achieving all the above objectives.

The study found that not all the persons convicted were adventurous or had gambling tendencies. Many were incompetent and muddled or unclear on their ideas of why they had committed such an act.

Wheeler also examined the paradox as to why even wealthy and well to do individuals involve in white collared crimes. His findings revealed three interesting psychological parodies

- Many of the subjects are “Risk Seekers” who find crime “thrilling” and enjoyable. Such individuals commit crimes for getting a feeling of performing a risky act.

\textsuperscript{18} Wheeler; Introduction and Overview of White Collared Crime - A Systems Perspective; http://www.sagepub.com/sites/default/files/upm-binaries/43841_1.pdf; (2013).
• Greed is invariably an inherent characteristic for such individuals. The individuals in this category are never satisfied with their financial status and have the craving to acquire more wealth.

• Fear of falling from a privileged or wealthy status or leading a life beyond one’s means causes individuals to resort to fraud to maintain the lifestyle.

2.5) COSO Findings 1998 to 2007

The Commission of Sponsoring Organizations for the Treadway Commission (COSO)\textsuperscript{19} was set up in the USA by five Accounting Associations to develop frameworks on internal control and fraud deterrence. COSO (2010) revealed that during the years 1998 to 2007 investigations by the Securities Exchange Commission (SEC) revealed that out of 347 cases of alleged fraud, 294 cases were proven. The dollar magnitude of fraudulent cases soared consistent with the high profile frauds involving companies like Enron and World Com. The alleged misappropriation value was approximately USD 120 billion with an average of USD 400 million.

COSO also found that in the decade 1987 to 1997, 83% of the Chief Executive Officers (CEO) were actively involved in the frauds with a conviction rate of about 60%. There was an increase during the period 1997 to 2007 when the involvement of the CEO in fraud cases had drastically increased to 89%.

The composition of individuals in the Board of Directors did not have any major differences between companies engaged in frauds and those that did not. In the companies that reported no fraud there was importance of Corporate Governance Processes and the interactions of various governance mechanisms. As emphasis was on processes and procedures rather than individuals frauds were non-existent.

Other important observations by COSO for the period 1998 to 2007 were

- 26% Percent of the companies had changed the auditors between the clean and fraudulent audit periods.
- 60% had changed the auditors during the fraud period
- 40% changed the auditors just before the fraud began.

This indicates the likely connivance of the auditors with the irregularity or fraud.

An initial press release of alleged fraud caused a decline in stock prices by an average of 16.70% in two days. In most prudently run stock exchanges this should have caused the circuit breaker to get activated but surprisingly no such event happened indicating a wider nexus between individuals occupying various capacities.

Most companies engaged in fraudulent activities experienced bankruptcy, delisting or material asset sales.

The highest fraud cases observed by the Commission in the USA were in the domains of

- Computer hardware manufacture
Computer Software services

Manufacturing Industries

2.5.1) Common Fraud Techniques identified by COSO

For the period 1998 to 2007, COSO identified a number of common techniques or schemes used by U.S. public companies to deliberately submit false or misleading financial information to the Securities and Exchange Commission (SEC).

Among the areas that continue to be a focal point for auditors and analysts in the execution of their duties are

- Improper revenue recognition
- Overstatement of assets
- Understatement of expenses and liabilities.

2.5.1.1) Improper Revenue Recognition

The COSO Report found that in the majority of companies examined, frauds in the financial statements involved inflating revenues. Instances where sales were fraudulently inflated included sales related performance incentives, management pressure to meet revenue growth goals, and aggressive analyst projections.

Revenue misstatement was made using ingenious schemes that gave the appearance of complying with the accounting principles in the USA under the assumption that these inaccuracies would not be detected. The COSO Report cited seven methods normally deployed to misstate revenue.
2.5.1.1.1) **False or “Sham” Sales.**

To cover the fraud, company representatives falsify inventory, shipping, invoices and other records, and depict fictitious transactions as genuine sales. In other instances, the company deliberately accounted for stock transfers between warehouses as sales. Yet another method adopted was to fake the shipment of inventory and subsequently hide it from the company auditors.

2.5.1.1.2) **Premature revenues before completion of terms of the sale**

This scheme involves recording sales after the goods are ordered but before actual shipment to the customer.

2.5.1.1.3) **Conditional Sales**

Transactions are recorded as unconditional revenues even though the sales involve contingencies or conditional agreements which often eliminate the customer's obligation to keep the merchandise.

2.5.1.1.4) **Backdating Invoices**

To increase revenues, accounting records are kept open beyond the actual balance sheet date to record sales in the current period when the actual sales are in the succeeding accounting period.

2.5.1.1.5) **Improper use of the percentage-of-completion method**

Revenues are overstated by a false estimate of the work in progress. Most service and turn-key companies adopt the “percentage-of-completion” method for valuing work in progress. Manipulating the percentage-of-completion can yield favourable results.
2.5.1.1.6) *Unauthorized shipments*

Revenues are overstated by despatching goods that were never ordered or by despatching inferior or “seconds” products and recording revenues at full rates.

2.5.1.1.7) *Consignment sales*

Revenues are recorded as consignment shipments or shipments of goods when the actual shipment is a sample or on a trial basis.

2.5.1.1.8) *Overstatement of Assets*

The Report noted that in most of the companies, the instances of fraud involved an overstatement of net assets by under-estimating provisions required for debtors or receivables or overstating the monetary value of inventory, fixed and other tangible assets, and recording assets that did not physically exist.

Assets prone to fraudulent misrepresentation were

- Inventory,
- Accounts receivable,
- Property, plant, and equipment,
- Loans/notes receivable,
- Cash,
- Investments,
- Patents, and
- Oil, gas and mineral reserves.
2.5.1.1.9) **Understatement of Expenses and Liabilities**

The COSO report indicated that in approximately 18 percent of the companies examined, the financial statement fraud involved understatement of expenses or liabilities.

Some of the fraudulent financial reporting, particularly relating to overstatement of assets and understatement of expenses and liabilities were

2.5.1.1.10) **Management override of controls**

In over 72% of the cases, the CEO appeared to be associated with the fraud. The Commission observed that members of the management are often in an ideal situation to perpetrate frauds because of their authority and access to all areas of the organization.

2.5.1.1.11) **Inappropriate use of Journal Entries**

Journal entries that were often unauthorized or inappropriate were deployed to perpetrate fraud by creating material and significant misstatements.

Journal entries were passed to incorporate adjustments to quantity or currency values reported in the financial statements but were not backed by appropriate approvals and audit trails. At times these entries were outside the journal register.

2.5.1.1.12) **Biased accounting estimates**

In preparing financial statements, the management is expected to pass responsible financial estimates based on judgments or valid assumptions. For example, management may be required to estimate the net realizable value of
outdated company inventory or the estimated liability related to an announced facility closure, or the estimated fair market value of an investment in a privately held company. Intentional misstatements in such cases had caused fraudulent financial reporting.

2.5.1.1.13) Unusual transactions

Unusual or significantly high value transactions or a number of unusual low value entries that collectively adds to substantial materially significant values led to fraudulent financial reporting or concealment and misappropriation of assets.

2.6) Findings of BDO Consulting


2.6.1) At Corporate Level

The findings of BDO Consulting at corporate level were as depicted in Table 2.1

<table>
<thead>
<tr>
<th>Serial</th>
<th>Root Cause of Perceived Fraud from 1998 to 2007</th>
<th>Fraud Percentage in Excess of $1 million</th>
<th>Fraud Percentage below $1 million</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Lack of Internal Control</td>
<td>32.70 %</td>
<td>39.70 %</td>
</tr>
<tr>
<td>2</td>
<td>Overriding Existing Internal Controls</td>
<td>19.00 %</td>
<td>19.10 %</td>
</tr>
</tbody>
</table>

²⁰ Huzeifa Unwala “Major Root Causes For Frauds & Detection”; http://www.icsi.edu/docs/portals/70/5jan11.pdf; (2010, Jan, 15).
### Table 2.1 – Findings of BDO Consulting for Cause of Frauds among Corporates (1998 to 2007)

<table>
<thead>
<tr>
<th>Serial</th>
<th>Root Cause of Perceived Fraud from 1998 to 2007</th>
<th>Fraud Percentage in Excess of $1 million</th>
<th>Fraud Percentage below $1 million</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Lack of Management Review</td>
<td>16.80 %</td>
<td>18.20 %</td>
</tr>
<tr>
<td>4</td>
<td>Poor Top Management Competency</td>
<td>16.30 %</td>
<td>5.80 %</td>
</tr>
<tr>
<td>5</td>
<td>Lack of Competent Personnel for Oversight roles</td>
<td>6.70 %</td>
<td>7.00 %</td>
</tr>
<tr>
<td>6</td>
<td>Lack of Independent Checks and Audits</td>
<td>6.50 %</td>
<td>5.30 %</td>
</tr>
<tr>
<td>7</td>
<td>Lack of Employee Fraud Education</td>
<td>0.70 %</td>
<td>2.30 %</td>
</tr>
<tr>
<td>8</td>
<td>Lack of Clear Lines of Authority</td>
<td>0.70 %</td>
<td>2.00 %</td>
</tr>
<tr>
<td>9</td>
<td>Lack of Reporting Mechanisms</td>
<td>0.50 %</td>
<td>0.70 %</td>
</tr>
</tbody>
</table>

#### 2.6.2) At the Individual Level

The findings also noted that individuals indulged in fraudulent activities due to

- Poverty
- Unemployment
- Recession
- Inflation
- Personal Circumstances
2.6.3) **Fraudulent Acts by Third Parties**

Frauds relating to personnel indirectly connected with the company were in the nature of

- Supplier related frauds
- Customer related frauds
- Fraudulently routed transactions involving sale and buy back of assets at unreasonable prices
- Cartel Frauds
- Commission Paybacks
- Counterfeiting
- Piracy

2.6.4) **Financial Statement Reporting Frauds**

Frauds in financial reports were of the nature of

- Improper Revenue Recognition
- Manipulated Asset Valuation
- Inappropriate Judgement on Capitalization of development Costs
- Concealment of Liabilities
- Related Party transactions
- Misstatement in accounting

2.6.5) **Misappropriation of Assets**

Assets were stolen or misappropriated under the guise of

- False expense Claims
- Theft of cash or materials
- Theft of Intellectual Property Rights
- Theft of Data

2.6.6) Corruption and Abuse of Power

Abuse of official power took the form of
- Management Overriding Controls
- Conflict of Interest
- Inappropriate in use of Computer Equipment
- Contrivance against fair competition.

2.6.7) Frauds in Disclosed and Certified Statements

Certified financial statements were manipulated to depict the following features
- Omission of material facts in Financial Statements
- Concealment of material facts in Financial Statements
- Misstatement of facts in Financial Statements
- Misrepresentation regarding undertakings and obligations to regulators and third parties like banks.

2.6.8) India Specific Factors

Unwala\(^{21}\) stated that the fraud factors for India were
- The “Winner Takes All” or selfish motive factor by fraudsters who did not like to reveal their deeds or share the proceeds of the embezzlement.

• Worshipping Power Brokers to win personal favours resulted in compromising on corporate governance, internal controls and deliberate misstatements.

• Poor Literacy Levels of customers and clients particularly in dealing with financial instruments resulted in unethical practices to the detriment of the customer.

• Underpaid Civil Servants often resorted to financial manipulation of government records and contracts to obtain pecuniary advantage.

• Tendency to trust others often caused monetary harm to the individual or organization. This trend was noticed in the financial instrument sector particularly in shares and stocks where the transaction value stated by the share broker was accepted as the correct value.

• Tax Avoidance by individuals and corporates resulted in acceptance and distribution of large volumes in cash that in turn caused misappropriation due to the lack of formal controls on unaccounted money.

2.7) Fraud Categorization in Ancient Times

Chanakya or Kautaliya was the prime minister to the 3rd century BCE king Chandragupta Mauraya. His treatise the “Arthasastra” was intended for imparting good governance. He suggested that good governance should avoid extreme decisions and extreme actions.
Kangle (2014)\textsuperscript{22} quoting the Arthasastra states that Sovereignty is practical with the cooperation of others and all administrative measures must be taken after proper deliberations. Strict code of conduct must be enforced for the king and his administrators. This is the essence of Corporate Governance.

Lekshmi (2012)\textsuperscript{23} has stated that Chanakya’s research into nearly forty different ways of defrauding the state and others. The list is almost exhaustive of the kinds of frauds perpetrated even in the modern computerized environment.

The Nyaya Shastra or Tarka Shastra is one of the six schools of ancient philosophy composed around the 2nd century C.E. According to Hindu Online (2010)\textsuperscript{24} the ancient sage Aksapada Gautam, had stated four sources of knowledge or “pramaras”-

- Perception or the observance of details especially financial details
- Inference or the ability to conclude the underlying purpose of the financial transaction.
- Comparison of the transaction with similar transactions in the past
- Testimony of responsible persons or supporting evidence to back the financial transaction.

Using these basic concepts, even in this modern era, the validity or otherwise of financial transactions can be evaluated.

\textsuperscript{22} Kangle RP; “The Kautaliya Arthasastra”; Motilal Banarsidass; New Delhi; (2014); Pages 34-35.
\textsuperscript{24} Hindu Online; “Nyaya Dhshan”; http://hinduonline.co/Scriptures/NyayaDarshana.html; (2010)
2.7.1) Fraudulent Transactions envisaged by Chanakya

Chanakya has propagated forty types of frauds in the course of his tenure as the Prime Minister to Chandragupta Mauraya. These were categorized by Lekshmi\(^{25}\) as

- 2.7.1.1) What is realized earlier is entered later on.
- 2.7.1.2) What is realized later is entered earlier.
- 2.7.1.3) What ought to be realized is not realized.
- 2.7.1.4) What is hard to realize is shown as realized.
- 2.7.1.5) What is collected is shown as not collected.
- 2.7.1.6) What has not been collected is shown as collected.
- 2.7.1.7) What is collected in part is entered as collected in full.
- 2.7.1.8) What is collected in full is entered as collected in part.
- 2.7.1.9) What is collected is of one sort, while what is entered is of another sort.
- 2.7.1.10) What is realized from one source is shown as realized from another.
- 2.7.1.11) What is payable is not paid.
- 2.7.1.12) What is not payable is paid.
- 2.7.1.13) What is not payable is paid in time.
- 2.7.1.14) What is not payable is paid untimely.

2.7.1.15) Small gifts made are depicted as large gifts.

2.7.1.16) Large gifts made are depicted as small gifts.

2.7.1.17) What is gifted is of one sort while what is entered is of another.

2.7.1.18) The real donee is one while the person entered as the donee is another.

2.7.1.19) What has been taken into is removed.

2.7.1.20) What has not been credited to it is shown as credited.

2.7.1.21) Materials not paid for are entered while materials paid for are entered.

2.7.1.22) An aggregate is scattered in pieces.

2.7.1.23) Scattered items are converted into an aggregate.

2.7.1.24) Commodities of greater value are bartered for those of small value.

2.7.1.25) What is of smaller value is bartered for one of greater value.

2.7.1.26) Price of commodities enhanced.

2.7.1.27) Price of commodities lowered.

2.7.1.28) Inconsistencies in giving character certifications.

2.7.1.29) The number of nights are increased.

2.7.1.30) The number of nights are decreased.

2.7.1.31) The year not in harmony with its months.

2.7.1.32) The month not in harmony with its days.
2.7.1.33) Inconsistency in the transactions carried on with personal supervision.

2.7.1.34) Misrepresentation of test marks or the standard of fineness.

2.7.1.35) Misrepresentation of prices of commodities.

2.7.1.36) Misrepresentation of the source of income.

2.7.1.37) Making use of false weight.

2.7.1.38) Measures deception in counting articles.

2.7.1.39) Making use of false cubic measures.

2.7.1.40) Lack of congruence in representing the work turned out.

2.8) Kinds of Frauds

The Institute of Chartered Accountants of India (ICAI) (2011)\(^ {26}\) has indicated the following kinds of frauds based on prior professional experiences of its members.

- Frauds for Personal Gain
- Corporate Frauds
- Frauds at Operational Level
- Skimming
- Teeming and Lading
- Fraudulent Disbursements
- Fraudulent Expense Reimbursement Schemes

\(^ {26}\) ICAI; “Study on Investigative Audits”; ICAI Publications; New Delhi; 2011; Pages 7-17.
- Payroll Fraud
- Commission Fraud
- Public Issue Fraud

2.8.1) Frauds for Personal Gain

Frauds for personal gain can take the form of Bribes or Conflict of interest. Bribes take the form of monetary favours or gifts offered to procure illegal or dishonest action or decision (like the award of a contract) in favour of the giver. In almost all cases these are outside the legal entries of any organization. A Conflict of Interest arises when there are competing professional or personal interests. Such a conflict can lead to impropriety and weaken or destroy the confidence in the professional ability of the compromised person. In its most common form, a conflict of interest can arise when a close relative is also a supplier or purchaser of goods or services.

2.8.2) Corporate Frauds

Some of the common corporate frauds stated by ICAI\textsuperscript{27} can take the form of

- Fictitious Sales in anticipation of actual sales creates a false impression about the activities of the company. Revenue is often misrepresented.
- Loans from multiple financial institutions are obtained by pledging or hypothecating the same asset.

\textsuperscript{27} ICAI; Study on Investigative Audits; ICAI Publications; New Delhi; 2011; Pages 7-17.
• Borrowings or loans are depicted as advances from clients or customers and booked under the wrong head misrepresenting the financial situation. Often this causes an irreversible debt trap.

• Revenues and costs are often inflated. Such activities are called ‘Window Dressings” and can lead to serious improprieties.

• Shell Companies are often created with the deliberate intention of siphoning off funds. Malpractices of this nature use false vendors for goods or services. Shell companies can be floated by the management or employees for personal gain to the detriment of the company or organization.

• Money Laundering is another activity that is rampant in corporates with weak controls. Money laundering is the deliberate act of projecting illegal funds as legitimate funds. Corporates with weak banking controls like absence of a proper bank reconciliation system are susceptible to such fraudulent actions. For example an unexplained credit in the bank account for a protracted period of time is a “red flag” for money laundering as it can be siphoned off without detection. Similarly, corporates that handle cash with inadequate identification of the remitter are also susceptible to fraudulent money laundering. This typically happens in agriculture based organizations like sugar cooperatives.
2.8.3) **Frauds at Operational Level**

At operational level, the frauds are perpetrated predominately by employees. This may take the form of

- Tampering of cheques by altering the payee’s name
- Preparing cheques without issue to the payee
- Charging the cheques to an incorrect head of account
- Drawing cheques to a personal name
- Forging Signatures
- Improper retention of time barred cheques
- Altering the name of the payee
- Wrong and deliberate coding the cheque proceeds to inactive accounts

Often the lack of internal controls can create situations of frauds. The person preparing the cheque should not be the same person who is in charge of bank reconciliation. There should also be rotation of duties and employees should be encouraged to go on leave to the extent they are eligible.

2.8.4) **Skimming Frauds**

The ICAI defines Skimming as the act of misappropriating cash before the accounting entries are recorded in the books. It is fairly common in agrarian feudal economies where cash transactions are the norm. Some examples of skimming are

- Allowing an employee to retain cash for a long time
• Sale of goods for cash without proper documentation
• Commissions that are paid or credited before recording the actual sale in the books.
• Booking of purchases without accounting for vendor rebates.

2.8.5) Cash Larceny

Cash Larceny takes place when cash is misappropriated after accounting entries are passed in the books of accounts. This kind of fraud can happen in a variety of ways. Three of the most common instances are

• Delay in collection of cash and remittance to the company.
• Frequent transactions involving large values depicted as cash or cheques in transit.
• Illegal endorsements of cheques in transit

2.8.6) Teeming and Lading

Teeming and Lading is also synonymous with ‘Short Accounting” and “Delayed Accounting”.

This could take the form of

• Deliberate Crediting of the wrong account to take advantage of time bounds commissions or discounts.
• Deliberate duplication of collections from clients and subsequent diversion to a personal account
• Short credit to the payer with subsequent misappropriation.
2.8.7) Fraudulent Disbursements or Reimbursements

Frauds of this nature can take the form of

- Submission of false bills
- Conversion of personal to official expenses
- Covering shortage of physical cash by passing fake disbursals
- Declaring false sales returns
- Not issuing a receipt or invoice to the customer for a sale and reversing the entry when the customer leaves.
- Inflation of refund amounts

2.8.8) Expense Reimbursement Schemes

This is normally resorted to by employees. Taken by individual isolation they may not be of high value but collectively could create major issues for the organization. Some examples are

- Personal expenses like household or stationery expenses claimed as reimbursement under the guise of having incurred it for official purposes.
- Individual claims for travel expenses when travel expenses are actually shared, grouped or pooled.
- Employees whose expenses are met by clients or dealers submit claims for expenses.
- Claims based on duplicate or photocopied bills.
- Cancellation of travel booking and misappropriation of proceeds.
2.8.9) Payroll Fraud

Payroll Frauds are common in the construction industry. This can take the form of payment to non-existent employees in cash or inflation of manpower in a labour contract to depict a larger work force.

2.8.10) Commission Fraud

Such frauds are normally perpetrated by salespersons for a monetary benefit. Instances of such cases may take the form of

- Fictitious Higher Billings for a higher commission.
- Alteration of the Sale price from that stipulated by the company to achieve a higher sales target and commissions.

2.8.11) Public Issue Fraud

Despite regulatory controls frauds are committed during public issues. These mainly consist of the following types

- Under subscription of minimum subscription by promotors
- False statements about prospective performance and targets
- Irregular allotment in the event of over subscription
- Violation of listing norms

2.9) Frauds in a Computerized Environment

The advent of automation has increased the risk of financial fraud. Rounding foreign exchange transactions, deliberate crediting personal accounts for illegal gratifications are common malpractices.
Non awareness of certain key essentials of a system is also sufficient reason for the fraudsters to inflict damage. An example is the innocent revelation of the bank password to an unscrupulous person.

The internet has helped fraudsters to commit financial crimes at speeds that may not have been otherwise possible. The rate of white collared crimes has exponentially increased with internet usage. The Federal Bureau of Investigation (2014)\textsuperscript{28} reports that in the USA there were 6,062 robberies involving physical force amounting to $45.90 million in 2009. Of these about $8.0 million were recovered. In the same year, there were over 14,000 reported cybercrimes perpetrated on banks with an estimated loss of $110 million of which nothing was recovered. The estimated loss would be higher if the unreported cybercrimes are included.

The Market Oracle (2013)\textsuperscript{29} states that in 2009, Trojan horse frauds, debit and credit card cloning and internet phishing affected more than 2,100 ATM machines in Asia, Europe and the USA. An estimated amount of USD nine million in cash was withdrawn in twelve hours.

Online fraudsters target individuals, financial institutions, brokerage firms, retailers and other companies. In 2009 there were 275,285 complaints involving USD 264.60 million. However, in 2010 there were 335,655 complaints

\textsuperscript{28} Federal Bureau of Investigation; “White Collared Crime”; https://www2.fbi.gov/whitecollarcrime.htm; (2014).

\textsuperscript{29}The Market Oracle; “The 10 Greatest Financial Scams in History”; http://www.marketoracle.co.uk/article38887.html; (2013).
involving USD 559.70 million. This represents an increase of about 112 percent in the value of frauds.

Technology has increased mobility in communication. Hand held smart phones can perform the task of a desktop or laptop with the same speed. The advent of 4G and other fast communication feeders has made world-wide communication a real time transaction. This also points to an increase in the incidence of financial frauds.

Steganography in a computerized environment is the action of pilfering valuable data in the guise of transmitting apparently harmless items. For example in India it is the common practise to send pictures of holy persons to each other. However, confidential materials may be concealed in the guise of sending innocuous pictures.

2.10) White Collared Crimes

The National White Collared Crime Centre (2014)\(^{30}\) claimed that despite the increase in online thievery, such acts represent only a small fraction of white collared crimes. The majority of financial fraudsters still resort to the old traditional methods of financial skulduggery. Some of the methods adopted are

- Bankruptcy Frauds that can take four forms in the USA
  - Concealment of Assets to avoid subsequent forfeiture
  - Filing false or incomplete forms about financial positions

o Filing multiple forms with false information or filing correct information in several states.

o Compromising a court appointed trustee

• Bribery

• Credit and Debit Card Frauds

• Counterfeiting Currency and Securities

• Embezzlement

• Foreign Exchange “Churning” fraud

• Identity Theft

• Insurance Frauds

• Kick Back Schemes

• Money Laundering

• Price Fixation and Manipulation

• Mortgage Fraud.
2.11) **Major Financial Frauds**

This section analysis the major financial frauds that have occurred in various countries. The intention of studying historical frauds is to analyse their causes and prevent the occurrence of such incidents in future..

2.11.1) **International Frauds**

2.11.1.1) **The Ponzi scheme (1920)**

The term “Ponzi” has become synonymous with “fraudulent financial schemes”. It originates from a scheme launched by Charles Ponzi in 1920 who cheated investors in the USA and Canada by promising extra-ordinary returns. Clark (2009) estimates the returns ranged from 50% in 45 days to 100% in 90 days. The modus operand was to borrow money from investors and use it in arbitrage operations involving International Reply Coupons (IRC). Investors who wanted to realize their money were repaid with profits from other borrowings. This effectively was a self-created debt trap that collapsed when a newspaper sting operation led to a run on the company and its subsequent bankruptcy. The estimated loss to the investors aggregated to over $10 million in 1920.

The word “Ponzi” in the financial world connotes schemes where investors are promised high returns with low risks. The scheme repays investors with money received from new investors rather than through cash earned through profits.

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2.11.1.2) The Madoff Scam (2008)

The Madoff scandal in 2008 was another “Ponzi” type scam that involved exchange traded securities. Bernie Madoff was a founder of the NASDAQ exchange and had served as its Chairman. He was a reputed financial expert and investment banker. Clark (2009)\(^3\) estimates that the money swindled was nearly USD 65 billion over two decades till 2008.

Madoff used hedge funds to buy securities and disposed all securities at the end of the month. As a consequence the hedge funds reported only cash investments and not securities. If securities had been depicted, they would have to be depicted at the lower of cost or marked to market. Investors also received emails of their summarized account information without any details of the underlying assets. The scandal was unearthed when family members disclosed the fact. The investors claim was USD 7 billion but the company only had USD 300 million for distribution.

2.11.1.3) The Enron Scam (2001)

The Enron scam was typical of the market ignoring early warning signs to take advantage of an apparently profitable situation. Enron had been rated as one of the most reputed and dynamic companies in the 1990s in the area of power and distribution. Enron grew exponentially through organic acquisitions and set up a new company Enron Finance Corporation for marketing power and gas. Enron

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\(^3\) Andrew Clark; “How Did Bernard Madoff’s victims fall for his $65 billion scam”; http://www.theguardian.com/business/2009/apr/02/bernard-madoff-fraud-victims-sec; (2009).
would buy gas and power from a network of suppliers and sell it to its customers guaranteeing supply and price. Fees were charged for the guarantee. A new energy derivative was created that was traded by another company Enron Online. Enron online was always a counterparty to every transaction and exposure risks were offset through Enron’s guarantee.

Enron valued its derivatives under US GAAP standards as “Marked to Market”. However, in the absence of an organized market for energy derivatives, the marked price was discretionary. Thomas (2002) reckon that the company had using this method created unrealized trading profits for more than 50% of reported profits for 2000.

The disclosures in the financial statements were confusing and lacked transparency. Enron’s investment in underperforming acquisitions caused huge cash losses. Increased competition in the power and gas sector eroded margins. Enron resorted to setting up Special Purpose Entities to access capital and hedge risks. Complex valuations of derivatives were devised. In October 2001 Enron officially announced its losses and a reversal of USD 1.2 billion in derivatives.

Some of the other unethical malpractices included

- Bad Accounting Ethics
  - The auditing company was also the financial consultant

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33 Thomas; “The Rise and Fall of Enron: When a Company looks too good to be true, it usually is”; http://journalofaccountancy.com/issues/2002/apr/theriseandfallofenron.html; (2002).
- Audit Partners accepted jobs from clients after leaving their professional practice.
- Auditors were retained for too long a period of time.
  - Unethical appointment of the auditors. Legally, the shareholders appoint the auditors. However, in practise, auditors were appointed by the management and the shareholders did not seem to be concerned about this fact.
  - Lack of Transparency of Managerial Remuneration. The Board of Directors were allotted performance linked stock options without revealing the manner of allocation. This permitted sale of the options with insider information.
  - Ignoring the red flag of unusual profits from 1996 that were not matched by other leading organizations in the same sector.

The Enron scandal was the primary reason for passing the Sarbanes-Oxley (SOX) Act of 2002 that mandated major changes in corporate ethics.

**2.11.1.4) The Parmalat Scam (2003)**

Parmalat was an Italian food corporate that went about acquiring diary and other related business many of which were unprofitable. It lured investors in the form of bonds or debt and siphoned funds to offshore entities. These siphoned funds were depicted as accounts receivables, interest swap deals and derivatives. Losses from the acquisitions were depicted as assets and bonds were issued on the security of such non-existent assets.
Parmalat also depicted increased export sales that were subsequently proven to be bogus. This attempt at inflating sales revenue combined with other malpractices created an estimated loss in the view of The Economist (2004)\textsuperscript{34} of approximately 14 billion Euro Dollars.

Parmalat was supported in its dealings by leading banks based in the United States which were subsequently indicted as collaborators in a concerted effort to commit fraud. The Economist (2004) quoted a European financial source in saying that the unethical dealings were run by top international banks through offshore tax havens like Cayman Islands. Deals like this are often used to finance political, illegal, speculative and terrorist efforts that could endanger the global financial system.

\textbf{2.11.1.5) The Barings Bank Fiasco (1995)}

Barings Bank was the oldest mercantile bank in the United Kingdom till 1995. Fraud Magazine (2002)\textsuperscript{35} estimates that when the bank failed the loss was approximately GBP 1.40 billion on future contracts.

In the case of the Barings bank, a single employee had the responsibility of taking advantage of arbitrage operations in derivatives between the Osaka and Singapore Stock exchanges. However, he gambled using the bank’s resources on future market positions of the Nikkei index and committed the bank to exposures on long futures positions.

\textsuperscript{34} Para Splat; The Economist 2004 Jan 14; http://economist.com/node/2349958
The Kobe earthquake led to the crash of the Nikkei and the bank lost heavily forcing a bankruptcy petition. Some of the unethical practices subsequently discovered were

- Usage of an unauthorized account to cover losses of about GBP 827 million while profits went to another account. Details of the accounts were not communicated to the Risk Control Department of the company based in London.
- Breaking down the number of contracts into several trades to by-pass procedures.
- Changed or manipulated the actual trade price to depict profits.
- Trader controlled the front dealing desk and the back office transactions
- The employee had total control on payments, contracts, confirmations, reconciliations, accounting entries and stock positions.

2.11.1.6) WorldCom (2002)

WorldCom was a leader in the communication sector in the USA. Lyke (2009)\textsuperscript{36} observes that WorldCom went on an organic acquisition venture and by 2001 controlled 29% of the communication network in the USA. In 1989 the company provided the investors a 57.30% average annual return for the previous ten years. This was about ten times the average returns of its competitors.

By 2001 with recession and the end of the dot com era, revenues fell but shareholder expectations remained buoyant. WorldCom resorted to artificially boosting its profits by underreporting costs and inflating revenues. Some of the accounting strategies deployed were

- Removing USD 2.80 million from reserves and depicting this as revenue for the year 2000.
- Depicting operating expenses as capital expenditures
- Manipulating journal entries to depict computer expenses without supporting evidence.
- Granting loans to directors without appropriate sanctions

The internal audit department uncovered USD 3.80 billion worth of irregularities by not following US GAAP standards. The Securities Exchange Commission followed this up with further investigations as they were suspicious of the high profits when other competitors reported losses. As a consequence to these findings the market share price dropped from USD 64.50 to less than a dollar. About Fifty Seven Thousand employees lost their jobs.

2.11.1.7) The Tyco Episode (2002)

Tyco was a multi-faceted company in manufacture and installation of electrical and electronic components, undersea communication equipment and fire protection systems.
Lawyer-Shop (2015)\textsuperscript{37} analysed the nature of the fraud between 1996 and 2002 and estimated the loss to be around USD 600 million. They found that the company had a low interest Key Employee Corporate Loan Program (KELP) that provided employees loans for relocation and exercising stock options. The Chief Executive Officer (CEO) and the Chief Financial Officer (CFO) utilized millions of dollars purportedly for purchasing stock and reimbursement of relocation costs but actually used it for purchasing personal luxury assets. The act of using the KELP funds as a perquisite was not disclosed as required under Securities Exchange Commission mandatory disclosures.

In course of time, the CEO and CFO authorized “forgiveness” for part of the loans taken by themselves. They also distributed cash bonus for themselves. To prevent information leaks, they extended this benefit to nearly forty more employees so that the illegalities would not be disclosed.


The United States Securities Exchange Commission (2006)\textsuperscript{38} investigated the AIG case that involved the deliberate and reckless efforts by senior corporate officers of a conspirator and facilitating company to permit AIG to manipulate its transactions for achieving favourable accounting results.

AIG undertook reinsurance contracts within another insurance company to share risks. The money received should have been apportioned between revenue


and deposits but was credited to revenue boosting its profits by USD 1.32 million. Loans received were also booked as revenue receipts. In addition, AIG paid deferred compensation to its senior executives through a holding company that pointed to conflict of interest on the part of the executives.

2.11.1.9) Lehman Brothers (2008)

Lehman Brothers was an investment bank that collapsed in September 2008 primarily due to high exposure in sub-prime mortgages and accounting misrepresentations.

Studies by the Seven Pillars Institute (2011)\(^39\) indicated that from 2003, the US economy witnessed a boom led by housing loans. However, these loans were granted recklessly and caused the Sub-Prime crisis that had a negative chain reaction on other industries. Lehman Brothers aggressively funded housing loans and during the period 2004 to 2006 revenues surged by nearly 56%. Investopedia\(^40\) estimates that in 2007 the net profits were reported at USD 4.20 billion for a gross revenue of USD 19.30 billion. The resultant net profit of nearly 22% was exceedingly high for the industry.

When mortgage loan defaults commenced, the company was heavily leveraged on mortgage assets. To hide facts it performed a REPO or repurchase operations where non performing mortgages were transferred to a UK company before the balance sheet date and repurchased back at a discount after the end of the


\(^{40}\) Investopedia Staff; “Case Study: The Collapse of Lehman Brothers”; http://investopedia.com/articles/economics/09/lehman-brothers-collapse.asp; (2009)
evaluation period. This was termed as the infamous ‘REPO 105” where assets were transferred to a company controlled by the executives of Lehman at 105% of cash received and depicted as a sale under US GAAP. An estimated USD 60 billion of assets were converted to revenue. Commission on sales was paid to the executives using this accounting manipulation. When the sub-prime mortgages reached uncontrollable levels, Lehman Brothers found itself holding USD 140 billion of mortgaged assets of which only USD 2 billion could be realized in cash.

2.11.2) Domestic Frauds in India

2.11.2.1) The Uttar Pradesh Food Grain Scandal (2010)

The Uttar Pradesh Food Scandal involved diversion of food grains intended for the Below Poverty Line (BPL) citizens from the Public Distribution System (PDS) to the open market between 2002 and 2010. A substantial amount of the diverted food grains were exported to South East Asian countries and South Africa. The diverted stock of food-grains were depicted as distributed to the beneficiaries.

The Times of India (2010)\(^4\) states that investigation into the alleged manipulation investigated by the Central Bureau of Investigation involves highly placed politicians and government officials and is estimated to have cost the exchequer over rupees two hundred thousand crores.

\(^4\) Times of India; “UP Food grain Scam may require 5000 FIR’s”; http://UP-Foodgrain-Scam-may- Require-5000 FIRs/articleshow/7068731; (2010, Dec 9).
The operation was a planned act in organized pilferage and involved fake documentation, fake transport vehicle registration and connivance between the Legislative and Administrative officials. India Today (2012)\textsuperscript{42} states that the objective seems to have been to perform a money laundering operation as certain highly ranked politicians have been indicted of taking insurance policies and bank accounts in the names of teachers working in schools they owned and managed and subsequently encashing the proceeds making it appear that money received was genuine.

\textbf{2.11.2.2) The 2G Scandal (2008)}

The episode was in the telecom sector where the government owned scarce communication frequencies were given on a “first come first served basis” to private participants at an apparent cost that seemed grossly below existing market values. There were no bid offers invited by the Telecom Ministry. Companies were allegedly given little time to respond to an invitation to bid although a few preferred companies had been informed in advance and were able to submit their offers in time.

India Mirror (2012)\textsuperscript{43} states that the difference between market values and allotment values had been allegedly received by politicians and bureaucrats as unaccounted money. The Supreme Court subsequently cancelled the allotments


\textsuperscript{43} India Mirror; “2G Spectrum Scam”; www.indianmirror.com/indian-industries/...scams/twogsspectrum.html; (2012).
and ordered a criminal enquiry. Times of India (2010)\textsuperscript{44} states that the Comptroller and Auditor General of India had estimated and subsequently defended his estimate of the loss to the exchequer at ₹ 176 lakh crores.

\textbf{2.11.2.3) The Coal Allocation Scam (2012)}

This was another scandal in the public sector involving improper allocation of scarce natural resources. Kaul (2015)\textsuperscript{45} states that in 2008 The Central Government allotted 206 coal blocks to public and private sector companies without adhering to the normal procedure of inviting competitive biddings. Allocations were allegedly made on the recommendations of the Inter Ministerial Screening Committee or through direct allocation. The allegation was that allocation was arbitrary and huge kickbacks were received by the then ruling government.

In August 2014, based on a report filed by the Central Bureau of Investigation, the Supreme Court declared all allocations as void and illegal. India Today (2012)\textsuperscript{46} states that the Comptroller and Auditor General of India has estimated the loss to extent to about was ₹ 1.86 lakh crores or ₹ 1,856 billion.

\textbf{2.11.2.4) The Sharada Group Scam (2012)}

This was yet another “Ponzi” deal that affected the Eastern states of India. Investors were promised high returns through the Chit-Funds or Small Savings

\textsuperscript{45} Vivek Kaul; “All You Wanted to Know about the Coal Scam”; http://www.dnaindia.com/money/report-all-you-wanted-to-know-about-the-coal-scam-1735936; (2015,Mar, 11).
\textsuperscript{46} India Today; “Coal Scam. How India lost 1.86 lakh crores”; http://indiatoday.intoday.in/gallery/coal-scam-how-india-lost-rs-1.86lakh-crores/1/7610.html; (2012).
route. Rediff (2015)\textsuperscript{47} claims that agents were paid high commissions to influence a large number of individuals to subscribe to the schemes. To avoid legal hurdles, funds were routed through private limited companies and partnerships. To avoid immediate detection, funds were sourced in cash from the rural areas.

NDTV(2013)\textsuperscript{48} states that the funds were allegedly invested in hotels, the tourism industry, real estate, infrastructure and even motor cycle manufacturing. The role of the politicians in participating in the scheme is being investigated.

Bhalla (2013)\textsuperscript{49} states that the role of the market regulator SEBI is also being investigated amidst allegations that they were late in investigating intelligence reports from the Enforcement Directorate about the group obtaining funds from a large number of rural investors in cash.

The Business Standard (2013)\textsuperscript{50} states that the Shyamal Commission has estimated that about 174 lakh or 1.74 million investors have been affected by the scam involving an estimated amount if ₹ 24.60 billion.

2.11.2.5) The Bihar Fodder Scam (1995)

Bhat (2013)\textsuperscript{51} claims that the Bihar Fodder Scam is estimated to have cost the state exchequer approximately ₹ 950 crores or ₹ 9.50 billion over a twenty year
period from 1975. Funds were misappropriated by the state Animal Husbandry Department with the connivance of the state government bureaucrats and politicians.

The modus operandi was to fake the purported issues of medicines and fodder for the animals owned by poor farmers. The items were either never issued or short issued. Entries were made in the registers without the physical supply of items to the beneficiaries and the actual stock would be sold for the benefit of the government officials and politicians. False Purchase Orders for fodder and medicines were raised. The items were never supplied but were subsequently paid for by the Bihar Government. According to the Central Bureau of Investigation, the beneficiaries were the Director of Animal Husbandry, politicians and bureaucrats’ who were paid gratification in cash or kind.

As the matter related to Governmental Expenditure, the Controller and Auditor General of India had included the irregularities in its report. The report is to be placed before the legislature for discussions. However, the government allegedly delayed placing the reports before the state legislature. When the reports were tabled, the matter became public.

2.11.2.6) The Commonwealth Games Fiasco (2010)

The Commonwealth Games of 2010 was a prestigious international event scheduled to be held in New Delhi in 2010 involving all the countries of the
former British Empire. The Hindu (2011)\textsuperscript{52} states that the planning and execution of the event was marred by financial fraud estimated at approximately \textrupee 70,000 crores or \textrupee 700 billion. According to the Central Bureau of Investigation (CBI), it involved politicians, bureaucrats, corporations and private businessmen. The case is under investigation and the charges levied by the CBI include

- Award of illegal contracts for installation of a timing system. The Economic Times (2011)\textsuperscript{53} estimates a loss of \textrupee 95 (or \textrupee 950 million) to the exchequer.
- Hiring of vehicles in the United Kingdom at exorbitant prices and using the excess money for money laundering.
- Inflating the cost of the broadcasting network by manipulating specifications to the advantage of only one vendor and awarding the contract to the vendor at a cost that was unfair to the government.
- Recruitment persons to the Organizing Committee without any prior experience and conducting a recruitment that ultimately included non-existent or “ghost” employees.


Granting of broadcasting rights to a private joint venture with no specific analysis. According to India Today (2011)\textsuperscript{54}, contracts for ₹ 6.73 crores were suspect of discretionary allocation without following transparent processes.

The illegal award of street lighting in New Delhi to a contractor without following procedures.

2.11.2.7) **The Satyam Computer Services Scam (2009)**

The Satyam Computers Limited scandal is perhaps India’s biggest financial scandal in the private sector. It was perpetrated with a combination of accounting manipulations, forgery and audit negligence. According to the Central Bureau of Investigation (2009)\textsuperscript{55}, the estimated loss to investors in the scam is estimated at ₹ 14,162 crores (₹141.62 billion) while the families of the promotors obtained illegal gains to the extent of ₹ 2,743 crores (₹ 27.43 billion).

As a result of the irregularities, the share prices that reached ₹ 542 in 2009 crashed to ₹ 6.30 the day the scam broke out when the Chief Executive Officer (CEO) confesses to the irregularities in a letter to the stock exchanges.

Satyam was brought down by the “Tunnelling Effect” or a financial fraud involving the transfer of assets and profits for the benefit of individuals who control the company. Funds were diverted from the main company Satyam Computer Services limited to more than 356 family owned companies since


\textsuperscript{55} Central Bureau of Investigation; “ The Satyam Scam Case”; http://cbi.nic.in/fromarchives/satyam/satyam.php; (2009)
2001. The diverted funds were used to fund the then booming real estate and construction businesses. When the recession set in in 2008, the company was unable to sustain the cash flow and found itself cash deficient to even pay staff and management salaries. This led to a self-confession by the CEO and subsequent enquiries.

The salient features that were revealed by the scam as revealed by The Economic Times (2009)\(^{56}\) were-

- The management of Satyam Computers were predominantly in the hands of one family.
- The management had 356 family owned companies to which funds had been diverted from Satyam Computer Services Limited.
- To depict increased sales turnover, nearly 7,500 fake invoices were generated for services that were never rendered.
- The increase in sales turnover was sought to be covered by increased cash collections that were actually fake fixed deposits worth nearly ₹3,300 crores or ₹33.00 billion with banks. The auditors failed to independently verify the fixed deposits with the banks and chose to rely on forged fixed deposit receipts produced by the company.

• The automated accounting system was created without any independent audit trail and had a “Super Id” that permitted the user to conceal or reveal invoices in the system.

• Cash balances were understated by ₹ 321 crores or ₹ 3.21 billion.

• Accrued interest receivable was depicted as ₹ 376 crores or ₹ 3.76 billion when in reality no such interest was receivable.

• Debtors were overstated by ₹ 490 crores or ₹ 4.90 billion.

• Liabilities were understated by ₹ 1,230 crores or ₹ 12.30 billion

• To give credence to interest earned on fake deposits, ₹ 186.91 crores or ₹ 1.86 billion was paid in cash to the tax authorities that precariously lowered the cash balances.

• Promotor’s stake in the company was reduced from 25.60% in 2001 to 8.74% in 2008 without following the norms for disclosure of variation in promotor’s quota in the share holding pattern.

• The estimated extent of financial irregularities was ₹ 7,855 crores or ₹ 78.55 billion.

• Fictitious Income booked in the accounting records between 2002 and 2008 was approximately ₹ 5,353 crores or ₹ 53.53 crores.

• Fictitious Fixed Deposit Interest booked in the accounting records were ₹ 900 crores or ₹ 9.00 billion.

• Fictitious foreign exchange gains were booked to the extent of ₹ 206 crores or ₹ 2.06 billion.
- Money Laundering was carried out by creating approximately 7,000 fictitious employees.
- For the quarter ending September 2008, operating profit was reported at 24% when it was actually only 3%.
- Gross Profits depicted at ₹ 649 crores or ₹ 6.49 billion when in reality it was only ₹ 61 crores or ₹ 0.61 billion.

The episode also revealed that the internal and statutory auditors had not observed the basis audit fundamentals of due diligence. The result of the scam was the introduction of a series of changes in corporate legislation that in many cases went against the existing corporate culture and is being resented by a large proportion of the corporate world.
2.12) **Warning Signs of Fraud**

Fraudulent activities are invariably planned thoroughly and executed well. The investigator or auditor has little time to conduct an in-depth analysis of business activities. In large businesses the investigator is often perplexed with huge volumes of data and faces the question of where to start to detect irregularities. However, there are certain signs that can alert the investigator into more detailed investigation. Two of such signs are termed as “Red” and “Green” Flags. These are situations or deviations from normal practices or industry standards that can act as a trail to trace potential irregularities or frauds.

2.12.1) **Definition**

Dinapoli (2012)\(^{57}\) has defined a “Red Flag” in accounting and audit as a set of circumstances that are unusual in nature or vary from the normal activity. It is a signal that something is out of the ordinary and may need to be investigated further. Red flags do not indicate conclusive guilt but provide possible warning signs of fraud.

2.12.2) **Red Flags in Business and Accounting**

AICPA Statement on Auditing Standards, (2012)\(^{58}\) has cited a list of “Red Flags” identified by The American Institute of Certified Public Accountants in their Statement on Auditing Standards released in an attempt to conduct the audit and obtain an assurance about whether the financial statements are free of

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\(^{57}\) Thomas Dinapoli; ‘Red Flags for Frauds”; http://www.osc.state.ny.us/localgov/pubs/red_flags_fraud.pdf; (2012).

material misstatement caused by error or fraud. The cited situations are Red Flags or Risk Factors and the investigator or auditor should analyse the significance of these.

Dalal (2012) has indicated that there are “early warning signs” that can be perceived to analyse whether an enterprise is prone to fraudulent transaction. He has termed these as Red and Green Flags or warnings of wrong doing and irregularities. Red Flags are indicators of potentially harmful pecuniary actions.

2.12.3) Indicators of Potential Fraud

The American Institute of Certified Public Accountants (2002) (AICPA) has considered a few indicators of potential fraud in evaluating audit evidence:

- Responses to enquiries about analytical relationships are vague, implausible, or in conflict with other evidence procured. (Instances are no specific answer to a queries relating to an unusual changes in monthly sales, profits or losses when compared to competitors).

- Journal entries having the following characteristics -
  - Entries are made to rarely used, unrelated or unusual heads of accounts.
  - Entries are created by individuals who normally do not make journal entries;

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59 Chetan Dalal; Novel and Conventional Methods of Audit, Investigation and Fraud Detection; Gurgaon; CCH India; (2011); Pages 72.
- Entries are not passed by the competent authority.
- Entries are recorded with incomplete supporting documents especially at the end of an accounting period.
- Entries contain regular round numbers or journal entries recorded during the preparation of financial statements.

- Accounting records contain discrepancies that include
  - Transactions are not in its entirety.
  - Transactions that are not passed in time or are improperly recorded.
  - Balances that are not supported with appropriate evidences

- Conflicting or missing evidential matter including
  - Missing documents;
  - Altered documents;
  - Non-availability of original documents.
  - Reconciliations with high value unexplained entries having a material impact.
  - Significant shortages or excesses of inventory or other physical assets.
  - No evidence of key systems development activities, program changes, testing and implementation activities.
  - High variations between recorded transactions and evidence to the contrary obtained.
- Problematic or unusual relationships between the auditor and management including
  - Denial of access to audit evidence in the nature of records, facilities, employees, vendors, customers, and others who can give corroborative evidence.
  - Undue constraints imposed by management to resolve complex or issues that are materially significant.
  - Intimidation of auditors in relation to his professional assessments.
  - Unusual delay in furnishing information
  - Reluctance to make disclosures transparent on policies and assumptions.

AICPA has indicated in Table 2.4 examples of Red Flags that are intended to act as guidance indicators.

<table>
<thead>
<tr>
<th>Serial</th>
<th>Likely Red Flag</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Business arrangements that are highly complex and appearing to serve little practical purpose.</td>
</tr>
<tr>
<td>2</td>
<td>Large last-minute transactions that result in significant revenues in quarterly or annual reports.</td>
</tr>
<tr>
<td>3</td>
<td>Widely dispersed business locations with decentralized management and a poor internal reporting system.</td>
</tr>
<tr>
<td>4</td>
<td>A consistently close or exact match between reported results and planned results. Examples are, results that are always on budget, or</td>
</tr>
<tr>
<td>Serial</td>
<td>Likely Red Flag</td>
</tr>
<tr>
<td>--------</td>
<td>----------------</td>
</tr>
<tr>
<td>5</td>
<td>Hesitancy, evasiveness, and/or lack of specifies from management or auditors regarding questions about the financial statements</td>
</tr>
<tr>
<td>6</td>
<td>A pattern of recording most of the sales for the period sales during the last few weeks or days of the accounting period.</td>
</tr>
<tr>
<td>7</td>
<td>Unusual balance sheet changes, or changes in trends or important financial statement relationship. If the percentage of receivables grow faster than revenues, or accounts payables are consistently delayed, these are signs of likely irregularity.</td>
</tr>
<tr>
<td>8</td>
<td>Unusual accounting policies, particularly for revenue recognition and cost deferrals. Recognizing revenues before products have been despatched or deferring items that normally are expensed as incurred are signs of inconsistencies.</td>
</tr>
<tr>
<td>9</td>
<td>Accounting principles/practices at variance with industry norms.</td>
</tr>
<tr>
<td>10</td>
<td>Use of reserves to smooth out earnings. Large additions to reserves that get subsequently reversed can be viewed suspiciously.</td>
</tr>
<tr>
<td>11</td>
<td>Frequent and significant changes in estimates for no apparent reasons or increasing or decreasing reported earnings.</td>
</tr>
<tr>
<td>12</td>
<td>Reluctance to make changes in systems and procedures recommended by the internal and/or external auditors.</td>
</tr>
<tr>
<td>13</td>
<td>A significant portion of management’s compensation represented by bonuses, stock options, or other incentives, the value of which is contingent upon the entity achieving unduly aggressive targets for operating results or financial position.</td>
</tr>
<tr>
<td>Serial</td>
<td>Likely Red Flag</td>
</tr>
<tr>
<td>--------</td>
<td>----------------</td>
</tr>
<tr>
<td>14</td>
<td>An excessive interest and maintaining or increasing the entity’s stock price or earnings trend through the use of unusually aggressive accounting practices.</td>
</tr>
<tr>
<td>15</td>
<td>A practice by management of committing to analysts, creditors, and other third parties to achieve what appear to be unduly aggressive or unrealistic forecasts</td>
</tr>
<tr>
<td>16</td>
<td>High turnover of senior management or board members.</td>
</tr>
<tr>
<td>17</td>
<td>New accounting, statutory, or regulatory requirements that could impair the financial stability or profitability of the entity.</td>
</tr>
<tr>
<td>18</td>
<td>High degree of competition or market saturation, accompanied by declining margins.</td>
</tr>
<tr>
<td>19</td>
<td>Declining industry with increasing business failures.</td>
</tr>
<tr>
<td>20</td>
<td>An accumulation of cash that indicates slowing of business</td>
</tr>
<tr>
<td>21</td>
<td>Declining value of depreciation charged</td>
</tr>
<tr>
<td>22</td>
<td>High unsecured debt not commensurate with the company’s business.</td>
</tr>
<tr>
<td>23</td>
<td>Unusually high current liabilities in the form of trade creditors and advances received from customers or clients especially when the company is not a market leader in the industry.</td>
</tr>
<tr>
<td>24</td>
<td>Unexplained variation in Gross Profits Margins.</td>
</tr>
<tr>
<td>25</td>
<td>An unusually high ratio of administrative and general expenses to net profit.</td>
</tr>
<tr>
<td>26</td>
<td>Receivables growing faster than Sales.</td>
</tr>
</tbody>
</table>

Table 2.4 – Likely Indicators of Red Flags at a Macro or High Level in Organizations
The introduction of Standards of Auditing 240 (Revised)\(^{61}\) and Companies (Auditor’s Report) Order 2015 [CARO]\(^{62}\) has placed the onus on the auditor to use modified or extended processes to conduct a due diligence. Audit to this extend has now become one that predominately assesses exposures, risks and controls. Red Flags are major warning signs of the state of risk exposures. Dalal has categorized these into two levels –

- Flags at High or Macro Level
- Flags at Operational or Micro Level.

### 2.12.4) Flags at the Macro or High View Level

Flags at macro level reveal irregularities that may not always indicate a fraud but point to the likelihood of the existence of circumstances that could lead to fraud. Violation of environmental norms, undesirable management practices and policies, non-adherence to industry standards, and guidelines issued by chambers of commerce and other bodies are macro level indications that there situations conducive for fraud.

Some of the other Macro level “Red Flags” cited by Dalal (2012)\(^{63}\) are as indicated below.

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\(^{63}\) Dalal; Novel and Conventional Methods of Audit, Investigation and Fraud Detection; Page 75-84
2.12.4.1) State of Disorderliness

Instances of this kind would include filing indiscipline, arrears in passing accounting entries, and missing records.

Unusual delays in passing accounting entries could be actually a consequence of a fraudulent activity rather than stressed work-loads. An accountant who took three weeks to record his computerized entries was found to have used the cash received for daily lending in the retail market at high rates of interest. He would subsequently reimburse the principal and pass entries with retrospective effect but keep the interest.

Missing or displaced documents can be very frustrating. The auditor can prima facie hold the person responsible for custody liable for cross examination. In situations where more than one person has custody of the documents, it is likely that one of the individuals is actually the fraudster. At times the perpetrator may know where the documents are but he/she deliberately claims it missing or misplaced.

2.12.4.2) Situations of Disaster

Situations of disaster are an instance where the fraudster can take advantage of the chaotic situation. For example when a fire has occurred, it is very easy for the unscrupulous to add high value fictitious items to the insurance claim. Often they would claim that the manual/automated records and supporting details were lost in the fire. The auditor will have to resort to ingenious measures to conduct due diligence. An insurance company engaged an auditor to assess a
fire claim. On inspecting the finished goods warehouse, the auditor found that the claim for goods destroyed exceeded the warehouse capacity when filled with the manufactured item.

2.12.4.3) Lack of Supervision

Regardless of the robustness, design and strengths of the Internal Controls, these will fail if adequate supervision is not in existence. A company had a well-documented process of cash count at the beginning and end of each working day. The Office Manager was responsible for the physical cash verification. Over a period of time, he “trusted” the cashier and merely initialled the cash tally ledger. It was subsequently found that the cashier had misappropriated the cash due to non-enforcement of the system.

2.12.4.4) Sudden Profits or Losses without Reason

Unexplained instant profits or losses are an indication of potential misdeeds. In a leading corporate case, a newly appointed manager in a hotel was credited with turning the unit around almost immediately. The profits were in cash and were properly accounted for. A detailed investigation revealed that the manager was actually selling the assets of the unit, depicting this as revenue receipts and in the process retaining a sizable amount.

Situations like this would also indicate a possibility of irregularities. A reverse analogy would be sudden losses in an otherwise profit making institution without apparent reason. In another instance a sudden low manufacturing output
could be traced to the fact that the production manager had clandestinely replaced good lathes with inferior ones resulting in a large number of rejections.

### 2.12.4.5) Missing Records or Seizure by Government Authorities

When a large number of relevant records and documents are missing, this is sufficient cause for alarm. A common reason cited in small and medium-sized organizations is that the records including the computers and servers have been seized by statutory authorities like the Income Tax, Excise Duty or Sales Tax authorities without adequate confirmations. Often this is done with the sanction of the superior officers and managers to cover up a possible irregularity or fraud.

### 2.12.4.6) Unauthorized Correction in Master Data

In a computerized environment, static data like the name, contact details and credit limit of a vendor or client rarely change. Changes if any are normally made with authorization and adequate trails are electronically maintained. A scrutiny of these trails can reveal interesting information. In a manufacturing company, the audit trail indicated that the addresses of leading suppliers had been changed twice within a fortnight. An investigation revealed that there was a nexus between the manager and other suppliers who wanted the contract to be executed by parties they were interested in. The mailing addresses of the leading suppliers were changed so that they would not receive the invitation for bids and consequently did not participate.
2.12.4.7) Other Indications of Irregularities

The Institute of Chartered Accountants of India (ICAI) (2011)\textsuperscript{64} has indicated other types of “Red Flag” situations. These are depicted in Table 2.5.

<table>
<thead>
<tr>
<th>Serial</th>
<th>Indicator of A Likely Irregularity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Crossing ethical barriers in setting performance targets.</td>
</tr>
<tr>
<td>2</td>
<td>Business Strategies overriding control environment and effective governance.</td>
</tr>
<tr>
<td>3</td>
<td>A “liking” for breaking defined rules with employees displaying resentment to directions from superiors.</td>
</tr>
<tr>
<td>4</td>
<td>Operating and Financial decisions are controlled by one or a few individuals</td>
</tr>
<tr>
<td>5</td>
<td>Undue empowerment of authorities at decentralized locations</td>
</tr>
<tr>
<td>6</td>
<td>Excessive cash transactions without adequate controls.</td>
</tr>
<tr>
<td>7</td>
<td>Significant and consistent inventory surplus or shortage.</td>
</tr>
<tr>
<td>8</td>
<td>Rising trend of operating expenses</td>
</tr>
<tr>
<td>9</td>
<td>Unexplained rise in the cost of goods sold</td>
</tr>
<tr>
<td>10</td>
<td>Surge in orders at the time of a key employee’s resignation.</td>
</tr>
<tr>
<td>11</td>
<td>High Level approval of trivial transactions.</td>
</tr>
</tbody>
</table>

Table 2.5– Indicators of Red Flags

\textsuperscript{64} ICAI; Study on Investigative Audits; New Delhi: ICAI; (2011)
2.12.5) **Flags at the Micro or at Operating Level**

These are indications at the business or operating level about trends in daily activities. The auditor should examine these and judge whether these are within acceptable parametric levels. Dalal\(^{65}\) has indicated flags at micro levels to include the following items.

**2.12.5.1) Employee seems to have unnecessary Excess Knowledge**

Evidence of knowing in depth more than what an individual ought to know is a likely evidence of guilt or a pointer in a direction of guilt. For example if a clerical grade employee who is concerned only with vouching arithmetical accuracy of entries points out evidence of materials supplied of sub-standard quality, this could be pointer into a deeper issue as he is not technically qualified for inspection and approval.

**2.12.5.2) Absence of Rotation of Duties**

An organization where there is no rotation of duties or suppliers and vendors is likely to have a high probability of collusion with third parties. Rotation of employee duties should be preferably with new employees. There must also be rotation of vendors or a competitive bid within selected vendors unless the supplied product is a near monopoly.

**2.12.5.3) Evidence of Conflict of Interest**

In large organizations vendors often tempt officials with free holidays and high value gifts and favours. Often these are not directly given but extended to the

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\(^{65}\) Chetan Dalal; Novel and Conventional Methods of Audit, Investigation and Fraud Detection; Page 79.
family of the employee. Evidence of this nature can alert a red flag about the likelihood of irregularities. Such evidence can normally be obtained orally from the employees and this method is often used by the Governmental Agencies for investigating corruption against officials.

2.12.5.4) Insignificant Weaknesses Collectively Compounding to Into Major Weaknesses.

Dalal (2012)\textsuperscript{66} refers to such small weaknesses in controls cumulating to a major fraud or explosion as the “Gunpowder Effect”. Gunpowder consists of potassium nitrate, charcoal and sulphur. These three are benign by themselves but when combined can cause an explosion.

For example an organization observing the practice of obtained signed blank cheques and not reversing issued stale cheques seems a trivial oversight. However, when found that the accountant used the blank cheques to his personal advantage and purported that this was in lieu of stale cheques, the “gunpowder effect” can be felt.

2.12.5.5) Orphan Funds

Orphan Funds are very common in charitable and religious institutions where donations are collected in hard cash and held in a fiduciary capacity. In cash rich religious units, a full- fledged Board of Trustees to administer the institution. However, when the cash collection box is operated routinely only by the same clerical assistant twice a day, a Red Flag is raised whether the clerk

\textsuperscript{66} Dalal; Novel and Conventional Methods of Audit, Investigation and Fraud Detection; Page 82.
is honest as the collections can in no way be corroborated with the devotees. The investigator in such instances must insist that the collections are opened by at least a minimum number of employees and a supervisor and cash counted in front of a designated trustee. The task of opening and counting should also be rotated frequently such that no person handles the function more than once in a specified period. In large organized places of worship or pilgrimage, a comparison can be made of the patterns of collections with the attendance and the collection. It is expected that on certain days of the week or on important festivals the collections will be large. The trend can be analysed and Red Flags if any can be noticed.

2.12.5.6) Irrational Behaviour

An employee’s behaviour that is not in accordance with his designation and experience is often an indication of an irregularity or wrong-doing. It was observed that in a large retail company that had high cash transactions, the accountant with ten years of experience took an unusual three hours to tally or reconcile the daily cash balance. It was subsequently found that he used to lend the company’s money on a daily settlement basis for interest. The delay in tallying the cash was because the irregular daily cash settlement inflow had to be accounted and tallied.

Such unethical practice is prevalent in the unorganized financial sector in India where loans repayable at the end of the day are given to small shop owners or vendors at exorbitant rates of interest. The interest is normally deducted in
advance. For example a small trader is given a loan of ₹ 1,000/- at a daily interest rate of 3.00% payable in advance. Under this system, the vendor gets only ₹ 970/- at the beginning of the day but has to return ₹ 1,000/- by the end of the day.

2.12.5.7) Alteration of Documents

Frauds by alteration of documents are common. In this electronic age, photocopies are changed, legal papers are forged and male fide intentions are exhibited in every walk of life. The auditor needs to judge the evidence available, call for originals and follow processes to ensure that fraud is minimized. When a large company produces a bank certificate confirming the account balances, the auditor may accept the certificate as an indicator of confirmation of closing balances. However, the auditor has no way of knowing if the certificate is genuine. He needs to get a direct independent confirmation from the bank for the closing balances.

2.12.5.8) Fraud by Illusion

Often the physical evidence is not what it appears to be. For example, in the process of inventory verification, the warehouse was stacked with packaged finished goods ready for despatch. However, many of the packed cases were empty and the product was deliberately not placed in the carton. Verification and reconciliation of production details will reveal the validity of the company’s claim in such instances which will then have to be corroborated with physical inspection.
2.12.5.9) Red Flags Specified By the Reserve Bank of India

The Reserve Bank of India (RBI) in its official circular\(^6\) has detailed forty five symptoms indicative of Red Flags. The RBI has termed transactions of this nature appearing in bank accounts as “Red Flagged Accounts” (RFA) or Early Warning Signals (EWS). Some of the key Red Flags described are

- Default in payment to banks, debtors and statutory authorities or bouncing of cheques.
- Frequent changes in the scope of the financed project by the borrower.
- Invoices not containing Tax Deduction and Collection Account Numbers.
- Funds sourced from other sources including banks to liquidate loans.
- Bills including foreign bills remaining outstanding for a long time.
- Frequent requests to defer inventory inspections for no valid reason.
- Financing a business unit in an area that is far away from the branch.
- Frequent invocations of Bank Guarantees and Letters of Credit.
- Interest payments being funded by additional loans.
- Identical collateral security offered to different lenders.
- Forming companies with bank money borrowed.
- Reducing promotor stake in the company.
- Consistently increasing unbilled revenues.

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\(^6\) Reserve Bank Of India; “Framework for dealing with loan frauds”;
 Movements in inventory inconsistent with sales growth.
- Disproportionate increase in working capital requirements when compared with sales.
- Significant increase in Fixed Assets after implementation of the project without increase in sales turnover.
- Unreported liabilities in any report from the Registrar of Companies.
- Significant discrepancies in the annual report.
- Qualifications in the annual report by auditors.
- Unexplained changes in accounting policies or accounting period.
- Unreasonably high volume of cash sales.
- Issue of Letters of Credit for related party transactions
- Unusual high Real Time Gross Settlement (RGTS) to unrelated parties.

2.12.6) The “Green Flag” Syndrome

Green Flags are similar to Red Flags but with the exception that while red flags sounds alarm bells, green flags are intended to bring a false sense of comfort. Green Flags are indications of circumstances that are trivial, and apparently harmless but on lifting the mask often expose irregularities. These are also termed as circumstances that are “Too Good to Be True” (TGTBT). Dalal\textsuperscript{68} has indicated a few examples are

\textsuperscript{68} Chetan Dalal; Novel and Conventional Methods of Audit, Investigation and Fraud Detection; Page 72.
• Inventory or Cash always depict accuracy or excesses but never any shortage. These could be indications of a parallel business run clandestinely.

• Shortages if any are invariably reimbursed by the employee.

• An apparently lazy employee suddenly turns responsible and recovers a long overdue receivable.

• Employees consistently do not take advances on official travel.

• Extreme behaviour of either very friendly or extremely hostile could be a ruse for a clandestine activity.

• Heavy unusual rejection of materials could be a ruse to smuggle out good inventory.

2.12.7) Commentary on Warning Signs of Fraud

Frauds are rarely committed spontaneously. Symptoms of internal control weakness are apparent before the fraud actually takes place. By analysing the weaknesses and trends the auditor can prevent frauds before they happen. The objective of business controls is to minimize internal losses. Constant evaluation of control systems will identify weaknesses. The benefit of a good internal control devoid of weakness accrues to the organization and its stakeholder.
2.13) Frauds in Selected Industries

This chapter examines common frauds that are unique in four business domains. The domains selected are

- Life Insurance
- Banking
- Housing Finance
- Educational Institutions

2.13.1) Frauds in the Life Insurance Domain

The insurance companies considered for analysis are in the domain areas of life and annuity insurance.

Life Insurance is payable in the event of the death of an individual legal person after a minimum elapsed period but before a specified date in the future. In the event of the death of the insured before the specified date, the nominees will receive the insured value. In the event of the individual surviving the period, the amount payable will normally be the value of premiums paid plus bonus normally computed through actuarial valuation.

There is a great deal of trust in the case of life insurance policies and unlike property and casualty insurance where the assured is only reimbursed for property loss, human life has unlimited value. An individual can consequently insure his life for a high value and take as many policies as he deems fit subject to his financial competence to pay the premiums.
Beattie\textsuperscript{69} (2012) mentions that in the past, life insurance companies have experienced major frauds in the areas of

- Deliberate and false declarations at the time of accepting the life insurance policy.
- Frauds by Life Insurance agents
- Wrong claim by the nominees

\textbf{2.13.1.1) Deliberate and False Declarations in a Life Insurance Policy}

Life Insurance companies require the insured to fully disclose all material details about certain details before the policy is accepted. Such material disclosures are required for the following items

- Current state and history of health e.g. The current state of health may be normal but there might be a history of past heart ailments.
- Age of the insured.
- Ethnicity as certain ethnic populations are prone to ethnic oriented diseases like diabetes.
- Occupation of the insured as a radiologist in a hospital is more prone to x-ray radiation and would be at a higher risk than a general practitioner.
- Habits, e.g. A middle age man who does not exercise or who smokes is more prone to disease.

\textsuperscript{69} Andrew Beattie; “What You Need To Know About Insurance Fraud; Invetopedia; http://www.investopedia.com/articles/insurance/11/life-insurance-fraud.asp; (2012)
Some or many of material disclosures can be supressed or misstated. The misleading statements may not always amount to a fraud and the insurance company cannot void the agreement in its entirety. Dalal\textsuperscript{70} has termed such acts as “Trojan Horse Frauds” as once accepted by the insurance company, they are difficult to discard.

Some of the misleading statements include

- Deliberate suppression of age details.
- Supressing details of hereditary illnesses like schizophrenia, haemophilia etc.
- Supressing material facts about lifestyle and habits.

In developing countries, rampant corruption and collusion with statutory authorities result in generation of false certificates that are accepted by insurance companies in good faith.

Wherever a medical check-up is needed, the insured supresses’ abnormal symptoms like blood pressure or high sugar by ingesting medicines to counter the effects immediately before the medical check-up.

\textbf{2.13.1.2) Frauds by Life Insurance Agents}

Life Insurance agents are often unscrupulous in their dealings as the commissions for new policies is high. Often they collude with the insured in providing misleading information about material details like age, health, habits etc. In the past, the insurance agents have agreements with medical doctors for

\textsuperscript{70} Chetan Dalal; Novel and Conventional Methods of Audit, Investigation and Fraud Detection; Page 137
recommending prospective individuals who would not otherwise qualify for life insurance.

In the United States, some agents are actively involved in fraudulent Viatical Life Insurance or Stranger Owned Life Insurance (STOLI) transactions. The Illinois Department of Insurance (2010) defines a viatical settlement as a legally binding contract where the owner of a life insurance policy voluntarily surrenders his interest and rights for cash consideration. Such consideration is normally lower than the death benefit. Viatical Life Insurance in most of the states in the USA is an optional clause and can be exercised only if the policy holder has been medically diagnosed to live for less than twenty five months. This is the similar (but not identical) to the “Surrender Value” of a life insurance policy in India with the difference that the life insurance policy is not surrendered to the insurance company but assigned to another for consideration. The person who represents the viator is the viatical settlement broker who analyses competitive bids for the policy.

Viatical Fraud happens when agents file applications on behalf of applicants who would not otherwise qualify for insurance claims because they are terminally unwell. The insured will then turn over the policy to a seller for consideration after expiry of the statutory period. On the death of the insured

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the named beneficiary collects the death benefit. The agent collects a commission on the transaction.

There have been criminal instances in the USA where the viator is eliminated using hired assassins if he lives longer than expected.\(^{72}\)

### 2.13.1.3) Wrong Claim By Nominees

Historically, wrong claims without the death of the insured has been the most common type of claim. This is often intentional and deliberate with intention to defraud the insurance company. The insurance company in the past would accept the official death certificate as proof. Often the death certificate is forged. There have been instances when the death is “by proxy” where another terminally ill person who dies is passed off as the insured and subsequent death benefits claimed.

With globalization and international travel, false life insurance claims in the developed world have increased for apparent deaths of the insured in developing countries where it is relatively easy to falsify records and collude with persons in authority.

Typically, the insured residing in a developed country takes a high value policy after passing the mandatory tests. The beneficiaries or nominees for the policy are normally close relatives in the developed or developing country.

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After the statutory “no claim” period that may be from six months to one year, the insured visits a developing country and seem to pass away. The medical certificate is prepared at the place of death and signed by the government or authorized medical officer. The body is then cremated or buried with all documentation in apparent order. The nominees or beneficiaries then proceed to collect the death claim in the normal process.

The hidden fact is that the insured after taking the policy in the developed country and paying the initial premiums arranges for an economically poor terminally ill person in a developing world to impersonate him. This is done after suitably rewarding the relatives of the terminally ill person. On the death of the unfortunate person, the identity is switched with that of the unscrupulous insured. The death certificate along with the supporting documents like passport details is authenticated by the official authorities and the body is disposed. For official purposes it is the insured who has deceased. In reality, there has been a fraud perpetrated on the life insurance company often with the connivance of the insured and the government officials of the developing country who in turn are suitably rewarded.

Often the insured and the nominee are one and the same person with different names. For example a Knight Smith in the United Kingdom might nominate “Shyam Sunder” in India as his nominee. However, Both Mr. Smith and Mr. Sunder are the same person and the death benefits would accrue to Mr. Sunder
in India. Beneficiaries in such cases rarely return to the country where the insurance was originally taken.

If the beneficiary is in the developed country, it is normally a close relative who would after a period of time siphon off funds to the apparently dead insured.

It has been found that this kind of fraud has been perpetrated by ordinary individuals who seize an opportunity to make huge profits from an apparently wealthy and faceless corporation.

**2.13.1.4) Life Annuity Frauds Against Senior Citizens**

In Life Insurance when the insured reaches an advanced age and becomes mentally unstable, unscrupulous individuals change the name of the annuitant or beneficiary taking advantage of the disability of the insured. This is done without resort to any forgery or signature manipulation.

In the USA solvency of the insurance company itself is a risk for senior citizens. Unlike Europe and to a large extent in India, in the USA, the Federal nature of the economy has created a situation where there are no stringent standards set for the minimum net worth of an insurance company. Defunct companies are a cause of financial detriment to senior citizens.

Often insurance takes the form of annuity payments. The most common occurrence of fraud is in single annuity payment where the insured or the annuity owner pays a lump sum and after a fixed period gets a periodic or commuted return. The insurance company files for bankruptcy protection before the annuity payments are effected. The National Association of Insurance
Commissioners (NAIC)\textsuperscript{73} (2008) has cautioned potential customers against the following types of frauds

- High Pressure Sales Pitch by Salespersons who pressurize customers with the false notion that the time for acceptance is limited.
- Pressure by agents to change the coverage with the intention of earning a higher commission
- Failure to prove agent credibility by not being a registered agent or providing bogus certificates to prove credibility.

In India, annuity schemes are not very popular. However, the nature of the Indian investment market makes the schemes risk prone especially for senior citizens. For example a leading life insurance company in India has explicitly stated that their investment of annuity receipts will be as in Table 2.6\textsuperscript{74}.

<table>
<thead>
<tr>
<th>Security Purported to be Invested In</th>
<th>Range of Investment (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash, Money Market, Mutual Funds</td>
<td>0 to 40%</td>
</tr>
<tr>
<td>Government Securities and Fixed Income Securities</td>
<td>40 to 100%</td>
</tr>
<tr>
<td>Equity</td>
<td>0 to 60%</td>
</tr>
</tbody>
</table>

\textit{Table 2.6 – Proposed investment portfolio by a life insurance company}

\textsuperscript{73} NAIC; “Investment Fraud-What is it and How Do I Report it”; http://www.naic.org/documents/consumer_alert_beware_insurance_fraud.htm;(2008,Aug)

\textsuperscript{74} HDFC Classic Assure Plus; http://www.hdfcbank.com/nri_banking/investments/Insurance/life_classic_assure_plus.htm
The nominee in the event of death will receive the higher of the fund value or 105% of premiums paid.

The fund value consisting of mutual funds, government securities is subject to low returns after considering the possibility of a loss in the equity segment in a widely fluctuating market. Added to this the administrative charges levied by the company, makes the fund value unattractive. The pay-out of 105% of premiums paid less administrative charges does not even compensate for current consumer price inflation. This is an indirect fraud perpetrated on the consumer many of whom are senior citizens.
2.13.2) Frauds in the Commercial Banking Sector

Banks have been traditionally subjected to a variety of fraudulent transactions ranging from false declarations about financial status to large scale asset defalcation. In India the nationalized banks have faced this problem with disastrous effects on their stability and future functioning. The matter is further compounded as public sector banks in India are traditionally slow in the follow up and recovery process. In many cases to avoid long legal wrangles, banks agree for an out of court settlement for a grossly reduced claim that in many cases covers only the principal and not the cost of funds. The fraudster in such cases succeeds in obtaining an “interest free loan” from a commercial bank for profitable diversions.

DNA Analysis (2015)\(^7\) quotes Reserve Bank of India estimates of the non-performing assets (NPA) of nationalized banks that have appreciated from ₹9,190 crores in 2011-12 to ₹216,739 crore in 2013-14. The exponential increase in NPA by 2,258% in two years is not a healthy trend. While part of this was attributed to the Sarada Scam, the involvement of other corporates like the Kingfisher group cannot be ruled out.

The Southern Indian Regional Council of the Institute of Chartered Accountants of India (SIRCICAI) (2015)\(^8\) has stated that as on 31\(^{st}\) March 2015, the twenty six public sector banks including SBI and IDBI had ₹2.78 lakh crores of Gross

\(^7\) DNA Analysis; “Nationalised banks' non-performing assets shoot up to Rs. 2,16,739 crore”; http://dnaindia.com/mumbai/report-nationalised-banks-non-performing-assets-shoot-up-to-rs216739-crore-2057212; (2015, Feb, 01).

\(^8\) SIRC Newsletter; *NPA in Banks*; July 2015; Vol-4; Page 17.
Net Performing Assets (NPA). The NPA in the new private sector banks was ₹24,534 crores. The value of “Stressed Assets” that included NPA and rescheduled loans accounted for 13.20% of total advances. This indicates a high level of non-performance in the industry caused by faulty loan sanctioning processes.

Dalal\textsuperscript{77} has through investigation proven that in a typical loan proposal there are agents who are associates of bank officials. These agents are aware of not just bank procedures but also the weaknesses of sanctioning processes and personalities in the institution. For an agreed fee or a commission or a percentage of the money received, the agents get the loan sanctioned. The commission received is often shared with the bank officials. In addition to the commission, the agents also receive payments for

- Sanction letters
- Quick Disbursements
- Permission for temporary overdrafts
- Permission for withdrawal over the overdraft limit
- By-passing security loopholes
- Ensuring that defective loans are not depicted as Non-Performing Assets.

Kundu and Rao\textsuperscript{78} have attributed the causes of increase in irregularities and frauds in the banking industry to

\textsuperscript{77} Chetan Dalal; Novel and Conventional Methods of Audit, Investigation and Fraud Detection; Pages 232-238

\textsuperscript{78} Kundu & Rao; Reasons of Banking Fraud - A Case of Indian public Sector Banks; International Journal of Information Systems Management Research & Development; 2014 June; Pages 11-24.
• With increased education, more and more persons are becoming aware of the possibilities of gains through bank frauds.

• The banking business is becoming impersonal. Often the bankers do not know the customers well. The signature is often the only proof.

• There is a large increase in banking business in India. The number of nationalized bank branches increased from 8,200 in 1969 to more than 64,000 in 2009. The sudden expansive explosion has created a vacuum of properly trained and experienced persons. New recruits often do not have adequate training or experience before they are put in responsible positions, which they handle irresponsibly.

• The banker does not have enough time to scrutinize documents thoroughly.

• Bank fraud is often considered a “safe crime” not involving any violence. The threatening gunman has been replaced by the conman.

• Bank frauds are difficult to detect. It often takes years to detect a fraud and by the time the fraud is detected the culprit would be missing. The documents often become time-barred or become difficult to trace. Historically, the majority of the persons prosecuted are acquitted in trials.

• Public moral values are falling. Making a “Quick Buck” seems to be fashionable.

• Non-adherence to explicitly stated procedures is also a significant reason for bank frauds. Under the guise of providing quality customer
service to meet competition, tested systems and procedures have been diluted.

- Other factors include indifference and insufficient knowledge. Indifference develops a lack of team-spirit and leads to casual attitudes. There is no apparent interest in knowledge or upgradation of skills required. Instructions from Corporate Offices are ignored that ultimately leads to frauds.

The Federal Bureau of Investigation Portland Division (2015)\textsuperscript{79} investigated several crimes against bank officials and found that senior bank officials including the Chief Executive Officer had between 2009 and 2014 been guilty of conspiring to deceive the Bank’s Board of Directors, its shareholders, regulators and the public by falsely depicting an incorrect financial state of affairs. The conspirators achieved this by using Bank or third-party proceeds to pay delinquent loans of customers, mischaracterizing assets in reports to the Board of Directors of the Bank and the Federal Deposit Insurance Corporation (FDIC), and concealing information about loans to bank auditors. The officials made false entries in the Bank’s reports to the FDIC and to the Bank’s Board of Directors about the status of various loans and transactions.

Dalal (2012)\textsuperscript{80} states that in India investigations into irregularities are carried out by the officials who colluded with the activity. In the event of the discovery

\begin{footnotesize}

\textsuperscript{80} Chetan Dalal; Novel and Conventional Methods of Audit, Investigation and Fraud Detection; Page 246.
\end{footnotesize}
of a fraud perpetrated on banks, it should be intention to recover the money advanced along with the associated opportunity cost at the earliest and not merely to send the perpetrators to jail. To facilitate this process investigators and auditors should be aware of the methods deployed to defraud banks. The listed items are in common use but are not exhaustive of all the known methods.

2.13.2.1) Funds Diversion to Undisclosed Bank Accounts

Unscrupulous borrowers have undisclosed accounts in many other banks that have not been disclosed to the lending bank. Funds or cheques from customers are deposited into such accounts and not revealed to the banks although they may be properly accounted. The reason is that banks normally insist on exercising control by controlling all bank accounts. Creation of a separate bank account would give freedom to the company to perform its own dealings.

2.13.2.2) Creation of Secret Reserves

Secret Reserves are created through artificial payments. Typically, cheques or other negotiable instruments like bills payable are prepared and entered in the accounting records as payments. However, there is no transfer of the physical possession of the instrument. The bank funds are deliberately reduced without actual payment. The instruments appear as not cleared in the bank reconciliation statement and after three months of the date of the cheque they are considered “stale cheques”. Subsequently the funds are used for clandestine purposes. Secret Reserves are also created by apparent statutory payments like advance or withholding tax, employee benefit funds and donations collected on behalf of
others. Receipts if any for these take a long time in reaching the payer of the money. Secret funds are created in such cases where the bank balance is reduced in the accounting records but in reality excess funds actually exist.

The Hindu (2007)\textsuperscript{81} states that in a major public sector corporate, donations from employees for the Gujarat Earthquake to the Prime Ministers relief Fund were depicted as paid but in reality it was withheld for a long period.

2.13.2.3) Inflation of Expenses

Expenses are often inflated and diverted for clandestine purposes. Even though the payment is made by cheque, the nature of the expenditure does not warrant its sanction. Some of the methods deployed are

- Duplicated Bills
- Fictitious Bills
- Manipulations in Bills

Expense Inflation is the most common form of usurping funds.

2.13.2.4) Supressed Sales in Cash

Unaccounted transactions using physical cash are common in India. This has the effect of supressing sales and eventually creating a parallel economy that is detrimental for the society. Typically manipulators supress sales by accepting unaccounted cash from customers and third parties. While cash is the norm in agricultural operations, it also is in vogue in many business transactions in the

\textsuperscript{81} The Hindu; “No Irregularities in Coal India Funds Collected for Relief”; http://www.thehindu.com/todays-paper/tp-national/no-irregularities-in-coal-india-funds-collected-for-relief/article1935242.ece; (2207, Oct 24).
urban areas. Real estate is an area where unaccounted cash thrives with implicit covenants between the builder and the customer.

2.13.2.5) Diversion of Sales or Income to Associated Corporates

Diversions to associated companies take the form of using the resources of one entity for the benefit of another. Any loans or overdrafts taken would then be subjected to default under the guise of “not adequate business”. For example Company X obtains an order but bills the client in the name of his personal entity. This is a diversion of income for Company X and any bank overdrafts or loans will be affected by loss of sales. Another common method of diversion is to use the assets of one company for the benefit of another. For example the call centre employees in one organization can be used to work for another with the billing or invoicing on one but the expenditures being charged to the detriment of the other organization. Another common unethical practice is the charging of employee transport expenses for taxis or motor vehicles in the books of the entity that does not earn the income from the services of the employees.

2.13.2.6) Using convenient accidents and economic scenarios to an advantage

Often an apparent economic catastrophe like fire or earthquake is turned into an advantage by claiming far in excess of what has been lost. The genuine inventory might have been moved out before the fire and replaced by rejects or waste that are subsequently charred. In chemical industries, the destroyed residue is often not amenable for further chemical analysis.
The good or genuine inventory that had been moved out is then sold clandestinely for cash and the money diverted from the company.

2.13.2.7) Misuse of Cheques

Cheque frauds have been in existence prior to the computerized era. The traditional fraud is forging the signature of an authorized person and withdrawing or transferring funds. In addition the following types of frauds have been detected:

- Alterations in values through chemical changes.
- Alteration in account numbers.
- Teeming and Lading where the amount received or paid has been deliberately credited to the account of another for monetary advantage like obtaining a discount for prompt payment of dues.

2.13.2.8) Misuse of Stationery

Banks have been subjected to frauds by misusing official stationery. Some examples are

- Pilferage of Fixed Deposit Certificates that are subsequently given as security for a loan or advance.
- Pilferage of Non-Judiciary Stamp paper.
- Misuse of Letters of Credit

2.13.2.9) Counterfeiting Currency

Often currency notes are forged and transactions are made without knowledge of their invalidity. These include foreign currency notes, coins and travellers
cheques. Banks normally accept a large volume of cash including foreign currencies and acceptance of fake currency is an occupational hazard.

2.13.2.10) Physical Threats

Physical threats to bank staff are known to have occurred in states where law and order is a problem. Cash transactions in such places should be kept to a minimum.

2.13.2.11) Frauds Perpetrated By Banks Themselves

Banks too commit acts that are not in accordance with ethical standards. The Hindu (2013)\textsuperscript{82} reported a sting operation that exposed top executives in three private sector banks in India who had offered to launder illegal money. Ghosh (1991)\textsuperscript{83} attributes four major elements for frauds in India. These are

- Active involvement of the bank staff either independently or in connivance with others.
- Failure on the part of the bank staff to follow instructions and guidelines.
- External elements perpetrating fraud on banks through forgeries or manipulation of cheques, drafts and other instruments.


\textsuperscript{83} Saibal Ghosh; Indian Banks-Crime and Security; APH Publications; Calcutta (1991); Pages 44-47.
• Collusion between businessmen, top bank executives, civil servants and politicians in power to defraud the bank by bending rules, flouting regulations and banking norms.

Inamdar (2013)\textsuperscript{84} has stated that by September 2013, the estimated fraud in the banking sector was approximately ₹ 13,766 crores of which the share of the nationalized banks was ₹ 13,766 crores. Nearly 88% of the total bank fraud value was attributable to public sector banks. The following reasons were attributable to the huge losses

• It takes over 10 years for 45% of the cases and between 5 to 10 years for 67% of the cases to be categorized as a fraud under current processes.

• Public Sector officials or employees found guilty were often let off after minor warnings or transfers rather than dismissal from service. This sets a bad precedent.

• The immoral issue of bank officials and bureaucrats, regulators and supervisors taking appointments with organizations and entities they regulated or supervised. Typically, a senior bank employee who aided a private sector organization would on retirement or voluntary relinquishment of employment, be appointed as an employee in the same organization.

- Skewed nature of the vigilance process that tends to focus on low level functionaries even though the sanctioning authorities were senior bank authorities. Out of 719 officers found accountable in 230 large value fraud cases in 2013, the break-up of officials involved were as in Table 2.7.

<table>
<thead>
<tr>
<th>Designations of Officials Found Guilty of Fraud</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior Managers</td>
<td>426</td>
<td>59%</td>
</tr>
<tr>
<td>Chief Managers &amp; Assistant General Managers</td>
<td>196</td>
<td>27%</td>
</tr>
<tr>
<td>Deputy General Managers, General Managers and Chief General Managers</td>
<td>94</td>
<td>13%</td>
</tr>
<tr>
<td>Members of the Board of Directors</td>
<td>3</td>
<td>1%</td>
</tr>
</tbody>
</table>

Table 2.7 – Designations of Bank Officials involved in Fraud in 2013
Source: - Nikhil Inamdar (2013) – Fraud at Public Sector Banks

The data indicates that bank frauds are committed by senior officials rather than by those at lower levels.

Inamdar\textsuperscript{85} states that Public Sector bank frauds and Non-Performing Assets (NPA) are increasing. There is therefore a need to identify how many are a failure of the credit approval and disbursement process and how many are an

outcome of the lending culture that seems to have permeated the Indian public sector banking system.

Khanna and Arora (2009) investigated the reason for bank frauds in India and concluded that non-compliance with proven security controls was the prime reason why frauds were being perpetrated on the banking system. In particular they highlighted on the non-compliance with the procedures prescribed by the Reserve Bank of India on commercial banks.

In a survey on compliance involving six measures suggested by the Reserve Bank of India. Their findings on compliance are in Table 2.8

<table>
<thead>
<tr>
<th>Serial</th>
<th>Compliance Requirements Relating To</th>
<th>Compliance Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Internal Checks and Controls</td>
<td>93.00 %</td>
</tr>
<tr>
<td>2</td>
<td>Deposit Accounts (Fixed and Savings)</td>
<td>82.00 %</td>
</tr>
<tr>
<td>3</td>
<td>Administration of Cheques and Passbooks</td>
<td>72.00 %</td>
</tr>
<tr>
<td>4</td>
<td>Demand Drafts</td>
<td>84.00 %</td>
</tr>
<tr>
<td>5</td>
<td>Internal and Intra Branch Accounting</td>
<td>83.00 %</td>
</tr>
<tr>
<td>6</td>
<td>Loans and Advances</td>
<td>89.00 %</td>
</tr>
</tbody>
</table>

Table 2.8 – Compliance Percentages for measures suggested by the Reserve Bank of India

Source: Khanna & Arora A Study to Investigate the Reasons for Bank frauds and the Implementation of Preventive Security Controls in Indian banking industry

The study revealed that the highest degree of compliance was in the area of imposing internal checks and controls while the least compliant was in the area

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of administration of cheques and passbooks. What was significant was that no specifically instructed and mandated activity had complete compliance. There needs to be a study on how much the loss the non-compliance could have cost the Indian banking system.

The study also observed that there were differences in compliance levels within employees of various banks. They concluded that this non-compliance between levels of employees was caused by the following reasons -

- Differences in organizational culture
- Training Intensity
- Attitude to Reserve Bank procedures

Only a small percentage of those surveyed reacted favourably to the procedures imposed or suggested by the Reserve Bank of India.

2.13.2.11.1) Failure to implement Know Your Customer (KYC) norms

The intention of introducing the Know Your Customer (KYC) norms is to be aware of the character of the client and his transactions. Often this process is violated by banks leading to subsequent acts like money laundering.

2.13.2.11.2) Inadequate Staff Training

Staff training in banks are inadequate as the emphasis is on achieving results and goals. Staff attrition in banks has increased leading to good trained members leaving the organization to untrained inexperienced persons who are often “rookies” or persons new to the tasks.
2.13.2.11.3) **Frequent transfers**

Banks have the policy of transferring officers at least once in three years as part of their “job-rotation policy”. This has led to a situation where before the incumbent thoroughly learns the processes and nuances of the department, he is replaced by another novice. The chances of making genuine errors are enhanced often with disastrous consequences.
2.13.3) Frauds in the Housing Finance Domain

Housing Loans are long term lending by specialized institutions or by a separate division of commercial banks. The primary borrower is normally an individual. The growth of the housing loans segment in India has been spectacular. Martin (2014)\(^87\) estimates that in March 2000 the total housing loans advanced was 43,850 crores. By March 2013 this had increased to 747,911 crores or a substantial increase of about 1,606%.

The Credit Rating Agency ICRA Limited (2015)\(^88\) estimates that housing loans will increase by approximately 22% and needs external capital to the extent of ₹ 18,000 to 28,000 crores. Kumar\(^89\) has indicated that the majority of housing loan frauds are associated with mortgage frauds.

In a housing loan, the property in land or buildings is mortgaged with the lender. In India a registered mortgage attracts high stamp duty. Mortgage is therefore invariably an equitable mortgage by deposit of title deeds in trust. This in turn creates a plethora of problems for the lenders and borrowers. The National Housing Bank (2005)\(^90\) mentions some of the more prominent equitable mortgage property frauds have taken the following forms

- The documents conveying possession of the property are forgeries or are faked. In India sale of an already constructed housing unit needs the sale

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\(^90\) National Housing Bank; “Fraudulent Transactions in Housing Finance”; http://nhb.org.in/Archives/Fraud_Circular.php; (2005, Jun, 21).
deed and proof of recognition of the sale in the land revenue records. This document is also called the encumbrance certificate. In India this is known as “Patta” or “Kata”. Very often these documents are forged with the connivance of the land revenue officials. The encumbrance certificate is often issued in the local language, carries a limitation period and the issuing authority expressly states that they are not responsible for errors. The result is that purchaser is often cheated. Attempts at rectitude in a court is time consuming and often by the time the verdict is reached, the perpetrator would be untraceable.

- Inflation of Property prices at a value substantially higher than current market value through unscrupulous brokers.
- Unpaid property taxes or association fees that often runs to a substantial percentage of the cost of the property.
- Claims of having renovated the house property when in fact no such act would have taken place.
- Fake release document purported to be given by the original financing organization when in fact the property is still under an equitable mortgage.
- Misrepresentation on the mortgage application forms indicating false valuations and payments.
- Illusionary down payments having been made when inadequate or no payment would have taken place.
• Quick sale of an acquired property to an unsuspecting “straw man” using forged documents. The purchaser does not get legal possession of the property as there is an unknown prior mortgage and is forced to further pay for the foreclosed mortgage. The unscrupulous buyer defaults on the instalments and decamps with the sale proceeds.

• Submission of inaccurate documents depicting repayment capacity.

The National Housing Bank (2005)\textsuperscript{91} has based on historical evidence, indicated the frauds and irregularities depicted in Table 2.9.

<table>
<thead>
<tr>
<th>Serial</th>
<th>Type of Fraud or Irregularity</th>
<th>Severity Level Observed</th>
<th>Methodology observed for committing the fraud</th>
</tr>
</thead>
</table>
| 1      | Documents are forged         | High                    | • Fake or forged stamp or judicial and non-judicial stamps are used.  
|        |                              |                         | • Photocopies of property and encumbrance certificates are relied on in good faith. |
| 2      | Multiple Financing of same property to different persons on different agreements | High | • Using forged documents, multiple copies are generated for the same property. These are in turn used to obtain loans from various sources |

\textsuperscript{91} National Housing Bank; “Fraudulent Transactions in Housing Finance”; http://www.nhb.org.in/Archives/Fraud_Circular.php; (2005, Jun 21).
<table>
<thead>
<tr>
<th>Serial</th>
<th>Type of Fraud or Irregularity</th>
<th>Severity Level Observed</th>
<th>Methodology observed for committing the fraud</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Cancellation of property after booking and availing of loan in collusion with the builder</td>
<td>Medium</td>
<td>• The borrower obtains the loan amount in his name and subsequently cancels the bookings. He also obtains the margin money he has paid the builder.</td>
</tr>
<tr>
<td>4</td>
<td>Loan disbursements encashed by third parties</td>
<td>Medium</td>
<td>• Loans are collected by agents and deposited in fictitious accounts with the connivance of bank officials. These are subsequently withdrawn.</td>
</tr>
<tr>
<td>5</td>
<td>Overvaluation of Properties</td>
<td>Medium</td>
<td>• The property is overvalued to reduce margin money and obtain loan amounts in excess of eligible limits. Often the valuation includes electricity deposits, society advances, fixtures, and legal charges that are not eligible for inclusion in the eligible value. Often the seller of builder is involved in inflating the value.</td>
</tr>
<tr>
<td>Serial</td>
<td>Type of Fraud or Irregularity</td>
<td>Severity Level Observed</td>
<td>Methodology observed for committing the fraud</td>
</tr>
<tr>
<td>--------</td>
<td>-----------------------------</td>
<td>-------------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>6</td>
<td>Sale of mortgaged property by the debtor or the original person to whom the loan was granted without clearing the existing loan</td>
<td>Medium</td>
<td>• The borrower sells the property using forged documents without clearing the loan even though the legal title vests with the lender.</td>
</tr>
<tr>
<td>7</td>
<td>Sale of mortgaged property by the builder without clearing the existing loan</td>
<td>Medium</td>
<td>• Property developers mortgage the property with the lender for loans but proceed to sell the undivided share in the land to prospective investor before the loan is cleared without the knowledge of the lenders.</td>
</tr>
<tr>
<td>8</td>
<td>Misrepresentation and subsequent end-use or misuse of loan granted</td>
<td>Low</td>
<td>• The loan is used for purposes other than what it was intended for. Loans taken for residential properties are diverted to commercial properties or used for business purposes.</td>
</tr>
<tr>
<td>9</td>
<td>Fabrication of Income Tax Returns, Salary Slips etc in connivance with</td>
<td>Low</td>
<td>This is normally done with the assistance of agents or brokers who have a vested interest in obtaining the loan on behalf of the borrower.</td>
</tr>
<tr>
<td>Serial</td>
<td>Type of Fraud or Irregularity</td>
<td>Severity Level Observed</td>
<td>Methodology observed for committing the fraud</td>
</tr>
<tr>
<td>--------</td>
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</tr>
<tr>
<td></td>
<td>the sellers or their agents</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 2.9- Types of observed Frauds and Irregularities in Housing Loans**

Source: National Housing Bank; “Fraudulent Transactions in Housing Finance”

\(^2\) National Housing Bank; “Fraudulent Transactions in Housing Finance”; http://www.nhb.org.in/Archives/Fraud_Circular.php; (2005, Jun 21);
2.13.4) FRAUDS IN EDUCATIONAL INSTITUTIONS

Educational Institutions have in due course become commercial ventures that have a profit motive despite a declared status of a non-profit organization. Lawyers Club India (2011)\textsuperscript{93} states that in the United States, an estimated USD 160 million is stolen or embezzled from educational institutions in the country. Traditionally, accounting in such institutions is on a cash basis or accounted only when cash (including cheques, drafts and direct transfers) is received or expended. On the income side the cash inflows consist of donations, fees and grants while the cash outflows consist of salaries and establishment expenses. One feature about these institutions is the high incidence of physical cash transactions. This is a cause of concern and requires very tight internal control procedures to control cash transactions.

In India every day a large volume of cash in the form of currency is collected from students that are in the nature of fees, fines, fees for documentation etc. Individually, the amount of collection is not high but collectively the volume of cash will be very high. The cashier’s role is critical in such cases as he/she does not operate on a target based system.

Dalal\textsuperscript{94} has indicated the following typical frauds that have taken place in Indian Educational Institutions in the past.

2.13.4.1) **Unrecorded Collections in Cash**

The cashier collects the cash but does not account for it. He uses it for personal purposes. This methodology is used where the amount of collection is not fixed. For example fines imposed on students are not fixed and the cashier accepts the fines but does not issue a receipt or account for the money received.

2.13.4.2) **Charging Differential Rates**

The cashier charges an amount higher than the fixed rate and accounts for only the fixed rate. This normally happens in the case of fines or documentation or for services such as photocopying documents.

2.13.4.3) **Issue of Invalid Receipts**

The receipt given for cash collected is not an official one. The receipt may be the cashier’s own receipt and the proceeds are not accounted. There may be instances when more than one receipt is given. The sum of the receipts would however equal the actual cash paid. However, the official receipts would depict the actual valid collections while the other receipt(s) would originate from the cashier who would then misappropriate the proceeds.

\textsuperscript{94} Chetan Dalal; *Novel and Conventional Methods of Audit, Investigation and Fraud Detection*; Page 215-216.
2.13.4.4) **Unaccounted Sale of Scrap**

Educational Institutions often accumulate a large volume of answer papers, outdated text books, equipment, outdated electronic equipment, teaching aids and furniture. These redundant items occupy space and are often the source of unwanted rodents and pests. The disposable or scrap value of such items is very large and there are many scrap dealers involved who often pay in cash. The management also wants to dispose the items in cash to avoid multi-point Value Added Tax. To compound the problem, items classified as scrap are rarely inventoried and there is no control over these items. The disposal value of redundant scrapped items can be very high. For example old unused computers have gold connectors that can be recycled and sold in the market.

Cash collected for sale of scrap is often not accounted in full. Misappropriation is common in the absence of proper supervision and internal controls.

2.13.4.5) **Admission Frauds**

Understating Admission Fees by the management is a serious fraud that generates illegal money and encourages money laundering. This is done by the management themselves with full knowledge of the consequences.

Another type of Admission Fraud is perpetrated by the clerical staff who withhold the admission letter to students who have already been admitted. They offer their services for cash consideration. The unsuspecting students comply with the results. In extreme cases, the admission letters are not posted by the clerical staff in retaliation for non-receipt of cash benefits. The institution
considers the delay in joining as a deemed rejection of the offer. The next person on the waiting list is given the offer according to the process but the clerical staff continue to harass the new prospective student with their unethical practices.

2.13.4.6) Scholarship Frauds

Scholarship funds are granted by the government or philanthropic institutions. These are normally received by cheques or by electronic fund transfers. However, genuine scholarship holders are incorrectly informed that the funds have not reached the institution. This results in the students paying the fees themselves or in extreme cases dropping out of the institution. Subsequently, after a few years when the students do not claim the amount, the scholarship funds are depicted as paid in cash or by cheque. Acknowledgement receipts are forged to show proof of payment.

This kind of activity is rampant in most aided institutions. The collective monetary values involved are very high. Clerical staff are the normal perpetrators of such frauds but there have been instances of the management staff also being involved.

2.13.4.7) Unethical Sale of Question Papers and Answer Sheets

This method is often indulged in by faculty and support staff. Question papers that are given for photocopy are not kept confidential and an image copy is preserved. These are subsequently printed out and sold for profit.
Blank answer sheets are often sold to students. These are used to write answers and are inserted along with the actual answer sheets as additional answer sheets.

2.13.4.8) Usage of Facilities

Facilities like lecture halls, common rooms, laboratories, auditoriums, lecture halls are let out on hire without proper authorization especially on holidays to third parties. The amount received in cash is misappropriated.

2.13.4.9) Unauthorized Business in the Campus

Often the employees set up their own food counters, photocopy facilities and vending counters without authorization. This is rampant in large institutions that are geographically spread out as monitoring of such clandestine activities is difficult.

At times the unauthorized business takes place through the relatives and friends of the employees. Employees subsequently receive clandestine payments.

2.13.4.10) Decamping with Refundable Deposits

Most institutions collect refundable deposits like library deposits, caution deposits, hostel deposits as a safeguard against potential damages. No interest is paid for such collections.

Once the course is successfully completed, students forget or are rarely interested in collecting their deposits as individually the deposit is not significant. Over the years, such unclaimed deposits grow exponentially and the students often do not claim the deposit. The management also does not pay much attention on such deposits.
Unscrupulous staff cleverly siphon funds from these prior year deposits using forged documents and signatures.

2.13.4.11) Misuse of Donations

Educational Institutions often receive donations from alumni or philanthropic organizations. Money received by cheques or direct bank transfers are properly accounted. However, donations in cash are often misappropriated and no receipts or fake receipts are issued. Donations in kind are subjected to gross misappropriation as these are not paid for and consequently are not entered in the Asset Register.

2.13.4.12) Deliberate Wrong classification of Assets

Infrastructure development in the form of new additions and modifications to existing structures are common in educational institutions. However, unscrupulous employees use such expenditure to profit from acquiring assets for themselves by deliberately debiting the wrong head of account. For example an institution may have a budgetary sanction for a few lakhs for extension of a building. The norm for labour payments is cash on weekends. Assets in the form of laptops and printers will be acquired and paid for in cash instalments over a few weeks. The expenditure will be accounted for under the head of buildings where a few thousands does not make a material impact. Payments are depicted as casual labour payments.
2.14) Liability of Certifying Authorities in the Event of Fraud

This section examines the legal and ethical position of the certifier of financial data in the event of fraud in the certified statements. A discussion is also made on the standards to be observed for performing a “Due Diligence” analysis on the financial statements.

2.13.1) Audit Standard

An audit standard is adherence to the recognized principles of audit certification to ensure that the financial statements are true, fair and correct.

The American Institute of Certified Public Accountants (AICPA) (2001)\(^9\) has defined an audit standard as the general, field work, and reporting standards approved, amended and adopted by the Institute.

The Institute has mentioned three General Standards

- Adequate technical training and proficiency to perform the audit.
- Maintain independence in mental attitude in relation to any matter concerning the audit.
- Exercise appropriate professional care in the performance of the audit, preparation of the reports and comments on the report.

The Standards of Field Work as specified by the Institute are

- There must adequately planning and supervision of any assistants.

\(^9\) AICPA; “Generally Accepted Audit Standards”; http://www.aicpa.org/Research/Standards/AuditAttest/DownloadableDocuments/AU-00150.pdf; (2001)
There must be sufficient understanding of the organization, its environment and the prevailing internal control systems in order to assess the likely risk of misstatement either by genuine mistake or deliberate intention in the financial statements. To hedge the likelihood of such misstatements, adequate and appropriate steps should be considered to design the nature, timing, and extent of audit procedures.

To facilitate a fair opinion about the financial statements under review, there must be adequate evidence obtained by performing appropriate audit procedures.

The Standards of Reporting as specified by the Institute are

- There must be an express statement in the audit report on the preparation and presentation of in accordance with principles of accounting that are generally accepted.

- If accounting principles have not been followed consistently, the audit report must state the situations that caused the inconsistency with reference to the preceding periods.

- Any inadequate informative disclosures must be disclosed in the auditor's report.

- There must be an explicit opinion for the financial statement as a whole. If such an opinion cannot be expressed, the reasons for such inability to express an opinion must be stated.
• If the auditor’s name is mentioned in the financial statements as in the case of a joint audit or certification, there should be a clear indication of the scope of work undertaken and the extent of responsibility accepted in the report.

The Institute of Chartered Accountants of India (2010)\textsuperscript{96} (ICAI) in its document Standards of Auditing SA200 has set out the norms that the independent or statutory auditor must perform. It explains the nature and work design of an audit to enable the independent auditor to meet those objectives. SA 200 also defines the responsibilities of the independent auditor as applicable for all audits and the manner in which the Standards of Audit must be followed.

Accordingly, the purpose of an audit is to imbibe confidence in the intended users in the financial statements. The opinion by the independent auditor on whether the financial statements are prepared in accordance with an acceptable reporting framework and is correct in all material aspects is of paramount importance and is relied upon for significant decision making. Audits should be conducted in accordance with applicable Standards of Audit and should include all ethical requirements to enable the auditor to form an opinion.

The audited financial statements are prepared and presented by the management or those charged with governance. The Standards of Audit do not impose any

\textsuperscript{96} ICAI; “SA200-Overall Objectives of the Independent Auditor and the Conduct of an Audit in Accordance with Standards on Auditing”; http://icai.org/new_post.html?post_id=450&c_id=141; (2010)
responsibility on the management or those charged with governance nor absolve them of their legal responsibilities.

SA 200 requires the independent auditor to obtain a “reasonable assurance” that the financial statements are free from material misstatements due to fraud or even genuine errors. Such “reasonable assurance” is at a high level and is normally obtained when the auditor has adequate and appropriate evidence to eliminate or at least reduce audit risk. An Audit Risk in this context is the risk of expressing an incorrect audit opinion when the financial statements are factually materially misstated. Audit risk is a function of the risks of material misstatement and detection risk.

The Institute acknowledges that “reasonable assurance” is not absolute level of assurance as there are inherent limitations of audit that results in most of the audit evidence for the opinion expressed is persuasive rather than conclusive.

The concept of materiality should be applied in planning and executing the audit and evaluating the effect of omissions or identified misstatements or uncorrected misstatements in the financial statements. Material misstatements or omissions can occur individually or may be aggregated and can be expected to influence the economic decisions of those relying on the financial statements. The Institute states that the opinion of the auditor is for the statements as a whole and misstatements that are not material in the financial statements is not subject to any liability.
ICAI Standards of Audit (SA240)\(^97\) specifically deals with the responsibility of an auditor for frauds in the financial statements. In addition to SA240 mandates, ICAI requires observance of two other standards. These are

- SA315\(^98\) issued by the Institute of Chartered Accountants of India (2008) that details the duty of the auditor in identification, analysing and assessing the risk of a likely significant misstatement. This is to be performed by a thorough understanding the entity and the environment it operates under.

- SA 330\(^99\) issued by the Institute of Chartered Accountants of India (2008) that deals with how the identified audit risks should be responded to and mitigated or eliminated.

Certification of financial statements including the notes by auditors is tacit recognition that the statements can be used by stakeholders for making decisions. In recent years the volumes for audit has reached very high levels making it difficult for the auditor to certify with confidence that the financial statements are “true and correct”. Recent legal decisions have cast an onus on the auditor to ensure that the statements are free from misstatements, misrepresentations and fraud that could have been discovered by the process of due diligence.


The Satyam and Enron cases have proven that the traditional use of sampling audits and validation of internal controls may not always absolve the auditor from his responsibility and liability. The early twentieth century observation that an auditor is a watchdog and not a bloodhound is not bound to detect fraudulent transactions unless it is revealed in the course of audit is no longer valid. Legislation in India and in the USA coupled with legal precedents have made the use of forensic tests particularly useful for detecting irregularities or frauds.

2.13.2) The O’Malley Report and its Recommendations for Audit

The Public Oversight Board (2000)\textsuperscript{100} or the O’Malley Panel by the Public Oversight Board in the USA recommended sweeping changes in the role of auditors. The Panel participants included representative from the Securities and Exchange Commission (SEC), state boards of accountancy, national and international accounting bodies, accounting firms, the American Institute of CPAs, the corporate community, the International Federation of Accountants, and the Financial Executives Institute.

The recommendations of the Committee were

- Auditors must perform procedures for every audit that are in the nature of forensic test to enhance the prospects of detecting frauds in the financial statements that may be fraudulent to a material extent.

Examination of non-standard entries, analysis of ascertainment of balances, the manner of resolution of accounting estimates and judgements are recommended processes for audit.

- The Auditing Standards Board of Professional Bodies should make audit and quality control standards more specific and definitive to help auditors enhance their professional judgement.

- Audit firms should review and where appropriate enhance their audit methodologies, guidance and training materials.

- In the case of peer reviews of training material, the process should be closed by analysing their implementation in audits. Findings of such review process must be reported.

- Audit firms should encourage high quality audits. The management of audit companies must communicate the importance of quality audits in training, monetary compensations performance reviews and promotions of those directly involved in such audit.

- The Public Oversight Board (POB) should set standards for auditing, independence in assessment, quality control, reviews and enforcing discipline in audit professionals.

- The Professional Bodies should strengthen its disciplinary process requiring member firms to take action against their partners for audit failures.
There should be an international self-regulatory system for the international auditing profession.

2.13.3) The Auditor’s Legal Position in India

In India, the provisions of the Companies Act and pronouncements by the Professional Bodies make the auditor liable for frauds and misrepresentations that could have been discerned in the normal course of audit.

The Companies Auditors Report Order 2015 (CARO)101 has detailed very specific duties for auditors in discharge of their duties against fraud.

Clause 4(iv) of CARO requires an auditor to specifically comment about whether the company has an adequate system of internal control system appropriate to the size of the company and the nature of its business. Such a system of internal control in the Order is restricted only to systems and processes the purchase of inventory and fixed assets and for the sale of goods and services. The Order extends the scope of examination of internal controls by requiring the auditor to expressly state on the existence of a continuing failure to rectify identified major weaknesses in internal control system. In this case the auditor has to test the validity of the internal controls using Barium and Trojan tests and report on the outcome.

Clause 4(xiii) of CARO requires the auditor to specifically state whether any fraud has been perpetrated by or on the company during the year. If the response

is in the affirmative, the auditor is bound by statute to disclose the nature and the quantum.

CARO casts an onus on the auditors to state the amount involved in a fraud if any. Here the concept of materiality is not relevant and the auditor is bound to state the value of the fraud. The task of the auditor in the case of a suspicion of fraud changes to an investigation rather than an audit. As the nature of investigation is more detailed than an audit, the scope of work under consideration also changes. The CARO clauses places the auditor in a quandary. If he notices weaknesses in the Internal Controls but does not find a fraud, the discovery of a subsequent fraud will render him liable for breach of professional diligence by not carrying out procedures that should have detected the fraud.

Rebello (2008)\textsuperscript{102} states that in a legal decision in Sales Tax Practitioners Association of Maharashtra verses the State of Maharashtra, the Bombay High Court has taken the view that the auditors are expected to have skills that are a deterrent to tax evasion and fraud. The decision acknowledged that auditors have a “privileged status” and this exposes the profession to professional misconduct and disciplinary action and at times to criminal liability under the Indian Penal Code.

SA240 has specifically detailed the auditor’s duty vis-à-vis frauds, errors and misstatements in financial statements. The Institute has acknowledged that the primary responsibility for prevention of fraud lies with the individuals charged

\textsuperscript{102} Rebello; “Sales Practioners verses State of Maharashtra”; http://indiankanoon.org/doc/1417477/; (2008, Mar, 28)
with the governance and management of an entity. The auditor has a responsibility of a penetrative and deep reaching audit to ensure that he is confident in the opinions expressed. The Standards expressly state that the auditors will have to perform additional tasks of due diligence and with professional skepticism.

2.13.4) Professional Skepticism

The International Accounting and Auditing Standards Board (IAASB) (2015)\textsuperscript{103} defines Professional Skepticism as adoption of an attitude that questions circumstances events, critical evaluation of available evidences and a inculcating a sense of constant alertness to identify circumstances that could indicate a possibility that statements have been created either through honest error or likely fraud. This clearly implies that in defining the scope of the audit, the auditor should recognize that there may be circumstances that can cause the material or significant misstatement of financial statements. Examples where Professional Skepticism should be applied are

- Audit evidences that mutually contradict each other. For example there may be a substantial increase in fixed assets and purchase of raw materials inventory but not a commensurate increase in production. This could lead to the possibility of suppressed sales.

- Documentary evidence that seem to be not reliable after responses from the management. An example would be documentary bank receipts with alterations that do not corroborate with subsequent collections.

- Internal Controls or the absence of Internal controls that point to the likelihood of fraud or embezzlement. The cashier who is the person handling cash and preparing the cheques is also the sole individual in charge of bank reconciliation.

- Prevalent circumstances that indicate the need for additional audit procedures in addition to the requirements of professional bodies. Consistent surplus of inventory items may be indicative of substitution of similar items with differing quality. A detailed scrutiny may be required of the entire inventory rather than sample high value checks.

Professional scepticism has fundamental ethical considerations of auditor objectivity and independence. An audit conducted with professional scepticism will be a high quality audit. The intention of the Professional Skepticism approach is to ensure that the auditor when determining the audit response to identified risks for enhancing audit quality

- Does not overlook unusual circumstances,

- Oversimplify the results from audit procedures

- Adopt incorrect assumptions that subsequently turn out as false.
The IAASB\textsuperscript{104} has clarified how the auditor can apply professional skepticism at various stages of the audit.

- At the time of accepting the engagement the auditor should consider whether the individuals in charge of the management of the company act with integrity. He should also ascertain whether items or circumstances exist that might affect his ability to act with professional scepticism and objectivity.

- During the Risk Assessment planning stage auditor should be skeptical of processes that are prescribed and those that are actually being followed. For example if internal control procedures require daily physical count of cash and the management confirms that such a procedure is followed, the auditor should obtain documentary proof of such a process. Instances of such proof would be a record of cash deposited in the bank or proof of physical count or even a surprise physical inspection of cash.

- During the process of obtaining audit evidence, the auditor should insist that the management produce documentary proof for items that require estimates, assumptions or judgement, by the management. In such cases the adequacy and reliability of evidence should be considered keeping in mind the likelihood of fraud. The verification of high value accounts receivables is often corroborated with a written confirmatory acknowledgement from

\textsuperscript{104}IAASB; “Professional Skepticism In An Audit Of Financial Statements”; https://www.nba.nl/Documents/projecten/Plan_van_aanpak/IAASB_Professional_Skepticism_QandA.pdf; (2012, Feb).
the debtor on appropriate stationery mailed to the auditor’s official address. This process requires the prior approval of the management. If confirmation is not forthcoming from the debtor or if management cannot comply with the request, the auditor will have to consider how much trust can be placed on the estimate of receivable estimated by the management.

- During evaluating audit evidence, the auditor should be alert for contradictory evidence that may undermine the sufficiency and appropriateness of evidence obtained. A Certificate of Deposit produced as evidence for a large deposit with a bank should match the entries in the bank account and not normally be the sum of a series of deposits.

Professional scepticism should also be deployed when an audit opinion is expressed after considering the adequacy of evidence on whether the financial statements considered as in totality are a correct presentation of their underlying transactions.

The ultimate objective of applying professional skepticism is to reduce detection risk. The attitude enhances the effectiveness of audit procedures and minimizes the possibility that an inappropriate conclusion has been obtained in the course of audit.
2.13.5) Teamwork

Standards of Audit SA240\textsuperscript{105} emphasizes the importance of teamwork. The advantage of involving the audit team in the planning and executing the audit are

- The team members especially the more experienced members can express their views on the likely items in the statements that may be susceptible fraud and lead to a likely misstatement that can be significant or material.
- A response plan for such susceptibility can be created in advance.
- The composition of the engagement team to conduct prescribed audit processes and procedures can be identified.
- Determine how the results of the audit processes will be shared between the engagement team and how to deal with any possible allegations of fraud.

The Standard cites examples of such exchange of ideas and involvement of team members. Some instances are

- The likely manner by which the management could perpetrate a fraud and conceal the fact in financial reporting.
- The likely methodology of defalcation (hiding or misappropriation) of assets.

• The instances or circumstances that could indicate practices adopted by the management to manipulate of earnings that could lead to deliberate fraudulent financial reporting.

• The known external and internal influences that are likely to create an incentive or pressure for management or other officers to commit fraud or provide the opportunity for fraud to be perpetrated, including a culture or environment that enables management and other officers to justify or rationalize the potential fraud.

• An assessment of management’s involvement in supervising or controlling employees with access to cash or any other assets that are prone to misappropriation.

• Instances of changes in lifestyle or professional behaviour or lifestyle of the members of the management or of employees that seem unusual.

• A consideration of the likely circumstances that if encountered, might indicate the possibility of fraud.

• A consideration of how unpredictability will be hedged into the audit procedures.

• A consideration of the audit procedures adopted and the procedures that are more suited and effective than others.

• Instances of any allegations of fraud.

• An assessment of the risk of management overriding prescribed internal controls.
2.13.6) Enquiry with Management

SA240 emphasises that Management should accept responsibility for creating and implementing the Internal Controls for preparation of financial statements. The auditor should enquire about the opinion and evaluation of the management for the likelihood of fraud and the appropriate internal controls that have been installed to prevent and detect it. If a business entity has multiple locations of business, the processes should include the monitoring of such locations and segments with varying degrees of intensity as appropriate. It must be ascertained whether the Management has identified particular operating locations or business segments for which a risk of fraud may be more likely to exist.

If the Management has not made a risk assessment into the likelihood of the fraud, this could point to lax internal controls and an indifferent attitude to internal controls by the management. The likelihood of fraud in such cases is high.

While the emphasis of the Management is on preventing frauds by employees, there exists the risk that the management itself would be guilty of perpetrating a fraud leading to material or significant misstatement in the financial statements. It is imperative that the auditor should make enquiries with others in the organization to obtain information that may not otherwise be communicated. The Institute acknowledges that the Management is often in the most advantageous situation to commit or perpetrate fraud in most instances. In evaluating management’s responses the approach should be one of professional
skepticism and the auditor needs to corroborate the responses with information obtained from other sources like

- Operating personnel not directly connected with the financial reporting process.
- Employees with varying levels of authority.
- Employees who are involved in commencing, continuing or recording complicated entries or transactions that seem unusual for the entity.
- The supervisors of the employees whose tasks involve initiating, processing or recording complex or unusual transactions.
- The Legal Officers of the organizations.
- The Chief Ethics Officer or an employee who is in charge of business ethics.
- The Vigilance Officer or equivalent if any.

2.13.7) Fraud Risk Factors

A Fraud Risk Factor is the likelihood of not identification of a fraud when such an event has actually taken place.

The fact that fraud is often concealed makes it very difficult to detect. The auditor must identify events or conditions that point to a high probability of a fraud or a potential opportunity of fraud. Examples of such instances are

- Pressure to meet the expectations of third parties like improved profits or enhance equity finances.
• The prospect of high bonuses if unrealistic profit targets are met.
• An Internal Control environment that is not effectively monitored.

The auditor must use his professional judgement to determine whether fraud risk factors exist to materially misstate financial statements. There will normally be three conditions when fraud exists

• An incentive or pressure to perpetuate a fraud;
• An perceived opportunity to commit the fraud
• The ability to rationalize the fraudulent action.

Intentional misstatements and deliberate omissions with knowledge of the consequences or with an intention to deceive are part of fraudulent financial reporting. Often it is created by the management to manipulate earnings to deceive financial statement users on the performance and profitability of the entity. Such manipulations normally commence as insignificant inappropriate adjustments and ultimately cause fraudulent financial reporting. Fraudulent financial reporting may be accomplished by the following:

• Creating incorrect documents or entries, forgery of documents, manipulation and alteration of financial data and other acts that underlie the financial statements.
• Misrepresentation or purposeful omission from the financial statements of significant events, transactions or other material information which if furnished would have caused a change of opinion.
• Deliberate incorrect application of accounting principles relating to value, nature of classification, manner of presentation, or disclosure.

• Fraud by the management by deliberate override of controls that would have otherwise detected frauds. Instances of such control overrides are
  o Recording fictitious journal entries towards the end of an accounting period, to change operating results.
  o Inappropriately use of estimates and assumptions to change account balances like accounts receivables.
  o Deliberate failure to record, recording in advance or delaying to record transactions that have occurred during the period under review. Consequently the financial statements could be materially or significantly incorrect.
  o Concealing or non-disclosure of facts that could lead to a significant difference in values in the financial statements.
  o Involvement in transactions that are unusually complex and apparently likely to misrepresent the financial position or performance.
  o Amendments or modification of documents or records that are material, significant or unusual.

Misappropriation of assets (for example cash) is often perpetrated by employees in small and often immaterial amounts. When the Management commits such
acts, these are disguised or concealed using methods that are difficult to detect. Some of the examples of misappropriation of assets are

- Embezzlement of cash received through normal routine cash sales.

- Stealing physical or intangible assets. Stealing inventory or scrap are examples of theft of physical assets. The illegal sale of a technical design to a competitor is an example of a theft and illegal sale of an intangible asset.

- Causing payment for goods and services or for value not actually received. Instances of this nature include payments fictitious vendors, bribes and illegal payment by vendors to the organization’s agents by inflating prices or by payments to employees who do not actually exist.

- Using organizational assets for the benefit of the Management. Examples are pledging assets as collateral security for personal loans for a member of the Management or his relative or his own personal company or agency.

- Defalcation of assets for personal use or as a pledged asset is concealed by producing false or misleading records and documents.

There are certain legal requirements for the auditor to specify whether fraud is prevalent in the organization. The Companies (Auditor’s Report) Order, 2015 and the circulars issued by the Reserve Bank of India for bank audits are instances of such legal requirements. In such cases, the auditor’s
responsibilities may not be limited to the likelihood of false statements in the financial statements but also includes a broader and more tedious responsibility to consider risks of fraud.

2.13.8) Journal Entries

Journal entries are a significant source of material misstatement of financial position. Such entries may be made at the end of the year or be a routine occurrence. In certain cases, adjustments may be consolidated and be not reflected as journal entries. The advent of automation has reduced the risk of inadvertent errors but the risk of deliberate manipulation of values into the financial accounting system cannot be ruled out. Such entries will be arithmetically correct but factually wrong. The visible evidence in such cases may be non-existent.

In evaluating the fraud risk factors for journal entries, the following must be considered

- The presence of indicators of fraud or risk factors and information obtained in the normal course of work may facilitate the identification of special types or classes of journal entries that can be tested for compliance with acceptable standards.
- The Internal Controls on journal entries. If effective controls that have been tested are in existence, this is likely to reduce the extent of testing.
• The nature of evidence that support the entry. Most organizations have a combination of manual and automated entries. The manual entries should be corroborated with trails.

SA240 details the likely characteristics of journal entries or other adjustment that may be fraudulent. A few of the characteristics of such journal entries may be -

• Entries posted to unrelated, unusual, or seldom-used accounts.

• Entries made by individuals who normally do not pass journal entries.

• Entries passed at the end of the relevant period with inadequate reasons.

• Entries made either immediately prior to or during the preparation of the financial statements that do not have valid codes or account heads.

• Entries in the nature of round numbers or with consistent ending numbers.

• Inappropriate journal entries for accounts that contain complex transactions

• Entries passed contain significant estimates and period-end adjustments,

• Entries passed to account heads that in the past have been misstated.

• Entries to account heads that have not been reconciled regularly or contain unreconciled differences.

• Entries that contain inter-company transactions,
• Entries that are associated with an identified risk of material and significant misstatement that can be attributed to fraud.

There may be instances of the existence of significant transactions that are outside the normal course of business for the entity. Similarly, there may be transactions that appear to be unusual and recorded with the possible intention of fraudulent reporting or defalcation.

Examples are

• The transactions appears overly complex involving numerous entities in a business group or with a number of apparently unrelated third parties.
• Management has not made transparent the purpose of such transactions with its officers or there are arrears in documentation.
• Management seems to emphasize on the requirement for only a particular type of accounting treatment rather than making transparent the economic rationale for the accounting entry.
• Transactions with related parties or special purpose vehicles, seem lacking in reviews and approvals by the Management.
• The transactions involve recently disclosed related parties or business entities that seem financially incapable of getting involved in such transactions without support from the organization under audit scrutiny.
2.13.9) Audit Procedures in Response to Management Override of Internal Controls

The Management of an organization is always in an advantageous and unique position to perpetrate fraud as they can change accounting records and prepare fraudulent financial statements by overriding the otherwise effective internal controls. The manner of such override is unpredictable and constitutes a significant risk of material misstatement.

To mitigate the risk factor, the auditor shall design and perform audit procedures to:

- Test whether the journal entries recorded in the general ledger are adequately appropriate.
- Evaluate any other adjustments passed during the preparation of the financial statements.
- In designing and performing audit procedures for such tests, the auditor shall:
  - Enquire from individuals involved in preparing the financial reports, instances of inappropriate or unusual activities during the passing of journal entries and other adjustments.
  - Scrutinize all journal entries and other adjustments if any performed on the last day of the reporting period.
  - Consider the need to test the necessity of journal entries and other adjustments if any throughout the reporting period.
Estimates by Management if any should be reviewed for biases and if biases are revealed, there should be an assessment whether the circumstances that caused the bias has also created a risk factor of material significant fraudulent misrepresentation. In performing this review, the auditor shall

- Evaluate whether such a bias has created a risk factor of fraud. If such a risk exists, the auditor should perform a retrospective review of judgments and assumptions by the Management pertaining to significant accounting estimates depicted in the financial statements of the earlier or immediately preceding financial year.

- In the event of the existence of unusual or significantly material transactions outside the normal course of business, the business rationale of the transactions must be examined to verify whether such transactions would cause fraudulent financial reporting or concealment or misappropriation of assets.

In conditions of uncertainty, the risk response strategy of the auditor is the performance of other audit procedures like audit in depth that will minimize or eliminate the risk of Management Override of Internal Controls leading to a fraudulent reporting or misappropriation of assets.
2.13.10) Evaluation of Audit Evidence

The Institute of Chartered Accountants of India (2010) has issued a Standard SA520\textsuperscript{106} that mandates that the process of audit should evaluate the results of analytical procedures to form an overall general conclusion on whether the financial statements reflect the auditor’s understanding of the entity. Such procedures could reveal a previously unrecognized risk factor of material significant fraud leading to a misstatement of financial statements. Some of the analytical procedures that can be deployed can include of ratio analysis, trend analysis, percentage, comparison with prior year’s data and industry analysis. If a misstatement is identified, the auditor must evaluate whether it is indicative of fraud. If in the affirmative, the auditor shall evaluate the overt and covert implications to other aspects of the audit especially on the reliability placed on management representations. Professional skepticism should be deployed in such instances with the acknowledgement that once an instance of fraud is recognized, there are likely to be more such occurrences. The auditor should also consider whether prevalent circumstances points to the involvement of the Management, key employees or third parties when evaluating the reliability of evidence obtained earlier.

In extreme cases there may be circumstances when the auditor is unable to conclude whether or not the financial statements are materially misstated as a result of fraud. The auditor shall evaluate the implications of providing such a

report for the audit including the authorities to whom he must report his conclusions.

2.13.11) Management Representations

SA240 mandates the auditor to obtain written representations from the Management on the following details

- An acknowledgement that the Management with the intention to prevent and detect potential frauds are responsible for the design, implementation and maintenance of internal controls in the entity.
- All disclosures have been made about the risk factors relating to fraud and its consequent effect on the financial statements.
- All disclosures have been made of their knowledge of fraud or suspected fraud affecting the entity involving:
  - Members of the Management and those in charge of governance.
  - Employees who have significant roles in planning and implementing internal controls.
  - Any other person who could significantly influence the contents of the financial statements.
  - Knowledge of any allegations of fraud that has an effect on the entity’s financial statements. This would include information communicated by stakeholders such as employees, former employees, analysts, regulators and others.
The ICAI has stated that the declaration by the management does not absolve the auditor of performing the audit with due diligence using his professional experience.

2.13.12) The Use of Sampling in Audit

In the course of work the audit programme would rely on sampling procedures on the assumption that the samples are a fair representation of the population. However, the actual determination of the sample must be from an evaluated population and not merely random sampling. It is this context that the use of forensic accounting tools can help the auditor to have confidence in his work and in the event of a claim, prove that he had exercised sufficient due diligence and honesty in carrying out his work.

The Institute of Chartered Accountants of India (2009) has issued a Standard SA530\textsuperscript{107} that states that the auditor may resort to sampling in the course of his work but has to consider the following details

- The characteristics of the population from which the sample will be drawn
- The sample size to reduce sampling risk
- The selection of the sample in a manner as to give each sampling unit an equal chance of selection.
- The tolerance levels for testing

\textsuperscript{107} ICAI; Sampling Audit; http://www.icai.org/new_post.html?post_id=450&c_id=141
• The confidence that the use of sampling has provided a reasonable basis for concluding that the population has been tested.

The International Federation of Accountants (2009)\textsuperscript{108} (IFAC) in their endorsement of an International Standard of Audit ISA530 has acknowledged the view that the auditor can use sampling techniques in conducting the audit. The objective of the auditor deploying an audit sample, is to provide a reasonable basis to draw conclusions about the population from which the sample is selected.

The IFAC following ISA 530 suggestions, lays down the following guidelines for conducting a sampling process

• The sample selected should be representative of the population. If not representative of the population, the auditor cannot form a conclusion based on the sample for the entire population. For instance, a test for Accounts Receivables should reasonably cover at least 75% of total receivables in value. If only 30% of the receivables by value are covered, this is not representative of the population.

• In resorting to sampling, the auditor should evaluate the sampling risk that may be present as use of sampling does not absolve the responsibility to detect misleading information. Sampling risk is the risk that the audit conclusions using a sample may be different had the entire population

been subjected to the audit procedure. A non-sampling risk is the risk of a wrong conclusion not unrelated to sampling risk. An example of such a situation would be where the auditor adopts inappropriate audit procedures, or does not recognise a control deviation.
2.15) **Forensic Accounting Techniques to Detect and Prevent Fraud.**

Frauds in business have existed since commercial transactions commenced. In the era of manual accounting, frauds were limited and prone to detection. The advent of computers instead of minimizing fraud has exponentially compounded the nature of fraud. In the modern age, an unscrupulous man with a “Smart Phone” can transact fraudulent businesses that can ruin many economies. Such transactions can be even be made remotely from foreign shores through the international network.

The Association of Certified Fraud Examiners (ACFE)\(^{109}\) has provided the following data relating to the cost of fraud depicted in Table 2.10.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Estimated Average Loss per incident in USD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Armed Robberies</td>
<td>$250</td>
</tr>
<tr>
<td>Burglaries</td>
<td>$450</td>
</tr>
<tr>
<td>Employee Related Frauds</td>
<td>$23,500</td>
</tr>
<tr>
<td>Computer Frauds</td>
<td>$500,000</td>
</tr>
</tbody>
</table>

**Table 2.10- Estimated Cost of various types of frauds**

From the table it is evident that the average cost of a computer fraud is much higher than other kinds of frauds.

In an automated system, the concept of “original document” is non-existent as the electronic media facilitates an unlimited number of copies. Often these electronic documents get stolen without the owner even being aware that they are missing. Ingenious methods are deployed by unscrupulous professionals. For example in foreign exchange transactions, currency values are expressed to the fourth decimal place on the computer. By rounding values to three decimals and inserting a zero as the fourth decimal, the difference may be irrelevant for an individual transaction. However, when the act is emulated for millions of currency values, the differential amount will be significant. This differential amount can be temporarily parked in a dormant account and siphoned off by an unscrupulous employee.

Another ingenious method deployed is the misuse of the ‘Rounding off Account’ in an automated environment. The intention of the rounding off account is to express values in integer currency values. Decimals currency values are charged to a rounding off account that is eventually charged off to the profit and loss account. Empirical evidence has proven that the net values will be insignificant. A clever professional can use this to an advantage and divert the money for personal gains as the account is rarely checked.

Auditing in the past has been a “Round the Computer’ approach where the computer is deemed to produce only the correct results. This has proven to be a fallacy as evident from a plethora of undetected computer based frauds. While most auditors and analysts lack technical skills, the most important skill in
auditing under a computerized environment is the skill and judgement of the analyst or auditor. Dalal states that technical skills can be outsourced but not an auditor’s judgement.

It is in such circumstances that Computer Assisted Audit Techniques or CATT is useful. CATT permits high level and detailed level checks and conclusions. Trend analysis, mathematical modeling, statistical sampling can be used to study data. This permits the analyst or the auditor to examine huge volumes of data to reveal trends and patterns. Once these patterns are deciphered, the analyst should use his judgement to find out whether or not there are irregularities. CATT also enables savings in scrutiny cost as well as adherence to the principle of “observance of due diligence” by the analyst.

Specialized CATT tools are at present very expensive. However, the analyst can obtain a reasonable opinion of the state of financial affairs by resorting to relatively inexpensive tools like Excel or Lotus that can give a high level conclusion about the state of financial affairs.

2.14.1) Myths in an Automated Environment

The main reason for the success of fraudsters is the ignorance of the analysts and auditors about the computerized environment. There is a general feeling that the “computer can do no wrong”.

Dalal\textsuperscript{110} has indicated four common myths prevalent across the business world.

\textsuperscript{110}
2.14.1.1) **Computers cannot make mistakes**

There is a notion that ‘since accounts are computerized, there can be no error”. Computers process data and generate reports at high speeds with a degree of accuracy as programmed to achieve. The term Garbage in Garbage out or GIGO has been coined with particular emphasis on automation. Computer Outputs are only arithmetically correct. The credibility of the transactions is beyond the scope of automation and machines will churn out what they have been programmed to do. Prudent judgement is required to rely on the output.

2.14.1.2) **Users of Computer Systems Must Be Technically Competent**

The user of any system must be familiar with its utilities and features. There is no requirement for technical competence to use computer based tools. He / She should however be aware of what the output should be and must apply a judgmental analysis to the output.

2.14.1.3) **Computers will Reduce Costs and Eliminate Manpower**

There is a myth that computers reduces manpower costs by eliminating staff. Computers normally introduce qualitative changes in speed, precision and accuracy rather than quantitative reduction of costs. Expansion of operations is facilitated with the existing staff. If a department is already overstaffed, the advent of computerization will expose the idle time but it rarely reduces total manpower in the organization as surplus staff are re-assigned to other departments or functions.

2.14.1.4) **Computers are Unsuitable for the Present Business Environment**
This tactic is deployed by those who want delays with the intention of covering their tracks. Computer based systems cannot create data or make errors independent of its designers. The biggest advantage of automation is speed and accuracy and many unscrupulous employees prefer procrastination to cover their unethical deeds.

2.14.2) Usage of Computer Assisted Audit Tools (CAAT) and Generalized Audit Software (GAS) for Compliance with Due Diligence

Computer based systems have non-paper processes and trails. Voluminous digital data is the medium for audit. This requires a totally new technique for audit, evaluation and assessment. Changing business methodologies, resource constraints and complex regulatory framework coupled with huge volumes of data have created the need for verification of a different kind in a changing environment. Usage of Computer Based Audit and Evaluation Techniques now become imperative. CAAT has evolved due to the inherent complexity of modern day automation.

Advances in technology, distributed processing, remote networking has compounded internal control systems.

CAAT facilitates auditors to recognize flags or likely signs of frauds or irregularities by using Data Analytics to highlight pertinent transactions or group of transactions. CAAT facilitates access to millions of transactions including data from previous years, across multiple locations and varied data bases.
Most CAAT / GAS use SQL or Structured Query Language for data extraction and manipulation. This is relatively easy to learn as it uses English like syntax and can also be used for compound nested conditions like multiple IF statements and XOR (either or) filters.

Standard CAAT performs functions in the nature of

- File Access: Permits access of tables with different formats and schemas
- File Re-Organization: Permits complex joins sorts, data consolidation or splitting.
- Selection: Enables selection of data that satisfy specified conditions
- Querying: Complex nested queries can be conducted on the extracted data
- Statistical Testing: Powerful features exist that enable scientific sampling and attribute testing.
- Arithmetic Manipulation: All standard and special arithmetic and logical operators permit the user to set up control and sub-totals.
- Stratification and Frequency Analysis: GAS permits definition of strata, defined class frequency and aging reports.

The Institute of Chartered Accountants of India (2011)\(^{111}\) has recognized that CAAT or GAS has two forms

\(^{111}\) ICAI “Data Analytics and Continuous Controls Monitoring”; ICAI Publications; New Delhi; (2012); Pages 2-4.
• The tool or the CAAT software

• The CAAT technique

The CAAT tool knowledge is learning about the tool application with its limitations including the database architecture the language syntax and the inbuilt features or functions. The CAAT technique is user specific and depends on the ingenuity of the user to apply the tools on the data.

Both have been considered equally important akin to the famous scissors analogy of Adam Smith.

The Institute of Chartered Accountants of India (ICAI) (2009)\textsuperscript{112} has identified some of the fraud detection applications the tool can be used for. A few of these are

• Company employees with the same address as authorized vendors. This implies a conflict of interest.

• Searching of vendor databases for post box numbers as it is unlikely that vendors will receive official communication through post boxes.

• Analysing sequence of transactions for missing cheques or invoices.

• Search for the same organization with more than one code and more than one mailing address.

• Search for several apparently different units with the same address.

\textsuperscript{112} ICAI “Study on Investigative Audits”; ICAI Publications; New Delhi; (2011); Pages 9-15.
• Search for duplicate records where such records should not exist. E.g. Salary payments more than once in a month.

CAAT enables auditors to recognize fraud patterns like negative entries in an inventory field, and high percentage of returns. Using these discerning features a “Fraud Profile” can be created that will facilitate future audits. Monitoring for suspicious patterns permits detection of frauds if any at an early stage. This permits loss minimization.

The Institute of Chartered Accountants of India (ICAI) (2009) states that CAAT can be divided into four categories each having its own characteristics

• Packaged Programs or Generalized Audit Software (GAS)
• Utility Programs or Common Software Tools (CST)
• Systems Exceptional Programs
• Special Purpose Programs

2.14.2.1) Generalized Audit Software (GAS) or Packaged Program

GAS are specialized audit oriented programs often integrated with leading Enterprise Resource Packages or accounting software like SAP or Oracle Financials. They contain almost all the tools required to audit an automated environment. Training is required to operate these utility programs. Commercial examples of GAS are ACL, IDEA, EASYTREIVE, SPSS, and SAS etc.

2.14.2.1.1) Rationale for Use of GAS

113 ICAI; “Data Analysis for Auditors”; ICAI Publications; New Delhi; (2009); Pages 11-23.
Farrell (2013)\textsuperscript{114} has observed that the majority of frauds are not detected by auditors or investigators. The findings are in Table 2.11

<table>
<thead>
<tr>
<th>Serial</th>
<th>Fraud Reported By</th>
<th>Percentage Reported</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tips or Whistleblowers</td>
<td>40%</td>
</tr>
<tr>
<td>2</td>
<td>Internal Auditors and Internal Control Violations</td>
<td>31%</td>
</tr>
<tr>
<td>3</td>
<td>Noticed By Accident</td>
<td>20%</td>
</tr>
<tr>
<td>4</td>
<td>External Auditors</td>
<td>8%</td>
</tr>
<tr>
<td>5</td>
<td>Notification by Police</td>
<td>1%</td>
</tr>
</tbody>
</table>

\textbf{Table 2.11 Types of Frauds detected}

Only 39\% of the frauds were detected by auditors and analysts. The majority of fraudulent practices would have gone undetected if they were not detected or reported by third parties. This indicates a serious lapse of due diligence by the auditors and analysts making them liable for professional liability.

Farrell also indicates the sources of the likely fraud. These are in Table 2.12

<table>
<thead>
<tr>
<th>Serial</th>
<th>Source of Fraud</th>
<th>Percentage Reported</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Employees</td>
<td>57%</td>
</tr>
<tr>
<td>2</td>
<td>Customers</td>
<td>18%</td>
</tr>
<tr>
<td>3</td>
<td>Vendors</td>
<td>13%</td>
</tr>
<tr>
<td>4</td>
<td>Anonymous</td>
<td>12%</td>
</tr>
</tbody>
</table>

\textbf{Table 2.12 Source of Fraud Reported}

\textsuperscript{114} Ramona Farrell; “Forensic Tools & Techniques for Internal Auditors”; http://powershow.com/view/3c8401-MzJmM/Forensic_Tools_and_Techniques_for_Internal_Auditors_powerpoint_ppt.presentation; (2013)
On an analysis of source of information on fraud, it was the employees and vendors and not a result of a direct discovery by the auditors. There exists compelling reasons to adopt GAS by auditors and analysts. The current cost of GAS tools is high but professional work with long term benefits, advocate the use of GAS over the other tools of CAAT.

Farrell has advocated the use of GAS for

- Improving the role of detection of fraud in internal and external audit.
- The Sarbanes-Oxley Act 2002 in the USA, the Companies Act 2013 in India and the Standards of Audit issued by the Institute of Chartered Accountants of India casts an onus on the auditors for verification of Internal Controls. Most GAS tools can perform this using the controls embedded in the accounting system.
- Auditors and Analysts need to be more useful and efficient in fulfilling their responsibilities. GAS will facilitate their effort
- GAS has the ability to verify 100% of the transactions within a relatively short time frame. The normal audit practice is to use a sample that is hopefully representative. Fraudsters can use this to an advantage as they know that the sample size will be normally restricted to high value transactions. Small value transactions that cumulate to a large value can be checked by GAS and patterns discerned.
- GAS permits a proper direction and control of audit processes. Exception reports can be generated using inbuilt functions like CLASSIFY or
PROFILE to obtain a data pattern. Judgement and past experience can be applied on this pattern to spot anomalies.

- GAS permits import of data from standard databases using appropriate interfaces. This imported data is accessed in a “Read-Only” mode and eliminates the possibility of data duplication or redundancy. Generalized spreadsheets that are often in lieu of GAS are prone to accidental insertions, deletions and other human errors.

- The learning curve for using GAS is not very high and most GAS tools use easily code able functions using SQL or No-SQL.

- GAS permits unlimited permutations and combinations across multiple time periods. The user can think “out of the box” and create his own evaluation methods in addition to the standard techniques.

- GAS maintains adequate trails and logs that record the techniques used with date and time details. This evidence can be used in the extreme case of an accusation of not having compiled with due diligence procedures.

- GAS can store commands and procedures. This facilitates batch processing of transactions at a later stage or time. There is considerable savings in time and effort for repetitive transactions at various time periods.
Singleton (2006)\textsuperscript{115} of The Information Systems Audit and Control Association (ISACA) has stated that in the modern automated age, performing audits without harnessing the power of information technology is not an option.

2.14.3) Utility Programs or Common Software Tools

Common Software Tools and utility programs are increasingly used for analysis as the cost of GAS is extremely high. Examples are EXCEL, LOTUS NOTES and reporting tools like CRYSTAL REPORTS. They operate by importing data from the host database. Most of these tools are relatively inexpensive and easy to use. However, they have inbuilt limitations like the inability to check internal controls, accidental insertion or deletion of data, inability to maintain an audit trail, slow response when the volumes are abnormally high, inability to perform complex batch processing etc.

2.14.4) System Exceptional Programs

These are generated by the client software itself as a counter check on the integrity of transactions. Hash totals, check sums, record count, user profile etc. are some of the internal control checks that are incorporated. Such programs may also be custom built for the clients or users.

2.14.5) **Special Purpose Programs**

Special Purpose Programs (SPP) are special custom made programs developed by the auditors or by external professionals or the software vendors for a fee. If the auditors write the script, these are in the form of small bridge programs or macros. Complex programming need professional expertise and is often outsourced.

Typically such programs are developed when the auditors want to check the data integrity between two different systems operating through a common interface. For example a company may maintain its operating data on an ORACLE data base with an UNIX system and its financial information may be on a Mainframe DB2 with a ZOS operating system. A special program may be required to check the integrity of the data. SPP may be deployed in such cases.

2.14.6) **Types of CAAT**

Every CAAT tool should be able to perform at least a few common checking and scrutiny functions. Dalal\(^{116}\) has indicated ten common functions used by most CAAT tools.

2.14.6.1) **Check for Missing Serial Numbers**

CAAT enables to identify gaps if any in any process that uses serial numbers for control. In business instances for serial number control are in cheque numbers, receipts, purchase orders, goods received notes, bank guarantees etc.

\(^{116}\) Dalal; Novel and Conventional Methods of Audit, Investigation and Fraud Detection; Pages 561-588
The tool groups transactions in a stated order and highlights missing transactions.

In an organization that issued pre-numbered purchase orders (PO), the CAAT tool found a few issued PO serials were missing. However, a matching report between issued and settled or paid PO revealed that an unscrupulous employee had stolen the PO for an advantage.

2.14.6.2) Check for Duplicates

This is the existence of multiple controls where there ought to be only one. Duplicated numbers prima facie indicate multiple payments for the same transaction. Such phenomenon must be investigated further.

There may be instances when the CAAT technique needs to join or concatenate multiple fields to analyse transactions. For example it is possible in a large company to have multiple vendors each with identical invoice numbers and dates. A check for duplicates can be made by combining or joining four fields viz.

- The Vendor Code
- The Invoice Number
- The Invoice Date
- The Purchase Order Number

The combined fields should depict a unique identification. If duplicates exist, there is cause for concern and further investigation must be conducted.

2.14.6.3) Classification
In a large audits there is always a problem in selection of the data for audit from the plethora of transactions that exist. A complete check of all transactions will not be possible or feasible. In such cases the auditor has the problem of selection of the representative sample to ensure that due diligence has been carried out. Classification of data to choose the sample helps in this process. Classification is the process of arranging data into homogenous groups or classes according to one or more common characteristic. This enables the auditor or user to obtain a high level view of how the data is dispersed and where the concentration of the data set is. Classification is particularly useful in conducting an audit in depth or an audit by exception in the areas of

- Purchases
- Sales
- Accounts Receivables
- Accounts Payables

2.14.6.3.1) An Example of Case Study in Classification

An auditor had to conduct an audit of the Accounts Payable ledger in an automated environment. There were about 1,500 creditors of which approximately 1,000 were active. It would be impossible to conduct an audit on all or a majority of the transactions. The auditor framed an audit programme that would check at least 70% in value of all transactions. The CAAT classification utility was activated to obtain a high level view of the transactions. The procedure adopted was
- Sum (total) all purchases ordered by creditor code.
- Create summary values for each creditor based on
  - Count or number of transactions
  - Value of transactions
- For each creditor compute the percentage of
  - Number of transactions to total transactions for all (the population) of creditors.
  - Value of transactions to total transacted value.
- Select only a few creditors for detailed analysis who accounted for at least 70% of transactions value.

The finalized summarized result obtained from the CAAT is in Table 2.13. It would be perceived that there were 4,564 transactions with a consolidated value of ₹ 145.634 million. Using the classification technique, the auditor was able to select only 199 transactions that covered 73.53% of the value. This process reduces time and cost and at the same time creates an audit trail that can be presented for proof of having performed the audit with due diligence.

<table>
<thead>
<tr>
<th>Serial #</th>
<th>Vendor Code</th>
<th>Number</th>
<th>Total Value ₹</th>
<th>Percentage to Total Transactions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Number</td>
</tr>
<tr>
<td>1</td>
<td>2,168</td>
<td>29</td>
<td>345,54,321</td>
<td>0.635%</td>
</tr>
<tr>
<td>2</td>
<td>1,948</td>
<td>12</td>
<td>231,11,345</td>
<td>0.263%</td>
</tr>
<tr>
<td>3</td>
<td>1,012</td>
<td>19</td>
<td>99,85,678</td>
<td>0.416%</td>
</tr>
<tr>
<td>Serial #</td>
<td>Vendor Code</td>
<td>Number</td>
<td>Total Value ₹</td>
<td>Number Value %</td>
</tr>
<tr>
<td>----------</td>
<td>-------------</td>
<td>--------</td>
<td>---------------</td>
<td>----------------</td>
</tr>
<tr>
<td>4</td>
<td>1,119</td>
<td>12</td>
<td>85,23,456</td>
<td>0.263%</td>
</tr>
<tr>
<td>5</td>
<td>5,643</td>
<td>19</td>
<td>72,89,654</td>
<td>0.416%</td>
</tr>
<tr>
<td>6</td>
<td>1,689</td>
<td>34</td>
<td>71,26,432</td>
<td>0.745%</td>
</tr>
<tr>
<td>7</td>
<td>4,121</td>
<td>21</td>
<td>65,76,529</td>
<td>0.460%</td>
</tr>
<tr>
<td>8</td>
<td>8,526</td>
<td>14</td>
<td>44,67,823</td>
<td>0.307%</td>
</tr>
<tr>
<td>9</td>
<td>2,518</td>
<td>18</td>
<td>38,93,213</td>
<td>0.394%</td>
</tr>
<tr>
<td>10</td>
<td>1,628</td>
<td>21</td>
<td>15,59,832</td>
<td>0.460%</td>
</tr>
<tr>
<td>Selected</td>
<td></td>
<td>199</td>
<td>107,088,283</td>
<td>4.360%</td>
</tr>
<tr>
<td>Value of Total Transactions</td>
<td>4,564</td>
<td>145,634,567</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2.13 – Sample Selection of Accounts Payable using Data Classification

Control by Classification is also called the 80/20 rule where 20% of the transactions cover 80% of the value of transactions. It is also called Decision Making by Exception.

2.14.6.4) Repetitive Odd Numbers

Repetitive odd number transactions especially with exact decimals raises suspicion of irregularity. CAAT can identify such transactions and subject it to further analysis.

2.14.6.5) Round Numbers
Round numbers are symptomatic transactions that need further investigation. Payments like rent, audit fee etc. are normally in round numbers but payments to vendors or receipts from customers will vary in value. Obtaining consistent round numbers raises professional scepticism and need to be investigated further.

**2.14.6.6) Single Transactions**

Single transactions in normal business are rare as there are frequent dealing with vendors, employees and customers. These are indicators of opportunistic ventures. The analyst or auditor needs to isolate such transactions and examine them in detail.

**2.14.6.7) Isolated Outliners**

An isolated outliner is an observation in a data set that is far higher or lower than others in the same data set. For example in routine monthly payments to suppliers for standardized items, if an item depicts a high departure from the normal pattern, it is an indicator of an abnormality. Such incidents can be investigated into although they may not always be irregular or fraudulent. Isolated outliners can be spotted by creating a chart or graph. Unusual items will be revealed immediately.

**2.14.6.8) Geocoding**

Geocoding in forensic analysis is used to identify physical location of suppliers and customers. Typically it uses the postal code to identify the location of the person or organization. For example duplication of a business address for
different vendors could indicate multiple payments to the same persons at the same address. This is an indication of a shell company or a fake payment. A similar exercise can be conducted based on postal codes. In developed countries where business and residential areas are clearly marked, a payment to a business entity with a residential postal pin code can raise a red flag.

2.14.6.9) The Benford Theorem

Benford’s Law or Theorem has been accepted as a standard for detecting irregular transactions by evaluating the first significant digit of each item, consolidating the findings and comparing it with a predicted frequency based on a logarithmic distribution.

Wolfram (2014)\textsuperscript{117} states that the use of logarithmic scales annuls the relative distance between numbers expressed to base ten. For example on a logarithmic scale the distance between $[1 \times 10^3 \text{ and } 2 \times 10^3]$ is identical to the distance between $[1 \times 10^{-3} \text{ and } 2 \times 10^{-3}]$. The use of a number raised to base 10 has no relevance on a logarithmic scale. This follows the real world situation where surprisingly the area of rivers, the population count, physical constants, molecular weights, birth and death rates follows the logarithmic scale. Benford reasoned that while humans count arithmetically (like 1, 2, 3, 4), nature counts geometrically (like $e^x$, $e^{2x}$, $e^{3x}$ and so on). Using the normal theory of probability, the chances of a numerical value beginning with a digit from one

\textsuperscript{117} Wolfram Mathworld; “Benford’s Law”; http://mathworld.wolfram.com/BenfordsLaw.html; (2014, Dec).
(1) to nine (9) is $1/9$ or an 11.11% probability that the value can start with any of the nine numbers. Benford proved that on a logarithmic scale the length of the distance from one number to the next divided by the length of the entire scale would give the probability of the digit being the first one in a given data value. This is expressed mathematically as in Equation 7.1

$$P (d) = \log_{10} [1 + (1/d)] \quad \text{(Equation 7.1)}$$

Where $P (d)$ is the probability of obtaining the number (d) as the first significant digit. For example the logarithmic probability of obtaining the number 5 as the first significant digit is computed as

$$P (5) = \log_{10} [1 + (1/5)] = \log_{10} (1.20) = 0.7918 \quad \text{(Equation 7.2)}$$

The theorem is based on the fact that the length of the distance of one number to the next on a logarithmic scale divided by the length of the entire scale would give the probability of the digit being the first significant digit in numeric value. The theorem can be applied to the second, third and fourth significant digits in a value range. The expected value for the second (and nth) significant digit is in equation 7.3

$$P (d_1, d_2) = \Sigma \log_{10} (1+ (1/d_1d_2)) \quad \text{(Equation 7.3)}$$

Where $d_1, d_2 = \{10, 11, 12 \ldots 99\}$

However, when the test is applied to significant digits in the fourth and higher positions, the expected values tend to be almost the same as in the probability theory. The expected values for the first five significant digits are expressed in Appendix 1.
2.14.6.9.1) **Example of a Case Study Using Benford’s Theorem**

A company rendering services has a large number of salesmen for canvassing sales. Company policy permits the reimbursement of legitimate expenses in cash. While most of the expenses had supporting documents, there were other expenses that did not have supporting evidence. Examples are local conveyance, hotel tips and out of pocket expenses. The management found that undocumented expenses were large and wanted to know whether this was reasonable or otherwise. The Forensic Auditor used the Benford Theorem and analysed 4,537 unsupported expenses for a twelve month period. He considered the first significant digit (omitting leading zeroes) and the second digit that included zero. The result for the first significant digit is in Table 2.14

<table>
<thead>
<tr>
<th>First Significant Digit</th>
<th>Number of Occurrences</th>
<th>Actual Percentage</th>
<th>Expected Benford Percentage</th>
<th>Absolute Variation Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1,045</td>
<td>23.03%</td>
<td>30.10%</td>
<td>7.07%</td>
</tr>
<tr>
<td>2</td>
<td>1,245</td>
<td>27.44%</td>
<td>17.61%</td>
<td>9.83%</td>
</tr>
<tr>
<td>3</td>
<td>1,467</td>
<td>32.33%</td>
<td>12.49%</td>
<td>19.84%</td>
</tr>
<tr>
<td>4</td>
<td>134</td>
<td>2.95%</td>
<td>9.69%</td>
<td>6.74%</td>
</tr>
<tr>
<td>5</td>
<td>145</td>
<td>3.20%</td>
<td>7.92%</td>
<td>4.72%</td>
</tr>
<tr>
<td>6</td>
<td>105</td>
<td>2.31%</td>
<td>6.69%</td>
<td>4.38%</td>
</tr>
<tr>
<td>7</td>
<td>128</td>
<td>2.82%</td>
<td>5.80%</td>
<td>2.98%</td>
</tr>
<tr>
<td>8</td>
<td>145</td>
<td>3.20%</td>
<td>5.12%</td>
<td>1.92%</td>
</tr>
</tbody>
</table>
Table 2.14 Actual and Expected Results using Benford’s Theorem for the First Digit

Applying the heuristic yardstick that any variation in excess of 6.00% warrants a deeper investigation, the auditor was able to identify that most of the local travel expenses were fraudulent or “cooked” and the salespersons had made invalid claims.
2.14.6.9.2) Application of the Theorem to the Second Digit

An analysis for the second digit also revealed variations that were not within the acceptable tolerance limits. This is in Table 2.15

<table>
<thead>
<tr>
<th>Second Significant Digit</th>
<th>Number of Occurrences</th>
<th>Actual Percentage</th>
<th>Expected Benford Percentage</th>
<th>Absolute Variation Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>842</td>
<td>18.56%</td>
<td>11.97%</td>
<td>6.59%</td>
</tr>
<tr>
<td>1</td>
<td>421</td>
<td>9.28%</td>
<td>11.39%</td>
<td>2.11%</td>
</tr>
<tr>
<td>2</td>
<td>692</td>
<td>15.25%</td>
<td>10.89%</td>
<td>4.36%</td>
</tr>
<tr>
<td>3</td>
<td>481</td>
<td>10.60%</td>
<td>10.43%</td>
<td>0.17%</td>
</tr>
<tr>
<td>4</td>
<td>458</td>
<td>10.09%</td>
<td>10.03%</td>
<td>0.06%</td>
</tr>
<tr>
<td>5</td>
<td>240</td>
<td>5.29%</td>
<td>9.67%</td>
<td>4.38%</td>
</tr>
<tr>
<td>6</td>
<td>381</td>
<td>8.40%</td>
<td>9.34%</td>
<td>0.94%</td>
</tr>
<tr>
<td>7</td>
<td>403</td>
<td>8.88%</td>
<td>9.04%</td>
<td>0.16%</td>
</tr>
<tr>
<td>8</td>
<td>328</td>
<td>7.23%</td>
<td>8.76%</td>
<td>1.53%</td>
</tr>
<tr>
<td>9</td>
<td>291</td>
<td>6.41%</td>
<td>8.50%</td>
<td>2.09%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>4,537</strong></td>
<td><strong>100.00%</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2.15 – Actual and Expected Results for Benford’s Law for the Second Digit

2.14.6.9.3) Utility of the Theorem

Benford’s Theorem is a preliminary Due Diligence check to ensure overall data validity of the transactions. Auditors can use this by downloading data from the historical financial data base to a spreadsheet and conducting an analysis of the
nature cited above or use the inbuilt functions available on most standardised audit tools. The utility of the theorem is particularly applicable where sanction limits are in force. For example if a manager has a maximum sanctioning authority of ₹500,000.00, the auditor would check if there are a disproportionate number of transactions starting with “3” or “4” as the first significant digit. This is because unscrupulous employees and managers would try to split high values into smaller values with each smaller values being just below the sanctioning limit. An expenditure of ₹25 million may be split into seven individual transactions each within the authorized limit. In such cases, the digit “3” would assume preponderance. The auditor would then like to audit all expenditures starting with “3”. Benford’s Theorem for the first digit has been used to detect errors or irregularities in the following circumstances.

Benford’s Theorem can also be extended for a combination of numeric values. For example one may want to know the logarithmic probability of the first two numerals being 23, 45 and so on. The user will use the Theorem appropriately as circumstances warrant.

Fewster (2009)\textsuperscript{118} states that the Theorem is also “Scale Invariant”. This means that its property remains unchanged when multiplied by a constant. The theorem is applicable for conversions in foreign exchange, units of measure, temperatures and other conversions using a constant value. In the Accounting

\textsuperscript{118} Richard Fewster; “A Simple Explanation of Benford’s law”; https://www.stat.auckland.ac.nz/~fewster/RFewster_Benford.pdf; (2009).
and Finance domain, the Theorem is applicable for most of the routine transactions. In particular, auditors have used this to validate transactions relating to

- Individual and Corporate Credit Card Transactions for pattern analysis
- Splitting of expenditures to ensure that these are within authorized limits
- Regularly duplicated items
- Alterations in entries
- Data Errors
- Purchase Analysis
- Loan Sanctions
- Accounts Receivable Entries
- Share or Stock prices
- Accounts Payable
- Raw Material and Outsourced Inventory costs
- Refunds to Clients

**2.14.6.9.4) Limitations of Benford’s Theorem**

Despite its utility, there are some limitations for use. Fewster (2009)\(^{119}\) details these as

• It is applicable only for a large sample sizes. Though a large sample has been defined to be a size equal or in excess of 30, the minimum size is recommended by most auditors is 500 or more.

• There should be no clustering around a range of values. For example there should be no minimum or maximum price limit.

• There should not be any pre-assigned numbers like Provident Fund or Employee State Insurance numbers.

• All values should be measured should have the same attribute or unit of measure.

• Square Roots and Reciprocals do not obey this natural law

• The data analysed should ideally be of four significant digits or else there may be bias towards the lower digits.

2.14.6.10) Relative Size Factor

Modern business has numerous ledgers relating to receivables and payables. Scrutiny of each item in the ledger would in a computerized environment be superfluous and irrelevant. The sheer volume of transactions makes it humanly ineffective to locate exceptional items. The Relative Size Factor (RSF) is useful in such circumstances.

RSF uses the commercial practice that in an active account, the transactions conform to a certain range or limit. These limits may not be defined but often conform to defined pattern. For example transactions with a particular vendor would normally range from Rupees ten to fifteen five million. A transaction of
two hundred million would be unusual and if the RSF test depicts a quotient of twenty, this requires further investigation. It may be a genuine posting error or a clandestine event but in either case loss to the company is prevented.

Dalal (2012)\textsuperscript{120} cites four main methods are used to compute the RSF. The selection of the appropriate method is dependent on the circumstances and past historical experiences in the organization.

\textit{Method 1:} The ratio of the largest to the second largest transaction for an individual account.

\[ \frac{\text{Largest Transaction Value}}{\text{Second Largest Transaction Value}} \]

\textit{Method 2:} The ratio of the largest to the average transaction value for an individual account.

\[ \frac{\text{Largest Transaction Value}}{\text{Average Transaction Value}} \]

\textit{Method 3:} The ratio of the largest to the average transaction value excluding the largest value for the account.

\[ \frac{\text{Largest Transaction Value}}{\text{Average Transaction Value less Largest Transaction Value}} \]

\textit{Method 4:} The ratio of the smallest to the average transaction value for the account

\[ \frac{\text{Smallest Transaction Value}}{\text{Average Transaction Value}} \]

\textsuperscript{120} Chetan Dalal; \textit{Novel and Conventional Methods of Audit, Investigation and Fraud Detection}; Pages 571-576.
Method 4 is often adopted in airlines and stores to detect if discounted sale values have been inappropriately used especially by employees.

2.14.6.10.1) Example of a Case Study using the Relative Size Factor

On a scrutiny of the Accounts Payable register, the auditor conducted a RSF analysis using the standard and average formulae and obtained the result in Table 2.16

<table>
<thead>
<tr>
<th>Vendor Code</th>
<th>Max. Value</th>
<th>2nd Largest Value</th>
<th>Average Value</th>
<th>RSF on (Max)</th>
<th>RSF on (Avg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>253,576</td>
<td>221,567</td>
<td>201,526</td>
<td>1.14</td>
<td>1.26</td>
</tr>
<tr>
<td>B</td>
<td>525,786</td>
<td>475,167</td>
<td>451,475</td>
<td>1.11</td>
<td>1.16</td>
</tr>
<tr>
<td>C</td>
<td>756,499</td>
<td>525,126</td>
<td>451,468</td>
<td>1.44</td>
<td>1.68</td>
</tr>
<tr>
<td>D</td>
<td>45,651</td>
<td>576</td>
<td>1845</td>
<td>79.26</td>
<td>24.74</td>
</tr>
<tr>
<td>X</td>
<td>26,351</td>
<td>20,145</td>
<td>18,545</td>
<td>1.31</td>
<td>1.42</td>
</tr>
<tr>
<td>Y</td>
<td>21,563</td>
<td>21,391</td>
<td>19,528</td>
<td>1.01</td>
<td>1.10</td>
</tr>
<tr>
<td>Z</td>
<td>56,526</td>
<td>50,143</td>
<td>49,158</td>
<td>1.13</td>
<td>1.15</td>
</tr>
</tbody>
</table>

Table 2.16 – Relative Size Factor Considered For Detailed Scrutiny

From past experience, the RSF cut off was considered at 6 based on Method 2. In the case of Vendor D, it was found that the RSF exceeded the tolerance levels at the maximum and average levels. A deeper analysis revealed that VAT/Sales tax payable was mistakenly posted to the vendor’s account instead of the VAT payable account. This error if not noticed could have serious implications with
VAT authorities as the penalty for non-payment or delayed payment is often very heavy.

The process is very often used to detect decimal point errors. For example if 3,200,000.00 is entered as 320,000,000.00 as a genuine error, RSF will indicate a quotient of 100 which on further detailed investigation will reveal the error. This Forensic tool can be used for fraud detection also. If the normal trend is for a large number of small payments for a vendor, one large payment can be an indication for an irregularity possibly in connivance with employees. This may need to be further investigated by exception by the management.

2.14.6.11) Beneish Test for Manipulation of Financial Data

The Beneish test is not currently a CAAT or GAS function. It is based on financial ratio analysis. Attempts are being made by some software vendors to incorporate it as an optional CAAT software.

The model is applicable primarily for manufacturing companies and based on an empirical formula predicts whether the accounting records of an organization is likely to be manipulated. The model is a high level test of financial integrity that can be used by investigators to investigate more specific areas if needed.

The M-Score (Manipulation Score) is a dependent variable with eight independent variables comparing the current year (t) with the immediately preceding year (t-1). The Multiple Regression Equation is expressed as:

\[
M\text{-Score} = -4.840 + [0.920DSRI + 0.528GMI + 0.404AQI + 0.892SGI + 0.115DEPI + 4.697TATA] + [-0.172SGAI - 0.327LVGI].
\]
The M-Score is the dependent variable with eight independent variables comprising of -

DSRI – Daily Sales Receivable Index

GMI – Gross Margin Index

AQI – Asset Quality Index

SGI – Sales Growth Index

DEPI – Depreciation Index

TATA – Total Accruals to Total Assets

SGAI – Selling and General Administrative Expense Index

LVGI – Leverage Index

The heuristic rule is that A M-Score greater than -2.22 (i.e. more positive than -2.22) indicates a likelihood of financial manipulation.

The Model was also abridged to FIVE important variables. The modified M-Score is computed as

\[ M\text{-Score} = -6.065 + [0.823\text{DSRI} + 0.906\text{GMI} + 0.593\text{AQI} + 0.717\text{SGI} + 0.107\text{DEPI}] \]

A resultant score of -1.78 or higher indicates a likely manipulation of financial data. The Beneish Model can be used to test the accuracy and validity of financial data in manufacturing companies. Though this is a high level test, it is facilitates identification of the area where a deeper investigation may be required. The Model has been used in an analysis of the major companies in the Indian Cement Industry. This has been explained in Section 5.6.6.
2.14.7) Typical Situations Where Frauds are exposed by CAAT

CAAT must be used for all audits especially in medium and large sized companies that are prone to fraudulent transactions. The benefit of CATT is in its speed and accuracy. The analyst will also have the satisfaction of having performed a due diligence with sincerity and in accordance with professional conduct and responsibility. The Institute of Chartered Accountants of India (ICAI)\textsuperscript{121} has mentioned instances of use of CAAT.

2.14.7.1) Salaries and Wages

Salaries and Wages expense accounts are prone to abuse by scheming manipulators who in turn are often fellow employees. There are many forms of manipulations. Some of the methodologies deployed are

- Payment to “ghost” or non-existent employees.
- Payments to past employees
- Loans to non-existent employees

The analyst can detect these anomalies through CATT by comparing the unique employee codes of current list of employees with the employee codes of those to whom salary has been paid and loans disbursed. The master list of current employees must be corroborated department wise by physical inspection or independent certification by the concerned department head.

\textsuperscript{121} ICAI; \textit{Data Analysis for Auditors}; ICAI Publications; New Delhi; (2019, April); Pages 271-326
Ghost employees can be detected by performing a search function and matching the employee number with the Provident fund and Employee State Insurance deductions and payments. Non-existent employees will not normally have a Provident Fund deduction and payment.

An analysis can be made with the automated swipe registers to find out whether there are employees who do not record their identification swipes but are paid salaries. Similarly the timing of the entry and exit into the office or factory premises can be analyzed for a pattern. There have been instances where former employees have deliberately not been taken off the rolls as their identity cards are being unscrupulously being used to depict them as present. Such employees are paid wages that are subsequently siphoned off.

2.14.7.2) Accounts Receivables

Accounts Receivables are often subjected to manipulation as cash is received only after a protracted period of time. Incidents of manipulation are

- Teeming and Lading or deliberately accounting into a wrong account for credit
- Date Manipulation to deliberately depict a lower age for the debt.

Teeming and Lading is often resorted to when customers are eligible for rebates for prompt payments. By deliberately accounting for genuine receipts to the wrong account, the customer is given the benefit of rebates. When the true customer points out the error, he too is given the rebate. However, the manipulator takes advantage of the time difference between payment by the
genuine customer and his grievance redressal. The perpetrator of the deed in collusion with the customer shares the benefit.

A CAAT tool can selectively identify the pattern of journal entries that are used to reverse the rebates or credits. This can be identified even if the transactions pertains to prior periods or financial years. Pattern identification of this nature may not be possible manually.

Date Manipulation is often resorted to ensure that the debtors are incorrectly aged. This may take the form of depicting the date of the cheque as the received date instead of the actual date of receipt. This would avoid penalties if the contractual terms stipulate. The cheque date may be deliberately back dated and treated as the date of receipt. For example a cheque received on 31st of August for a sale effected in June may be treated as having been received on 27th of June because the date of the cheque is entered as the receipt date.

A CATT tool can classify the dates as

- Date and Time of Receipt of Cheque
- Date and Time of Transaction
- Date of Cheque
- Date and Time of Actual Accounting Entry

By performing a date manipulation test, the CATT tool can easily identify the abnormal delay between relevant dates.
2.14.7.3) **Inventories**

Inventories are subjected to major quantitative and financial manipulations. Often manufacturing companies have parts that are substitutes for each other but are of differing quality. For example a fly-wheel in a factory can be of an expensive imported type. There may also be cheaper substitutes. When the expensive part is requisitioned through a goods requisition note, the stores may deliberately issue a cheaper one. During stock or inventory verification, the expensive item would be in excess and there would be a shortage of the cheaper variety. The expensive variety would be pilfered for a profit and the cheaper ones would be replaced through a salary reimbursement.

A CATT tool can immediately identify a pattern of shortage of items. This can be further investigated into for genuineness of the transaction.

2.14.7.4) **Expense Inflation and Manipulations**

Expense manipulation is the most common form of skullduggery. Typically expense reports are inflated often with dummy supporting bills. The analyst or auditor can use tools of the nature of

- Benford’s Theorem Analysis
- Pattern Analysis
- Accountant-Wise Analysis
- Claimant-Wise Trend Analysis
- Cash Defalcation Trend Analysis
At times patterns for non-financial data can also be obtained. For example it would be possible using CATT to associate vehicle break downs with driver and / or routes. If a pattern emerges, there is prima facie reason to investigate further.

2.14.7.5) **Manipulation of Reports and Statements**

Often project reports are prepared independent of accounting data. The main cause is that project site expenses are often batched for data entry unlike operational expenses that are subjected to an online data entry routine. This is often kept as a separate entity or termed as ‘Capital Work In Progress” till it is audited and capitalized. It has been observed that under such circumstances, the project managers often do not properly differentiate between revenue and expenditures or the proper heads of account. The error if noticed is attributed to “pressure of work” and “lack of accounting expertise”. Often the expenses are suppressed to indicate favourable results with the intention of obtaining a bonus for efficient work.

CAAT enables a comparison of expenses with budgets and is able to analyse trends. CATT coupled with “Earned Value Analysis” (a project management technique to indicate the status of the incomplete project) will give an indication into whether the expenses are booked properly.