

A Brief Overview of Forensic Accounting and Its Present Position in a Middle East Country

Dr. Nabil Ahmed Mareai Senan

Assistant Professor, Accounting Department,
College of Business Administration,
Prince Sattam Bin Abdulaziz University,
Al-Kharj, Saudi Arabia.
and Administrative Science College,
Al-Bayda University, Yemen.

M. M. Swalih

St. Xavier's College,
Trivandrum, India.

Abstract

The world over economic crimes has increased in scale and size. The average annual cost of financial fraud is estimated to be around five per cent of the revenue of any company, with the overall figure amounting to trillions. This pervasiveness of economic crimes has highlighted the need for Forensic Accounting. Though this discipline in the present form is of recent origin, it has a long history that dates back to several centuries BC. Forensic Accounting involves the in-depth application of certain special skills in areas like accounting, auditing, finance, quantitative methods, research, law, etc. In addition to these a Forensic Accountant has to collect required evidences in the event of any criminal proceedings. Now Forensic Accounting is listed as one of the top 20 careers of the future. The present article discusses about the utility and prospects of Forensic Accountings as a profession and its present position in Saudi Arabia. Lots more need to be done in Saudi Arabia towards elevating the position of this profession.

Key words: Economic crime, Cyber crimes, Forensic Accounting, Forensic Accountant, Saudi Arabia

Introduction

In the recent past economic crimes and frauds has reached astronomic proportions. Economic crimes occur despite the presence of so called 'proactive and foolproof checks, balances and systems'. Economic crimes and frauds have been in existence ever since man started indulging in trade and commerce originated. Present day economic crimes; according to Mehta (2009) include; corruption, corporate fraud, tax evasion, smuggling of goods, stock markets manipulation, counterfeiting currencies, credit card fraud, environmental crime, intellectual property infringement, etc. There are also certain other crimes like assets misappropriation, embezzlement, kickbacks, insider trading, bribery, conflicts of interests, etc.

The world over, economic crimes from dishonest personnel are posing enormous challenge to the society and economy. In the globalized and networked economy, there has been a manifold increase in the scale of economic crimes (Bussman, 2003), with large sums of public money being siphoned off by unscrupulous businessmen. It is estimated that, the world over, the average annual cost of financial fraud is around five per cent of revenues for any company, and the overall figure could be over US\$3.5 trillions worldwide (ACFE 2012). Organized crimes

have now acquired global ramifications, with the aftereffects adversely affecting national debt, and even posing immense threats to national security. The Economic Council of Europe (2005) is of the opinion that economic crimes have adverse impacts beyond the direct individual victims as it:

- 1.affects a large number of persons, society and the state,
- 2.damages the functioning of the national or international economy, and
- 3.causes loss of trust and confidence in the economic system.

Cyber-crime is of recent origin. Perpetrators of cyber-crimes often manipulate or destroy the database, even without the consideration that it may have been built over a long period of time spending massive amounts (Sulphey, 2014). Detecting and preventing cyber-crimes is herculean in nature, and in many cases perpetrators of such crimes remain untraced. In this background the discipline of Forensic Accounting is of immense significance.

Forensic Accounting

Forensic accounting is a specialized field within accounting that conducts investigation about frauds, including analysis of various financial records and information to be used in legal proceedings. Forensic Accounting has been defined by various institutions and academicians in the field. According to the American Institute of Certified Public Accountants (AICPA) forensic accounting is 'the application of accounting principles, theories, and disciplines to facts or hypotheses at issue in a legal dispute, and encompasses every branch of accounting knowledge'. Horthy defines Forensic Accounting as:

"The science that deals with the relation and application of finance, accounting, tax and auditing knowledge to analyse, investigate, inquire, test and examine matters in civil law, criminal law and jurisprudence in an attempt to obtain the truth from which to render an expert opinion."

Now the help of Forensic Accountants is sought to untangle various issues caused by perpetrators of financial crimes. They are now sought by various business houses, insurance firms, accountants, etc. Though Forensic Accounting in the present form is of recent origin, the discipline has a long history that dates back to centuries. An examination of this long history of this discipline, and its vast potential in the current world would definitively be informative and timely.

History of Forensic Accounting

Though the modern version of Forensic Accounting

originated and grew as a profession during the second half of 20th century, subsequent to the adoption of 'Generally Accepted Accounting Principles' (GAAP), this discipline has been in force for over centuries.

Earlier history

The earlier history of Forensic Accounting dates back to about 3500 BC. Archeological evidences from Mesopotamia and Egypt between 3500 BC and 3300 BC, have evidences of accountants or scribes recording monetary transactions using damp clay tablets or papyrus. In order to ensure that no tampering or alterations were done to the original documents, they were enfolded into clay envelopes. Tampering of such documents was subjected to investigations. In the event of confirmation of foul play, the perpetrators were subjected to punishments like fines, mutilations or even death penalty. At the time of Pharaohs of ancient Egypt, officials used to take physical inventory of grains and valuable assets like gold and ornaments. Embezzlement and bribes were often dealt with severe and harsh penalties, which could even be death.

In India the first recorded history of Forensic Accounting is credited to the Mauryans. Reference to the discipline is found in Arthashastra (Science of Material Wealth) of Kautilya. In this book, which dates back to 300 BC, 40 ways of embezzlement were presented. According to the book some forms of embezzlement include:

"what is realized earlier is entered later on; what is realized later is entered earlier; what ought to be realized is not realized; what is hard to realize is shown as realized; what is collected is shown as not collected; what has not been collected is shown as collected; what is collected in part is entered as collected in full; what is collected in full is entered as collected in part; what is collected is of one sort, while what is entered is of another sort."

In addition to narrating various forms of embezzlement, Kautilya also stressed the need for various checks, and accounting and auditing to deal with them. He was so pessimistic about detecting an appointed official's dishonesty. According to him it is so difficult to detect such dishonesties, and compared the detection to 'detecting the amount of water that is drunk by a swimming fish'. Kautilya can also be credited of being the first ever author to articulate the views about Forensic Accounting as well as the need for forensic accountants.

Another classical example of Forensic Accounting was that of Archimedes. Without damaging the royal crown, Archimedes was capable of determining that it is not completely made of gold. This was done through determining the density of the crown by measuring the

displacement of water. In the court of Mogul emperor Akbar, Birbal his courtier used certain tricks to investigate various crimes of officials. These instances cannot however be considered as a 'formal' form of Forensic Accounting.

Recent history

The recent history of Forensic Accounting is credited to Lawrence Dicksee (1892). He wrote a near to comprehensive book (Published in America in 1905), entitled 'Auditing: A Practical Manual for Auditors'. In this book he listed three audit objectives:

1. detection of fraud,
2. detection of technical errors, and
3. detection of errors in principle.

According to him the most important component of the auditor's job is fraud detection, and a good auditor is one who is invariably capable of detecting frauds.

The terminology 'Forensic Accounting' was coined by Maurice E. Peloubet in 1946. The term was introduced in his essay entitled 'Forensic Accounting: It's Place in Today's Economy'. This discipline was used extensively during the World War II by various governments across the globe. However, the formalized procedures with respect to Forensic Accounting came into being only in the 1980s. It was during this time that a number of academic studies were published in the field (Rasey, 2009). Now Forensic Accounting has become a specialty area of the accountancy profession dealing with engagements that could lead to actual or anticipated disputes or litigation. A number of experts attempted to define what Forensic Accounting is. A few such definitions are provided in Table 1.

Table 1
Forensic accounting defined

No	Author	Definition
	Association of Certified Fraud Examiners (ACFE) (2014).	"application of accounting principles, theories, and discipline to facts or hypotheses at issues in a legal dispute and encompasses every branch of accounting knowledge"
	Institute of Cost Accountants of India (2014)	"an examination of evidence regarding an assertion to determine its correspondence to established criteria carried out in a manner suitable to the court"
	American Institute of Certified Public Accountants (AICPA) (2004).	"the use of professional accounting skills in matters involving potential or actual civil or criminal litigation, including, but not limited to, Generally Acceptable Accounting Principle; the determination of lost profit, income, assets, or damages; evaluation of internal controls; fraud; and any other matter involving accounting expertise in the legal system"
	Horty (XXXX)	"the science that deals with the relation and application of finance, accounting, tax and auditing knowledge to analyse, investigate, inquire, test and examine matters in civil law, criminal law and jurisprudence in an attempt to obtain the truth from which to render an expert opinion."
	Ozkul and Pamukc (2012)	"the application of accounting and auditing, financial and investigative skills, to unsettled issues, conducted within the context of the rules of evidence"
	Arokiasamy and Cristal-Lee (2009)	"the application of auditing methods, techniques or procedures to re -solve legal issues that require the integration of investigative, ac -counting, and auditing skills".
	Stanbury and Paley - Menzies, (2010).	"the gathering, interpreting, summarizing and presenting complex financial issues in a clear, succinct and factual manner often in a court of law as an expert"

Bologna and Lindquist (1995) has provided a comprehensive definition, when they defined it as:

'the application of financial skills, and an investigative mentality to unresolved issues, conducted within the context of rules of evidence. As an emerging discipline, it encompasses financial expertise, fraud knowledge, and a sound knowledge and understanding of business reality and the working of the legal system'.

An analysis of the definitions in general, and that of Bologna and Lindquist (1995) in particular shows that Forensic Accounting has two major components – investigative services and litigation services. The utility of both the services are presented in Table 2 below:

Table 2
Utility of investigative and litigation services

Name	Particulars	Action
Investigative services	Involves a criminal-related investigation of matters such as employee theft, identity theft, embezzlement, securities or insurance fraud, or any other wrongdoing	<ul style="list-style-type: none"> ? Makes use of various skills of the forensic accountant. ? This investigation may or may not lead to a courtroom testimony. ? The accountant may after the investigation recommend actions that could facilitate in the minimization of future losses.
Litigation services	Involves existing or pending civil litigations, which could include quantifying economic damages that have occurred as a result of breach of contract or otherwise.	<ul style="list-style-type: none"> ? Does factual presentation of economic issues that could be related to any existing or pending litigations. ? The damages involved in legal disputes could be quantified, or may testify as an expert witness. ? Assistance with respect to resolving the disputes in such a manner that legal wrangles are avoided.

The objectives of forensic accounting are thus broad. According to Crumbley, Heitger and Smith (2005) Forensic Accounting involves the in-depth application of certain special skills in a host of areas. Some of them include accounting, auditing, finance, quantitative methods, research, law, etc. Other skills include assessment of damages that could have been caused by an auditor's negligence, fact-finding to establish the occurrence of any embezzlement, its quantum, and the need for any criminal proceedings; as well as the collection

of required evidences in the event of any criminal proceedings.

Skills required for a Forensic Accountant

Forensic Accountant should have a host of different knowledge skills sets distinct from other accountants (Smith and Crumbley, 2009). Prime among them is the perfect knowledge of accounting, auditing and legal environment. Other skills and competencies include communication skills (both written and oral), reasoning

(logical and legal), critical and creative thinking, IT skills, etc. In addition to this he should have the investigative skills to collect, analyze, and evaluate evidences; and the capability to interpret and communicate the findings. A Forensic Accountant to be successful should utilize his understanding of business information and financial reporting systems; accounting and auditing standards and procedures; evidence gathering and investigative techniques; as well as litigation processes and procedures. Another important desired quality is the capability to look beyond mere numbers and deal with business realities based on each situation, which may be unique in nature. He should also be capable of examining all possible alternatives in the given situation, scrutinizing the finer details of the issue, and at the same time presenting a wider picture. Further, he should be expert in analyzing, interpreting, summarizing and presenting complex financial issues; investigating and analyzing financial evidence; communicating findings in the form of reports, and assisting in legal proceedings.

Bhasin (2013) is of the opinion that forensic accountants require an eclectic set of skills that should include communication, accounting and auditing, IT, meta-thinking, etc. In addition to this they should also have skills with respect to applied sciences like psychology, criminology, law, etc.

An indispensable ability that a Forensic Accountant should possess is the ability to respond instantly and communicate the required information clearly and concisely in courtroom settings. Normally this is an area where all auditors flounder. There are many occasions where the guilty had to be left off due to inability of the concerned person to prove wrong doing before the court of law. To succeed in identify suspects and testify before courts, Forensic Accountants need to use a whole range of evidences that could include physical, testimonial, documentary, and demonstrative. Overall, a Forensic Accountant is expected to have three layers of knowledge. The Base layer that consists of accounting knowledge; the Middle layer which includes knowledge of auditing, internal controls, risk assessment and fraud detection; and Top layer that pertains to the knowledge about the legal environment and a strong communication skill.

Need for Forensic Accounting

Forensic Accounting need to accomplish the indispensable job of helping organizations, individuals and the society at large to detect and prevent frauds, so that large sums of public money are not lost. The occurrence of a number of business failures in the recent past due to scandals of astronomical proportions has revealed the compelling need

and indispensability for Forensic Accounting. Some of the business failures that highlighted the need for Forensic Accounting include BCCI, Enron, WorldCom, Barings, Lehman Brothers, Satyam, Reebok, etc. These scandals resulted in the loss huge amounts of investors' money and public trust, and prompted many companies to take drastic proactive steps to restore the lost public confidence. Some such steps include drastically improving the internal control and accounting systems. These developments have increased the importance of forensic accountants around the world. Certain other compelling areas that a Forensic Accountant need to get involved include fraud, valuation, bankruptcy, and a host of certain other professional services (Calyurt and Idowu, 2012).

With e-commerce gaining traction the modern day Forensic accountants need to play a proactive risk reduction role. This could be accomplished through designing and performing extended procedures as part of statutory audit; and involving in advisory services activities to the audit committees and assisting them in fraud deterrence activities.

The profession of Forensic Accounting

Just as a forensic physician is responsible to determine the cause of a victim's death by scientific methods, forensic accountants are expected to investigate the cause of financial fraud referred to them. The importance of the discipline has made Forensic Accounting to be listed among the top 20 careers of the future (Ozkul and Pamukcu, 2012). Forensic Accountants are expected to net the perpetrators of theft and frauds amounting to billions annually, that occur in the business world. Their job includes such activities ranging from tracing money laundering and identity theft activities to tax evasion. There are also further sub-specializations among Forensic accountants like those involved in insurance claims, personal injury claims, fraud detection, construction, royalty audits, etc.

In the US Forensic Accounting gained prominence in the mid-1990s. With the arrival of the Sarbanes-Oxley Act of 2002, the formation of the Public Company Accounting Oversight Board (PCAOB), and the implementation of the Statement on Auditing Standards No. 99; there was a drastic change in the auditing environment. This made a compelling shift in the professional skills required for the auditors as focus is now on preventing fraud, rather than its detection. Experts opined that the future demand for auditing services will depend on the auditors' capability to "detect and deter fraud" (Carpenter, 2007; Wilks and Zimbleman, 2004). Certain others like Coenen (2006), and Zikmund and O'Reilly-Allen (2007) were of the firm

conviction that adding forensic skills to the audit process would assist in fulfilling the expectation gap of clients and shareholders.

In the western countries majority of the large firms have 'specialist' forensic accounting departments. However, in the Middle East there is a definite need for the profession of Forensic Accounting to be provided the badly required thrust and boost. The profession is yet to get the required position and importance in this part of the world, despite the fact that business activity has multiplied in the recent past.

The uses of Forensic Accounting

Forensic Accounting has a wide array of uses in the current world (Sulphrey, 2014). They can be summarized as under:

Criminal Investigations: The services of a Forensic Accountant can be used for criminal investigation of financial and other related frauds. Their services are normally sought by investigative Agencies, regulatory bodies and stake-holders.

Stakeholders' disputes: In the event of any disputes between stakeholders, for instance partners, Forensic Accounts could be called in for a detailed analysis of financial records over a certain period so that the issues of dispute could be quantified.

Insurance claims: The insurance policies have become complex in the modern day business. They differ significantly with reference to covers, applicability, and terms and conditions. Modern policies and insurance claims require in-depth review and investigation to ascertain coverage, genuineness and quantity of claims in the event of a claim. Many of these assignments would require the services of a forensic accountant.

Business related Fraud investigation: This investigation involves a plethora of services which include asset identification and recovery, tracing of misappropriated funds, gathering of intelligence, preventive actions, due diligence reviews, etc. Many of these investigations are required to determine the existence and extent of fraud, as well as identifying the perpetrator(s). In-depth investigations covering documents, interviews with personnel and management, analysis of statements, etc. would be required to gather documentary evidence that may be tenable before a court of law.

Dispute settlement: Another area where the services of forensic accountants become handy is dispute settlement. Examples of disputes that can be handled by them include contract/breach of contract disputes, product liability claims, infringement of patent, trademarks and related

cases, etc. Matrimonial disputes of celebrities are also nowadays handled by Forensic accountants.

Of late the number of professional bodies involved in forensic accounting has increased drastically. There are many traditional universities that offer forensic accounting as core courses as well as optional. Another aspect that many even offer the course online! The Chartered Accountants Institutes of many countries have added this subject to the curriculum or has initiated it as a short term course. Though some strong steps have been taken in various parts of the work in the right direction more needs to be done to enrich this challenging discipline.

The future of Forensic Accounting

With multifold increase in financial operations, the climate of fraud has undergone a sea change, with the possibility and intensity of accounting frauds increasing drastically. Though based in the traditional disciplines of accounting and auditing, Forensic Accounting requires a different and broader set of knowledge, training, approach and expertise (Crumbley, Heitger, and Smith, 2011; Smith and Crumbley, 2009). It is an effective tool that helps in preventing the occurrence of white collar crimes that could devastate the very fabric of any society. However, it is still in a volatile and nascent stage and requires technological reinforcement on a continuous basis and global cooperation.

Forensic accountants have the task of translating and transforming complex financial transactions, deals and the numerical data in such a way that laypersons are able to understand it. They have to examine all relevant financial records, definitely look beyond numbers and have to closely analyze the frauds based on the various underlying circumstances. They have to investigate frauds and provide impeccable legal support services and bear witness before the court of law. The current scenario has also enhanced the requirement of computer forensic investigators, and this is set to increase manifold in the near future (Tysiac, 2012). The future forensic accountants will require extensive IT skills. Forensic accounting will have to develop as a (super) specialty profession of accounting with a tinge of law and IT. There will be the need to have close interaction with law enforcing agencies and various regulators. Towards this there is a definite need for in-depth research in the area, with accountants taking a prime role.

Forensic accounting in Saudi Arabia

Though forensic accounting has developed substantially and matured in various parts of the world; it is still in the nascent stage in most parts of the Middle East, especially Saudi Arabia. With the volume and depth of business

operations multiplying in leaps and bounds there definitely are a need for a proportionate growth in the discipline of Forensic Accounting. With the current transition phase that the kingdom is passing through, there is an urgent need to have professionally qualified and experienced Forensic Accountants. In the recent past [Saudi Arabia](#) have succeeded in recouping over \$100bn that were allegedly siphoned off from state revenues, though its anti-corruption purge. This was done through examination of the personal finances of over 325 businessmen by forensic accountants. However, there is definite paucity of qualified Forensic Accountants in the kingdom.

In Saudi Arabia, the Saudi Organization for Certified Public Accountants (SOCPA) is entrusted (by Royal Decree Numbered M/12) with the duty and responsibility of promoting the profession of accounting and auditing, and all other associated matters. It operates under the direct supervision of the Ministry of Commerce, Government of Saudi Arabia, with an intention to “promote the accounting and auditing profession and all matters that might lead to the development of the profession and improve its status” (www.socpa.com). The recent drive by the Saudi Government to root out corruption has highlighted the importance of this profession. However, the apex body that is expected to take the required steps, SOCPA, seems to be still in slumber. Though the custodian of accounting standards and profession in Saudi Arabia, it is doubtful if SOCPA has provided Forensic Accounting the due importance and status. The website of SOCPA does not find any mention of Forensic Accounting at all. Though many companies like Saudi ARAMCO appoint Forensic Accountants for their various projects, it is doubtful if the corporate sector has taken seriously its need and significance.

The big consulting companies like Deloitte, KPMG, PWC, etc. now have a pool of Forensic Accounting personnel stationed in the Middle East. It is these personnel who cater to the needs of large corporate in the region. There definitely is the need to scale up the availability of Forensic Accounting profession in the region, if it is to safeguard the aspect of accountability and transparency. Towards this SOCPA need to put in more efforts, in terms of conduct of courses and training programs, to orient the current accounting professionals as well as to build a fairly good population of Forensic Accountants in Saudi Arabia. As the volume of business in the kingdom increases multifold, there will be compelling need for more such trained professionals in the near future.

Even in academic circles, Forensic Accounting seems to be in its infancy. A search in various academic repositories provided only a few studies (Alhassan, 2017; Alhassan and

Saad, 2016; Al-Saad, 2013). Most of the available studies were found to be generic in nature. There is definitely a lack of in depth empirical analysis in various aspects of Forensic Accounting. The study of Al-Saad (2013) concludes with a mere statement that Forensic Accounting needs to provide certain professional opinions to judicial officers with respect to financial litigations whenever required. Another study is of Alhassan and Saad (2016). This study reported a few findings based on per cent analysis. These findings were also generic in nature, for which data was collected from Asir region of the kingdom. Some of the findings include the contention of 82% of the respondents that the skills required by chartered and forensic accountants are different. Other findings include certain per cent of the respondents' opinion about reduction of financial and administrative corruption, the obstacles faced in the country in applying forensic accounting, etc. In a recent study Alhassan (2017) surveyed 120 respondents of a few diverse groups. This study with questionable methodology found that “forensic accounting is an effective tool in uncovering diverted fraudulent practices and identifying misappropriated assets and reversible insider transactions” (sic). Another finding was that there existed significant differences in the duties performed by forensic accountants' and auditors. The studies reveal the level of infancy of Forensic Accounting in academic circles too. There is a definite need to elevate the discipline of Forensic Accounting from the current “infant dormancy”. The profession needs to be popularised among the industry and academic circles. Courses and training programs on Forensic Accounting need to be introduced and periodically updated in Universities and colleges. Towards this, as the apex body of professional accountants in Saudi Arabia, SOCPA needs to take an earnest and lead role.

Conclusion

Forensic accounting requires the combination of the discipline of Accounting, Finance Law, etc. Its duty is to use various techniques to investigate and unearth fraudulent dealings and embezzlements of public money through the analysis of financial information. It also has the responsibility to present the associated evidences before the court of law during the conduct of legal proceedings. As the economies of the Middle East, including Saudi Arabia, develop and enhance their position in terms of volume and size, there is a definite need to have heightened level of scrutiny to achieve the required accountability as well as transparency.

Now most businesses across the region face risks and challenges that were hitherto unheard of; like fraud, international arbitrations and litigations, etc. In addition to

this there is the definite need to optimize the delivery of various capital investment projects; which needs heightened scrutiny. Forensic Accounting is the sole answer to all these modern complex issues. There is, as such, the need for the profession to grow and thrive. It needs to wake up from the slumber and accomplish its tasks. These aspects call for renewed focus and thrust towards this profession. SOCPA need to take a more proactive role in popularizing and professionalizing the discipline of Forensic Accounting. It is expected that this work will act as a trigger towards these directions among administrative bodies, professional associations, industry leadership and academia to take up the cause of popularizing and professionalizing the Forensic Accounting profession.

References

- Alhassan and Saad (2016). Forensic accounting Accounting and Reduction of Financial and Administrative Corruption in the Kingdom of Saudi Arabia. *Journal of Accounting, Auditing and Governance*, 1(3), 41-76.
- Alhassan, A. F. M (2017). Forensic Accounting and Financial Fraud: Evidence from Saudi Arabia, *El-Bahith Review*, 17, 41-47.
- Al-Saad, S. A. (2013). Forensic accounting in the Kingdom of Saudi Arabia: Current practice and future perspective: An empirical study (exploratory). *Journal of King Abdul Aziz University Economics and Administration*, 27(1), 3-94.
- American Institute of Certified Public Accountants (AICPA) (2004). *Forensic services audits and corporate governance: Bridging the gap*, New York: Author.
- Arokiasamy, L., and Cristal-Lee. S. (2009). Forensic Accounting: Public Acceptance towards Occurrence of Fraud Detection. *International Journal of Business and Management*, 145-160.
- Association of Certified Fraud Examiners (ACFE) (2014). *Fraud examiners manual*, Texas: ACFE.
- Bhasin, M. L. (2013). Survey of appropriate skills required by forensic accountants: empirical evidence from a developing economy. *International Journal of Accounting and Economic Studies*, 1(2), 53–73.
- Bolgna, G. and Linquist, R. (1995). *Fraud Auditing and Forensic Accounting: New Tools and Technique*, 2nd Ed. New York, NY: John Wiley & Sons.
- Carpenter, T. D. (2007). Audit team brainstorming, fraud risk identification, and fraud risk assessment: implication of SAS No. 99, *Accounting Review*, 82 (5), 1119-40.
- Crumbley, H. and Smith (2011). *Forensic and Investigative Accounting*, 5th ed., CCH Chicago, Ill.
- Ozkul, F. U. and Pamukcu, A. (2012). Fraud Detection and Forensic Accounting, in Caliyurt, K. and Idowu, S.O. (eds.), *Emerging Fraud*, Springer-Verlag Berlin Heidelberg, DOI: 10.1007/978-3-642-20826-3_2.
- Smith, G. and Crumbley, D. (2009). How divergent are pedagogical views toward the fraud/forensic accounting curriculum? *Global Perspectives on Accounting Education*, 6, 1–24.
- Stanbury, J., and Paley-Menzies, C. (2010). *Forensic Futurama: Why Forensic Accounting Is Evolving*. Available in <http://Www.Aicpa.Org/Publications/Newsletters/Aicpacpainsider/2010/Jun28/>
- Sulphey, M. M. (2014). *Behavioural Finance*, New Delhi: PHI Learning Pvt. Ltd.
- Tysiac, K. (2012). Demand strong for forensic accountants in wake of financial crisis. *CPA Insider*. Available at http://www.cpa2biz.com/Content/media/PRODUCER_CONTENT/Newsletters/Articles_2012/C PA/Sep/Forensic Accounting.jsp
- Wilks, J.T. and Zimbleman, M.F. (2004). Using game theory and strategic reasoning concepts to prevent and detect fraud, *Accounting Horizons*, 18 (3), 173-84