Cyber Forensics, Forensic Accounting/ Auditing and Chartered Accountants

According to the 2010, 2012 and the 2014 reports to the Nations on Occupational Fraud & Abuse, the Association of Certified Fraud Examiner's (ACFE) survey has consistently found that a typical organisation loses 5% of its revenue every year to fraud, with a median loss of approximately ₹90 lakh. Forensic accounting is the need of the hour, and this represents an opportunity where we, as chartered accountants, can contribute the most on the basis of financial, audit and analytical skills we have. Forensic accounting is the integration of accounting, auditing and investigative skills with a view to obtain legal evidence for the arrived at result. It is important to note that a forensic accountant needs to act as bloodhound, trying to sniff out fraud and criminal financial transactions through documentary evidence. Read on to know more…

The 2014 *Report to the Nations on Occupational Fraud and Abuse* provides an analysis of 1,483 fraud cases as reported by Certified Fraud Examiners (CFEs) who investigated them. This includes 41 cases in India.

As per the report:

- Average loss was $1,45,000 (approx. ₹90 lakh)
- More than 22% of these cases caused losses of at least $1 million (approx. ₹6 crore) as compared to 20% in 2012.

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It has been observed in the recent studies and fraud cases:

1. Card fraud in Asia costs banks $400 million a year, and is rising by 20%-25% a year.
2. Approximately 50% of the frauds have been initially detected by whistleblowing (tips). External audits have succeeded in detecting only about 3% of frauds.
3. Ranbaxy had never been tested for its drugs, and most of the drugs test documentation were fake. Besides, many approvals for the Indian market were based on fraudulent data.
4. Gowex, a fast growing technology company based out of Spain and leader in creating wi-fi cities in four different subcontinents, filed for bankruptcy in July 2014 after its founder and CEO Jenaro Garcia resigned on 5th July, taking responsibility for the accounting fraud.

5. Scientists at Iowa State University of USA had successfully tested the HIV vaccine on rabbits. An incredibly promising outcome, as it suggested that a human vaccine could also be created. However, recently it was found that the research team's remarkable results were faked.

These are disturbing facts and statistics of national and international corporate scandals, and embarrassing audit failures in the past few decades have led the experts in the field of accounting and auditing to think beyond their traditional roles. In fact, in a path-breaking decision by a Canadian court in 2014, auditors of Livent (a high-flying theatre company in the 1990s) have been ordered to pay $84.8 million for failing to detect fraud.

To think that statutory auditors are not bloodhounds, but only watchdogs is not acceptable any longer. Stakeholders expect auditors to plan and perform reasonable efforts to detect frauds and manipulations. The work of an auditor is no longer limited to ensure that the financial statements are true and fair; rather the focus is now on fraud risk, fraud-detection, fraud prevention and investigation.

This presents a vast opportunity for all of us, as chartered accountants, in this area where we can provide significant value-added services to our clients (current/prospective) by performing fraud risk assessments, defining controls to detect fraud in almost real time and to prevent them from happening in future.

Difference between Traditional Auditing & Forensic Accounting

Description	Traditional Auditing	Forensic Accounting
Nature	Mandatory in nature	In response to a fraud or manipulation reported or detected
Scope	Measures compliance with reporting standards	Involves financial investigation
Number game	Looks at the numbers	Looks beyond numbers
Materiality	Focuses on material transactions	May focus on immaterial transactions
Reporting	Provides reasonable assurance on financial statements	Findings can be used in the court or to resolve dispute.

Focus Areas

Generally, forensic accounting assignment falls under following three areas:

a) **Cyber forensics**→To investigate by examining computer hard disk and other information sources.

b) **Data analytics for fraud detection**→It involves use of technologies and methodologies for detection of fraud.

c) **Financial statement analysis**→Use of ratio analysis and other methods of finding financial statement fraud.

Cyber Forensics

In a fraud or dispute case, a cyber forensic expert is normally called to assist. It is a branch of forensic accounting that deals in the scientific examination and analysis of digital evidence in such a way that the information can be used as evidence in a court of law.

- Cyber forensics generally include the following steps:
  - Secure collection of computer data
  - Identification of suspect data
  - Examination of suspect data to determine details such as origin and content
  - Presentation of computer-based information to courts of law
  - Application of a country's laws to computer practice.

- The basic methodology consists of three As:
  - **Acquire** the evidence without altering or damaging the original data/source
  - **Authenticate** the image/source
  - **Analyse** the data without modifying it.

Data Analytics for Fraud Detection

The primary reason of increased popularity of data analytics to detect fraud is because a lot of internal control systems are inadequate in preventing and

detecting frauds. In order to effectively test and monitor internal controls,to look at every transaction that takes place and test them against company policies and procedures, organisations have started looking at data analytics mechanism to compliment internal controls.

One of the key aspects of data analytics is the ability for the technology to maintain comprehensive logs of all activities performed. You can run an application (MS Excel, MS Access or a script), enter some data, and find some anomalies. That's not sufficient as you're going to need some sort of proof of what you did to uncover that fraudulent activity. That proof has to be specific and detailed enough tostand up to further fraud investigation, perhaps even prosecution. There are automated data analytic tools available, like ACL, IDEA, *etc.*, which have these capabilities.

Besides, many organisations are implementing continuous analysis for fraud detection, which involves defining scripts and then running those predefined scripts on periodic basis like daily, weekly, monthly, *etc.*, as the case may be. This method can really improve the overall efficiency and consistency and quality of an organisation's fraud detection processes.

Financial Statement Analysis

Financial statement fraud is defined as a deliberate misrepresentation of the financial condition of an enterprise accomplished through the intentional misstatement or omission of amounts or disclosures in the financial statements to deceive financial statement users.

Beneish Model is a mathematical model that uses financial ratios and eight variables to identify if a company has manipulated its earnings. The variables are constructed from the data in the company's financial statements and, once calculated, create an M-Score to describe the degree to which the earnings have been manipulated.

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Why Beneish Model?

1. World Bank uses and advices the use of the Beneish model.
2. ACFE suggests the use of the Beneish model-"fraud magazine" in the March/ April 2005 issue.
3. Taught at universities such as those of Berkeley, Chicago, Cornell, Dartmouth, New York and Indiana.
4. Used by analysts at Merrill Lynch and Prudential Securities, among others.
5. Success rate is up to 50%; better than random or stratified random testing.

The eight constituents of Beneish Model are:

- **Days' Sales in Receivables Index (DSRI)**- This sales index measures whether receivables and revenues are in or out of balance in two consecutive reporting periods. A material increase in the index could indicate a company's receivables are phony.
- **Gross Marin Index (GMI)**- This index is designed to alert you that the risk of earnings manipulation is higher when gross margins drop. But, if the company is already engaging in attempts to inflate earnings, gross margins will be just the opposite: higher than normal.
- **Asset Quality Index (AQI)**- This index measures the proportion of total assets for which future benefits may be less certain. For the purpose of evaluating earnings manipulation, an increase in the asset quality index may indicate a company's propensity to capitalise costs.
- **Sales Growth Index (SGI)**- Growth does not imply manipulation, but growth firms are viewed by professionals as more likely to commit financial statement fraud as their financial position and capital needs put pressure on managers to achieve earnings targets. In addition, concerns about controls and reporting tend to lag behind operations in periods of high growth.
- **Depreciation Index (DepI)**- A DepI greater than 1 indicates that the rate at which assets are depreciated has slowed down, raising the possibility that the firm has revised upwards the estimates of assets useful lives or has adopted a new method that is increasing income.
- **Sales, General & Administrative Index (SGAI)**- This index is used because analysts

would interpret a disproportionate increase in sales as a negative signal about firms future prospects. If sales increase faster than expenses there needs to be an explanation. If not, the SGAI may be pointing to overstated revenues.

- **Leverage Index (LeVI)**- This index captures the increasing reliance on debt financing, as this increases the firm's financial risk and the likelihood of earnings manipulation (*e.g.,* debt agreement constraints).
- **Total Accruals to Total Assets (TATA)**- An increase in accruals from one period to the next may indicate management is attempting to manipulate earnings through its discretionary authority over accrual policy. The presence of higher accruals and a corresponding decrease in cash often can be an attempt by management to internally finance its losses.

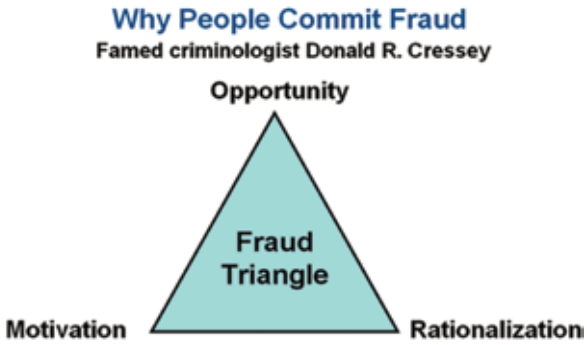
Finally, M-score needs to be calculated which is:
M Score = M = -4.84 + 0.92*DSRI + 0.528*GMI + 0.404*AQI + 0.892*SGI + 0.115*DepI – 0.172*SGAI + 4.679*TATA – 0.327*LevI

A score greater than -**2.22** (*i.e.*, less negative than this) indicates a strong likelihood of a firm being a manipulator.

Fraud Triangle and Its Use as Forensic Accountant

The first quantitative study of embezzlement was done in the late 1940s by Donald R. Cressey, who interviewed approximately 300 convicted fraudsters who had been confined to state prisons in an effort to determine if the offenders had any commonality in their crimes.

He observed the presence of three things in his study— opportunity, motivation and rationalisation.



This is an important correlation because if an organisation succeeds in interrupting one of these three elements of the triangle then it can prevent and deter frauds. Although it is difficult to totally eliminate the elements of fraud, if they are minimised, the likelihood of occurrence of fraud can also be minimised.

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Role of Chartered Accountants in Forensic Accounting

With a growth of Indian economy, financial statement frauds are rising. Every year, investors loose thousands of crores of rupees due to white-collar crimes. The infamous Satyam scam of 2008, followed by the CWG, 2G Spectrum and Ranbaxy scams have heightened the need for the development of forensic accounting as a profession in India. These financial scandals have shaken the investor's confidence and have made forensic accounting an attractive career opportunity for finance professionals to combat fraud. This makes forensic accounting a fastest growing area of accounting today.

Conclusion

With the ever-increasing pressure on employeesto achieve targets and on the management to show growth of bottom line only increases the probabilities to fraud being committed in any organisation. Traditional auditing is getting less effective day by day to keep a check over the employees and top management. To manage this ever-increasing risk, many multinational organisations are employing experts in forensic accounting for early and timely detection of frauds. Time has come for us to recognise that accounting and finance world need fraud-specific methodologies in order to be effective in fighting against fraud. ■