



Forensic Accounting and Fraud Investigation: A Conceptual Summary

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Abstract

The rampant increase of corporate fraud demands accountants and auditors to take utmost care of the company financials. Particularly, it requires an intense investigation of the accounting records to find out the underlying reasons for the fraud and take necessary legal action. On this backdrop, we see the emergence of forensic accounting as a sub-discipline within accounting and legal studies. This paper provides a conceptual understanding of forensic accounting and fraud investigation in the accounting discipline. Drawing evidence from literary, the paper briefly illustrates few critical issues: first, it defines forensic accounting and contrasts it with regular auditing function; second, it describes the role of forensic accountants and the skills needed for forensic accountants; third, it shows different categories of fraud and how forensic accounting is engaged with a fraud investigation; finally, it reports on the forensic accounting education with examples from different countries. The paper has important implications for accounting professionals, auditors, fraud investigators, and national policymakers. The paper is limited to the extent that it does not provide empirical evidence from an institutional context. Nevertheless, the paper could be used as an important guide to carry out empirical work in the context of Bangladesh and its corporations.

Keywords: Forensic Accounting, Fraud Investigation, Corporate Fraud, Forensic Accountants.

1.0 Introduction

In 2002, the world had observed the collapse of US energy sector giant Enron Corporation when it was at the peak of business with the reputation of 'America's most innovative companies' for six consecutive years by Fortune. In 2016, the world had observed a series of paper leak, known as Panama Papers, which revealed that how the worlds' wealthy investors avoided tax by establishing shell companies in remote tax havens. In either case, the beneficiary companies or parties used an accounting device to fulfill their ill motives. So, the question remains, whether the regular accounting and auditing fail to recognize such unethical and illegal activities? What alternatives could we foresee then to maintain an ethical business practice?

Fraud and scandals are not something new to the world. However, over the last two decades, issues such as corporate fraud, white-collar crime, creative accounting and earnings management have become burning questions among the public sector policymakers, business professionals, media and academicians. Notorious corporate scandals such as Enron, WorldCom, Tyco and Satyam came under public review, and people started taking more interest in corporate affairs. Moreover, public sector corruption is a worldwide phenomenon and is increasing over time. Both the corporate world and the policymakers started giving more emphasis on the issues such as corporate governance, auditing, corruption control and stakeholder interest. Because of these corporate scandals and stakeholder awareness, a relatively new branch of accounting called forensic accounting has emerged. This sub-discipline of accounting has already proven its importance in the eyes of the stakeholders. These days, forensic accounting is being taught in several universities and colleges with the help of its separate and unique textbooks. Accounting researchers are also getting interested in this topic and are continuously writing and publishing research articles in renowned journals. This paper attempts to provide a conceptual guide to the understanding of forensic accounting and fraud investigation.

The paper is structured as follows: first, it defines forensic accounting and contrasts it with regular auditing function; second, it describes the role of forensic accountants and the skills needed for forensic accountants; third, it shows different categories of fraud and how forensic accounting is engaged with a fraud investigation; finally, it reports on the forensic accounting education with examples from different countries.

2.0 Forensic Accounting- Meaning and Differences with Auditing

The 'forensic accounting' term has been evolved over time in meaning and multitudes (Botes and Saadeh, 2018). Researchers have defined the term from a wide range of perspectives. Until the beginning of 1990s, it had been narrowly defined as the producer of legal evidence to be used in the courtroom (ibid). Conversely, in recent decades, forensic accounting has been considered to play a greater role in investigating corporate scandals and white-collar crimes (see, Botes and Saadeh, 2018; McMullen and Sanchez, 2010). Some of those key definitions are presented here:

Table-1: Definition of Forensic Accounting

Year	Author	Definition of Forensic Accounting
2010	Singleton and Singleton	The term forensic accounting refers to the comprehensive view of fraud investigation. It includes preventing frauds and analyzing antifraud controls. Forensic accounting would include the audit of accounting records in search of evidence of fraud: a fraud audit. (p. 12)
2012	Hopwood, Leiner and Young	Forensic accounting is the application of investigative and analytical skills for the purpose of resolving financial issues in a manner that meets standards required by courts of law. (p. 3)
2014	Chattopadhyay	... forensic accounting refers to the application of accounting principles, theories and discipline to facts and hypotheses at issue in a legal context, embracing litigation or any other form of dispute resolution such as arbitration. (p. 22)

	Huber and DiGabriele	[...] a multidisciplinary field that encompasses both a profession and an industry, where civil or criminal economic and financial claims, whether business or personal, are contested within established political structures, recognized and accepted social parameters, and well-defined legal jurisdictions, and informed by the theories, methods, and procedures from the fields of law, auditing, accounting, finance, economics, psychology, sociology, and criminology.
2015	Rufus, Miller and Hahn	... the use of accounting theories, principles, or analyses in a legal action, often through expert witness testimony. (p. 17)

From the above definitions, it can be understood that forensic accounting is mainly related to the investigation of frauds and financial irregularities and legal procedures concerning frauds. The term forensic 'underscores the application of scientific methods and techniques to the investigation of crime, as much as it is concerned with courts of law' (Chattopadhyay, 2014, p. 22). Moreover, as a multidisciplinary field, forensic accounting substantially interacts with other disciplines (DiGabriele and Huber, 2015).

Although forensic accounting requires an integration of accounting, auditing and investigative skills, it differs from the traditional financial audit. Financial audits are statutory and recurring in nature. That means public limited companies are required to perform the financial audit in every financial year (or at a regular interval). However, forensic accounting does not have this recurring nature. Forensic accountants are solicited whenever people think that a fraud has taken place in the organization. Forensic accountants investigate the fraud and deal with the case in the court of law. The differences between the statutory audit and forensic accounting are presented here.

Table-2: Statutory Audit vs. Forensic Accounting

	Statutory Audit	Forensic Accounting
Objective	The objective of statutory financial audit is to provide an opinion to the stakeholders on the fairness of overall financial statements for a particular period.	The objective of forensic accounting is to ascertain the likelihood of fraud occurring and determining the magnitude of the fraud.
Nature	In general, a statutory audit adds credibility to the financial statements.	The purpose of forensic accounting is to deal with particular suspicions related to accusations of fraud.
Frequency	The statutory audit is conducted on a recurring basis.	Forensic accountants are consulted when a particular problem/question/suspicion needs to be addressed. That means forensic accounting is non-recurring .
Beneficiary	In general, the statutory financial audit serves the interest of investors and other stakeholders.	The audience of forensic accounting is the engaging party who employs the forensic accountants to investigate a particular fraud.

3.0 Forensic Accountants- Skills and Attributes

Big accounting firms and professional institutes (AICPA, for example) advocate for the application of training and skills of chartered accountants to investigations, disputes and other reviews (Botes and Saadeh, 2018). This simplistic view considers only chartered accountants have the skills and knowledge required to work as forensic accountants. However, forensic accounting has multidisciplinary perspectives, and the term 'forensic accountants' can be applied to anyone who is engaged in a fraud investigation. In terms of investigative services, the forensic accountants may perform three significant activities: fraud detection, fraud examination and fraud deterrence (Rufus et al., 2015). Fraud detection is related to the discovery of fraud. When there is an indication/

suspicion of fraud, forensic accountants can be hired to examine the depth and nature of fraud. A proactive firm can undertake fraud deterrence strategy to prevent fraud. Potential preventive strategies include pre-employment screening, employee training and monitoring, inculcating ethical organizational culture etc. Other than these, forensic accountants can get involved in financial viability assessment such as analysis of financial and management sustainability and determining the reasonableness of insurance claims (ibid). According to Pedneault, Rudewicz, Sheetz, and Silverstone (2012), forensic accountants can also be employed in case of dealing with bankruptcy, insolvency and reorganization, computer forensic analysis, economic damage calculations and business valuation. Moreover, forensic accountants can provide litigation services (Rufus et al., 2015) such as expert witness services (can express opinions as expert witnesses) and consulting services (such as assisting the attorneys).

In general, forensic accounting service demands a wide range of skills from the part of the service providers. An individual may not possess all the qualities and skills that are needed to perform a particular investigation. A team consisting of people from multiple disciplines can be employed to carry out a particular forensic accounting engagement. Forensic accountants should have a skeptical mind and a keen interest in problem-solving.

According to Rufus et al. (2015), a forensic accountant should have the ability of critical thinking, reasoning and communicating. By **critical thinking**, the authors focused on the ability of being rational, skeptical, reasonable, well-informed and open-minded. **Reasoning** involves the capability of drawing inferences and conclusions. Lastly, the forensic accountants have to be sound in both written and oral **communication**. Their reports have to be clear, concise, comprehensive, and grammatically correct. Moreover, in many cases, forensic accountants have to defend their report in court. That is why they must have good oral communication skill.

Tiwari and Debnath (2017) mentions that forensic accountants have to be competent in six areas. **First**, they must have good accounting skill. They must be aware of the accounting standards and the practices of creative accounting. Also, knowledge about financial

analysis (especially, financial ratios) is essential. **Second**, they should have good knowledge of the tools and techniques of auditing. **Third**, knowledge of statistics is important. It is expected that the forensic accountants should possess the knowledge of statistical methods, model fitting and data mining. **Fourth**, in the era of the fourth industrial revolution, forensic accountants have to be aware of the information technology. Cybercrimes are becoming common phenomena these days. The knowledge of information technology can be helpful in investigating these crimes. **Fifth**, they should have human behavior skills as forensic accounting involves the investigation of frauds and corruption. Interpersonal skills can be helpful in this kind of investigations. **Sixth**, the knowledge of legal matters is also critical as forensic accountants are expected to deal with legal matters in the court.

According to Singleton and Singleton (2010), the required knowledge, skills and abilities of forensic accountants include:

- i. Capability of identifying frauds with the help of minimum information by applying effective procedures.
- ii. Ability of interviewing several parties while seeking evidence and information.
- iii. Ability of healthy skepticism (tendency to question).
- iv. Knowledge of collecting useful evidence and presenting them in the court.
- v. Ability of presenting the findings to the stakeholders/interested parties.
- vi. Knowledge of the investigative techniques.
- vii. Appropriate investigative skills required for a particular investigation.
- viii. Having investigative mentality that helps to go beyond accounting and auditing standards.
- ix. Capability of identification of financial issues in relation to any 'complaint, allegation, rumor, inquiry, or statement of claim' (Singleton and Singleton, 2015, p. 25).
- x. Ability to interpret financial information to test the business reality.

Drawing from a stakeholder perspective, Kramer, Seda and Bobashev (2016) has documented several skills of forensic accountants from literary sources:

Table-3: Skills of Forensic Accountants

Source of Evidence	Required Skills
Meservy et al. (2006)	Interrogation and interviewing skills, evidence sources, fraudulent financial statement schemes, criminology, computer/internet fraud techniques or skills and people/human relations skills
DiGabriele (2008)	Critical thinking, unstructured problem-solving, investigative flexibility, analytical proficiency, oral and written communication, deductive analysis, legal knowledge and the ability to maintain composure.
Davis et al. (2010)	Analytical skills, communication skills, the ability to simplify a complex issue and the ability to present opinions in a legal setting.
McMullen and Sanchez (2010)	Analytical skills, followed by expertise in basic accounting, problem-solving and data analysis.

Source: Developed from Kramer, Seda and Bobashev (2016)

Therefore, from the above discussion, it is conceivable that in order to be a forensic accountant, a person should not only possess the technical skills of accounting/auditing/computing/statistics but also have a good grasp of analytical, communication and social skills. In this advanced information age, they should have good command over the use of information system packages in fraud investigation.

4.0 Fraud- Concept and Typology

Fraud can be found in almost every culture and every country in the world. It exists both in the private and public sectors. Every kind of organization, regardless of its type, size or industry, has to deal with fraud. The word fraud has a negative connotation. Usually, people react negatively to the news of any fraud. In general, fraud results in financial loss. Rufus et al. (2015, p. 158) defined fraud as ‘the unlawful taking of another’s property by deception’. Skalak, Alas and Sellitto (2006), has identified four elements for any act of fraud: first, a false representation (false statement or omission) that is material in nature; second, the suspect knowing that the representation is not accurate; third, the person/party (the victim) who received the representation relied on it; and the representation and the reliance on it resulting in financial loss, damage or injury for the victim. Cressey’s (1953) fraud triangle has been one of the influential theoretical frameworks to understand fraud. It has identified three necessary conditions for fraud to occur: pressure (a non-shareable problem), opportunity (lack of internal controls), and rationalization (the ability to justify one’s actions). In 2004, Wolfe and Hermanson introduced the “Fraud Diamond Model” where they added one additional condition: ‘the fraudster’s capabilities’ which assert that the perpetrator must have the capability to commit an act of fraud with confidence. More recently, Kranacher, Riley and Wells (2010) have introduced MICE framework that considers Money, Ideology, Coercion, and Ego/Entitlement as motivations to commit fraud.

Although fraud varies in scope, context and fraudster’s position, there is some commonality in the purpose of committing fraud. In this regard, Skalak et al. (2006) highlighted two broad categories of fraud: (1) employee fraud/misappropriation of assets and (2) financial statement fraud. **Employee frauds** include ‘the theft of cash or inventory, skimming revenues, payroll fraud, and embezzlement’ (Skalak et al., 2006, p. 5). Asset misappropriation (the most common kind of fraud) includes ‘billing schemes, payroll schemes, expense reimbursement schemes, check tampering, and cash register disbursement schemes’ (ibid). **Financial statement fraud** includes intentional misstatement/omission in the financial statements. This kind of fraud is committed with an intention to deceive the stakeholders (mainly the investors). Rezaee (2005) also investigated the underlying reasons of financial statement fraud. He suggested a framework of ‘CRIME’, which refers “C” for Cooking the books, “R” for Recipes, “I” for Incentives, “M” for Monitoring or lack of it, and “E” for End Results. In general, corporate employees and management are responsible for this kind of fraud. This kind of fraud is a serious threat as it damages corporate reputation (Skalak et al., 2006) and erodes investors’ confidence in financial information (Rezaee, 2005).

The increasing accounting scandals have shown that people with high social status and organizational positions

are involved in committing fraud. This type of fraud is known as white-collar crime, and it is now evident in almost all economies in the world. Edwin Sutherland coined the term 'white-collar crime' to refer fraud 'committed by a person of respectability and high social status in the course of his occupation' (cited in Rufus et al., 2015, p. 160). White-collar crime has six features (ibid): first, **Deceit:** misrepresentation or concealment of truth by the offender; second, **Intent:** the fraud is intentional, means, it did not happen by accident; third, **Breach of trust:** because of the respectable position of the offender, there exists a trust factor between the offender and the stakeholders; fourth, **Losses:** the stakeholders have to bear the losses because of the actions of the offender who is securing a responsible position; fifth, **Concealment:** the crime remains concealed; and sixth **Outward respectability:** because of the respectable position of the offender, it becomes tough to challenge the crime. Forensic accountants can play an important role in dealing with white-collar crimes as Chattopadhyay (2014, p. 22) emphasizes: "In the ultimate analysis, forensic accounting and forensic audit are concerned with finding the truth to help punish the guilty and protect the innocent".

5.0 Forensic Accounting Engagement and Fraud Investigation

Forensic accountants investigate frauds. Chattopadhyay (2014, p. 22) mentions: "Forensic accounting encompasses all accounting and financial analyses performed for assisting counsel in connection with investigation, assessment and proof of issues in a dispute resolution proceeding. All these involve skillful gathering and reconstructing financial evidence and solving problems within the context of the rules of evidence and the legal system". So, finding relevant evidence and scientific inference is the most critical task that the forensic accountants perform.

Academics documented various approaches to forensic accounting engagement and fraud investigation. For example, both Rufus et al. (2015) and Hopwood et al. (2012) identified four phases in the forensic accounting and fraud investigation process. Analyzing their models, we find a total of five steps in a typical fraud investigation process. These are briefly discussed here:

Table-4: Forensic Accounting Engagement and Fraud Investigation Process

The Engagement	Once a fraud incident takes place, forensic accountants are employed to conduct the investigation. At this phase, the forensic accountant agrees with the client on the scope of the investigation.
Discovery of Evidence	At this phase, the actual investigation takes place, and the necessary pieces of evidence are collected from all possible sources. As such, the forensic accountants physically visits the place, observe the operations, interview people and collect archival documents.
Analyzing the Evidence	Forensic accountants exhibit their technical and analytical skills at this phase. To see the broader picture, they not only corroborate one source of evidence with others, but they also conduct statistical analysis here.
Communication	Once the analysis is completed, the forensic accountants need to communicate the findings through a formal report.
The Action	This is the final step of the entire investigation process. Once forensic accountants produce their report, the victim (individual/company) may initiate legal proceedings against the fraudster. In insured cases, the victim may recover the loss caused by the incident from the insurance company. Also, the forensic accountants and their report can be used as expert testimony.

6.0 Forensic Accounting Education

As discussed in section 3, forensic accountants need to have conceptual, technical, analytical, communication and social skills. Understandably, one cannot acquire

these skills on his/her own. They need to take part in forensic accounting education and training. The importance of forensic accounting education has been acknowledged by the academics, practitioners, professional bodies, regulatory agencies, users and other stakeholders (Kramer et al., 2016, Seda and Kramer, 2008). For example, Buckhoff and Schrader (2000, p.135) suggests “adding a forensic accounting course to the accounting curriculum can greatly benefit the three major stakeholders in accounting education—academic institutions, students, and employers of accounting graduates.” There are a handful number of research that provides evidence from various contexts and investigates the existing forensic accounting curriculum at both university and professional institute level. Drawing from Seda and Kramer (2014), we have calculated the alternative modes of forensic accounting higher education in different countries. We present the results here:

Table-5: A Brief Scenario of Forensic Accounting Higher Education

Mode of Higher Education	USA	Canada	UK	Australia	China	Others	Total
Separate Forensic Accounting Courses	422 (94.41%)	9 (2.01%)	3 (0.67%)	4 (0.89%)	2 (0.45%)	7 (1.57)	447 (100%)
Forensic Accounting Certificate and Degree Programs	58 (64.44%)	6 (6.67%)	11 (12.22%)	7 (7.78%)	1 (1.11%)	7 (7.78%)	90 (100%)
Forensic Accounting Concentration, Minor, Track or Specialization	97 (91.51%)	3 (2.83%)	2 (1.89%)	1 (0.94%)	-	3 (2.83%)	106 (100%)

The table shows that the USA has complete domination in forensic accounting higher education in the world. Apart from the USA, higher education in forensic accounting is mostly available in English speaking countries. Therefore, there is an apparent dearth of forensic accounting education in other parts of the world. Notably, as a leading world economy, China is falling behind of Anglo-Saxon countries in this regard. Just like forensic accounting higher education, USA also leads in accrediting professional certification for forensic accountants. Since 2008, AICPA has designed two new credentials for CPAs and financial professionals specializing in forensic accounting and business valuation: Certified in Financial Forensic (CFF) and Accredited in Business Valuation (ABV). Various associations have also been established to facilitate the forensic accountants’ professional matters. Huber (2011) terms these association as forensic accounting corporations. He reports that there are four for-profit forensic accounting corporations [National Association of Certified Valuation Analysts (NACVA), Association of Certified Fraud Examiners (ACFE), Forensic CPA Society Inc. (FCPAS), and American College of Forensic Examiners International (ACFEI)] and one non-for-profit association: Association of Certified Fraud Specialists (ACFS).

7.0 Conclusion

This paper presents a general overview of a recent branch or accounting – forensic accounting. Over the past few decades, because of the several notorious corporate scandals, the demand for forensic accounting has increased. Forensic accounting is a branch of accounting that is applied for any suspicion of fraud. It is a ‘specific’ engagement-based activity and non-recurring. The forensic accountants have to have several skills such as basic knowledge of accounting, auditing and financial analysis. They have to be skilled in human relations, communication, information

technology and statistics. Applying these skills, forensic accountants investigate the fraud incident taken place within an organization. Irrespective of the nature of fraud, forensic accountants perform their activities through a five-step process: the engagement, documenting the evidence, analyzing the evidence, the communication and the action. To produce competent forensic accountants, higher educational institutes are offering courses and several degree programs in forensic accounting. Professional institutes also run forensic accounting accreditation programs for their members. Moreover, several associations of forensic accountants have been established for members' professional development. This conceptual paper has important implications for academics, professional accountants, educational institutes, users and other stakeholders. It not only gives an introductory knowledge of forensic accounting to them but also helps as a guide to carry out future studies in forensic accounting issues (profession, regulation, education, etc.) in different contexts. 

References

- Botes, V. & Saadeh, A. (2018). "Exploring evidence to develop a nomenclature for Forensic Accounting." *Pacific Accounting Review*, 30(2), 135-154.
- Buckhoff, T. A. & Schrader, R. W. (2000). "The teaching of forensic accounting." *Journal of Forensic Accounting*, 1(1), 135-146
- Chattopadhyay, P. (2014). "A theoretical construct of forensic accounting and auditing." *The Management Accountant*, September, 22-28.
- Cressey, D (1953) *Other people's money: a study in the social psychology of embezzlement*. Free Press, Glencoe
- DiGabriele, J.A. & Huber, W.D. (2015). "Topics and methods in forensic accounting Research", *Accounting Research Journal*, 28(1), 98 – 114.
- Hopwood, W. S., Leiner, J. J. & Young, G. R. (2012). *Forensic Accounting and Fraud Examination* (2nd edition). NY: McGraw-Hill. (Chapter 1)
- Huber, W.D. (2011). "A Comparison of Forensic Accounting Corporations in the United States." *Journal of Accounting, Ethics & Public Policy*, 12(3), 301 – 339.
- Huber, W.D. & DiGabriele, J.A. (2014), "Research in forensic accounting – what matters?" *Journal of Theoretical Accounting Research*, 10 (1).
- Kramer, B., Seda, M. and Bobashev, G. (2016). "Current Opinions on Forensic Accounting Education." *Accounting Research Journal*, 30(3), 249-264.
- Kranacher, M. J., Riley, R., & Wells, J. T. (2010). *Forensic accounting and fraud examination*. John Wiley & Sons.
- McMullen, D. & Sanchez, M. (2010). "A preliminary investigation of the necessary skills, education requirements, and training requirements for forensic accountants," *Journal of Forensic & Investigative Accounting*, 2(2).
- Pedneault, S., Rudewicz, F., Sheetz, M. and Silverstone, H. (2012). *Forensic Accounting and Fraud Investigation* (CPE Edition). USA: John Wiley & Sons, Inc. (Chapter 1)
- Rezaee, Z. (2005). "Causes, consequences, and deterrence of financial statement fraud". *Critical Perspectives on Accounting*, 16(3), 277-298
- Rufus, R. J., Miller, L. S. & Hahn, W. (2015). *Forensic Accounting* (Global Edition). Boston: Pearson. (Chapter 1)
- Seda, M. & Kramer, B. (2008), "The Emergence of Forensic Accounting Programs in Higher Education", *Management Accounting Quarterly*, 9(3), 15-23.
- Seda, M. & Kramer, B. (2014), "An examination of the availability and composition of forensic accounting education in the United States and other countries", *Journal of Forensic and Investigative Accounting*, 6(1), 1-46.
- Singleton, T. W. & Singleton, A. J. (2010). *Fraud Auditing and Forensic Accounting* (4th edition). NJ: Wiley. (Chapter 1)
- Skalak, S. L., Alas, M. A. & Sellitto, G. (2006). *Fraud: An Introduction*, in Golden, T. W., Skalak, S. L. & Clayton, M. M. (Eds.), *A Guide to Forensic Accounting Investigation* (pp. 1-20), NJ: Wiley.
- Tiwari, R.K. & Debnath, J. (2017). "Forensic accounting: a blend of knowledge." *Journal of Financial Regulation and Compliance*, 25(1), 73-85.
- Wolfe, D. T. & Hermanson, D. R. (2004). "The fraud diamond: Considering the four elements of fraud". *The CPA Journal*, December, pp.1-5.