

Changing the model for prevention and detection of fraud

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The traditional model for evaluation of audit risks related to detection of irregularities is not effective

Introduction

Accounting firms have incurred significant legal expenses over the last few years defending cases filed by third parties which claim that they lost their investment because of the auditor's inability to detect fraud and a related material misstatement. The Big Six alone between 1990 and 1993 paid out over \$1 billion to settle cases related to fraud including Ernst & Young (\$400 million in 1992) and Arthur Andersen (\$65 million in 1993) settlements to the Resolution Trust Corporation. Litigation expenses according to the Big Six's 1992 joint statement entitled "The litigation crisis in the United States: impact on the accounting profession" equal up to 11 per cent of audit revenues. Litigation expenses along with practice management problems are noted to be the primary reasons for the demise of three national firms between 1990 and 1993 (Laventhol and Horwath, Spicer and Oppenheim, and Pannell, Kerr and Forster). Public concern for fraud detection began during the early 1970s when the famous Equity Funding and Penn Central cases occurred[1,2]. These cases raised public concerns which eventually led to the Senate commission directed by Senator Lee Metcalf known as the Metcalf Commission and the AICPA commission directed by Manuel Cohen known as the Cohen Commission. These two commissions made various recommendations which were eventually adopted by the Financial Accounting Standards Board (FASB) and the Auditing Standards Board (ASB) during the late 1970s. During this same time-period Congress was also responding to the public's general concern regarding ethics brought on by the Watergate hearings. This eventually led to the passage of the Foreign Corrupt Practices Act (FCPA) in December 1977 under the Carter administration.

The actions of the 1970s seemed temporarily to pacify the concerns of government regulators such as the Securities Exchange Commission (SEC), Congress and investors.

However, the savings and loan débâcle during the mid-1980s created a new wave of public concern and Congressional inquiry which eventually led to the formation of the Treadway Commission. The Treadway Commission's charge was to help the accounting profession maintain self-regulation duties while prescribing effective recommendations to guide the ASB's development of standards to help detect and prevent fraud. The Commission's 1987 report led to the ASB's issuance of nine statements of auditing standards (SAs) called the "Expectation gap" in 1988. These nine SAs (Nos. 53 to 61) were designed to outline clearly the external auditor's role concerning fraud, and enhance overall audit procedures for detecting and preventing fraud. These standards also sought to enhance communications between the auditor and the audit committee, the auditor and management, and the auditor and the public.

The wave of litigation indicates that a gap still exists regarding the auditor's responsibility to detect fraud. More importantly, recent cases such as Phar-Mor Drugs (\$350 million fraud case where Coopers & Lybrand is being cited for audit failure) in 1992 indicates that the auditors are not successful in detecting material misstatements which are related to fraud. This article posits that the traditional model for evaluation of audit risks related to detection of irregularities is not effective[3,4]. We propose a model which focuses on gaining an understanding of the organizational culture. We offer a summary of the costs of fraud as a background to support the rationale for adopting a new model for fraud detection which follows next.

The cost of fraud

The US Chamber of Commerce estimates that the annual cost of fraud exceeds \$100 billion. This big bill for fraud is not paid by its perpetrators, rather it is paid by innocent parties including consumers, insurance companies and public servants such as external auditors. The cost of fraud eventually bites into the profitability of the victimized organization as well as the stability of the

US economy. The impact of fraud can be viewed from both a micro and a macro perspective.

Micro perspective

Fraud involves a misallocation of resources or distorted reporting of the availability of resources. This contradicts the elements of sound and prudent management. Fraud impairs efficiency, productivity and innovation because it siphons away resources to non-constructive activities. This limits an organization's ability to manage, grow and succeed. For example, the Drexel Burnham Lambert case resulted in the demise of one of Wall Street's most prestigious firms. The glamour associated with Michael Milken, who will undoubtedly survive, is overcast by the thousands of lost jobs. In addition, what about the host of investors who lost their life savings owing to the scandal? Likewise, the MiniScribe case cost jobs as well as the credibility of its auditor Coopers & Lybrand. Corporations cannot remain healthy and remain competitive if fraud continues to go undetected. The resources misallocated threaten the longevity of a firm. Losses incurred owing to fraud can be translated into decreased sales, employment, productivity, and credibility. In fact, the only increase associated with fraud is the cost of legal and insurance protection[5].

Macro perspective

Congress will ultimately approve over \$500 billion to bail out the savings and loans institutions (S&Ls). That is enough money to give every college-bound student a four-year all-expenses-paid scholarship with ample funds left over to finance a national job skills training programme. Simply stated, the cost to bail out the S&Ls equals 12.5 per cent of the approximately \$4 trillion in national debt. The effect of fraud on the economy parallels the effect it has on an organization. Fraud diverts funds which are needed for constructive programmes such as education and health.

The GAO estimates that white-collar crimes cost the government almost \$100 billion annually. This, combined with the US Chamber of Commerce's estimate for the cost of fraud to corporations of \$100 billion, represents a total cost to society of \$200 billion or 5 per cent of the national debt. The \$200 billion in losses is absorbed by the consumer/taxpayer which ultimately slows down the economy. Basic economic theory requires resources to be circulated to stimulate the economy through the multiplier effect. However, losses caused by fraud are diverted away from the mainstream economy. The FBI alone spends over \$86 million annually or approximately 24 per cent of its budget to combat fraud. The \$200 billion above does not include the cost of investigation or prevention.

Ultimately the cost of fraud is the impact it has on the moral fibre of our nation. Sociologists contend that fraud causes a pervasive attitude of "If others can do it, so can I",

which fosters and perpetuates further indulgences of white-collar crime. The status of recent offenders including CEOs and congressional members further erodes the value system since it sends out a conflicting message of social ethics and responsibility. Fraud has no boundaries as it has permeated the sanctity of religious entities (e.g. the PTL Scandal) and the credibility of governmental organizations (e.g. House Banking Scandal). Fraud is a result of the general disregard for ethical behaviour which stems from a variety of social and educational disorders.

Existing audit approach to detect fraud

The pervasiveness of fraud, as discussed above, is not currently captured in the extant methods for fraud detection which focus on the internal control environment. The existing model for an audit consists of obtaining management assertions (existence and occurrence, completeness, rights and obligations, valuation or allocation and presentation and disclosure) which represent their criteria per SAS No. 31 (Evidential Matter) used to record, classify and report economic events. These five management assertions are then linked to eight general audit objectives (validity, completeness, ownership, valuation, classification, cut-off, mechanical accuracy and disclosure) which per SAS No. 22 (Planning and Supervision) and SAS No. 31 represent the auditors' responsibility to determine the reliability of management assertions. These general audit objectives then generate specific audit objectives such as verifying the existence of inventory balances as reported during the audit period. The key element of audit planning and risk assessment is the basic audit-risk model:

$$AR = IR \times CR \times DR$$

where:

- AR = audit risk
- IR = inherent risk
- CR = control risk
- DR = detection risk.

This model per SAS No. 55 (Internal Controls) indicates that the auditor should plan for a level of acceptable risk based on the nature of the client and accounts under review, the system of internal controls and the overall likelihood of failure to detect departures from management assertions. SAS No. 55 and SAS No. 56 (Analytical Procedures) mandate that the auditor obtain a good understanding of the client's internal control environment. This understanding focuses on determining the extent that the auditor can rely on the accounting information generated from the client's financial reporting system. The review consists of using tools such as an internal control questionnaire, flow charts and narratives to assess strengths and weaknesses. This review is primarily focused on the financial characteristics of the organization. Very little attention is

placed on operational factors and broader organizational traits. The audit risk's independent variables (inherent, control and detection) all focus on specific accounts, control procedures or management assertions which are all directly related to the client's financial reporting system. The goal of an audit is to render an unbiased opinion regarding the fairness of presentation of the financial statements. How can the auditor provide such reasonable assurances without understanding the culture which surrounds the economic events translated, recorded, classified and reported by the clients' accounting system?

A 1993 survey of fraud was recently released by KPMG Peat Marwick, where they surveyed more than 300 major corporations regarding fraud. One respondent noted that the results of the Treadway Commission resulted in the need to "jump more hoops" rather than address the underlying issues which cause fraud. More than 76 per cent of the respondents experienced fraud greater than \$1 million. Several respondents experienced more than one type of fraud such as misallocated funds, forgery or misrepresentation of facts. Some firms recognized cultural factors as potential red flags, yet most of the firms indicated that they focused on financial-oriented red flags such as an erosion in profits.

During 1992 several companies such as Sears were cited for unfair practices involving the delivery of services. In Sears' case, their auto repair shops were cited for overcharging customers for work not performed, required or requested. In addition, Sears was cited for creating future service work by damaging an auto while it was being repaired. The internal auditors and the external auditors did not uncover these fraudulent acts. Sears' response was to change the compensation plan for service writers and service technicians in an effort to discourage unethical behaviour. In essence, Sears realized that they had created an environment which fosters fraud. Historically, service writers and mechanics work for low wages supplemented by a commission for services rendered. In other words, the more work they sold or performed, the more they earned. Consequently, the automotive repair industry has earned a dubious reputation for a lack of integrity and honesty. The culture which surrounds the profession promotes unethical behaviour. Yet, the existing guidelines for planning an audit, assessing risk and evaluating internal controls would not capture this characteristic. The process for internal controls per SAS No. 55 focuses on factors such as the existence of proper approval, control of documents, physical security, segregation of duties, and written policies and procedures. Application of the historical model for fraud detection to the Sears case would probably focus on the controls over inventory parts, recording of sales, collection of cash and payroll. The conventional audit would not have uncovered the repair scandal.

As of this writing Sears has not been cited for material management fraud where a misstatement in financial reporting was intentionally included to mislead users. However, a culture which is conducive to one type of fraud may also evolve into other types of fraud which could directly impact on the financial statements. Per SAS No. 1 (General Standards, Field Standards and Reporting Standards) and SAS No. 22 the auditor should obtain background information on the client. This information should include data related to the client's industry and client's lines of business and other economic factors which may affect the client. This information will help the auditor to develop levels of materiality and acceptable risks as denoted by the audit-risk model discussed above. Again, this information does not focus on gaining an understanding of the client's organizational culture, rather on economic events. In addition, SAS No. 39 (Statistical Sampling), SAS No. 48 (Computers) along with other audit standards prescribe specific techniques and tools to assist the auditor to gather evidence, all of which focuses on financial information. The standards do not provide guidelines for assessing non-financial information regarding the client's culture and determining the financial implications.

The enactment of the Federal Deposit Insurance Corporation Improvement Act (FIDICIA) in 1991 and Financial Institutions Reform, Recovery and Enforcement Act (FIRREA) in 1989 indicate that governmental regulators did not feel that SAS No. 55 provided sufficient guidance for auditors and management. FIDICIA and FIRREA provide explicit guidance for reporting, disclosing and evaluating internal controls. In fact these two acts have apparently had a pervasive affect on the profession, such as the Special Committee on Financial Reporting (formed by the AICPA board of directors in 1991 to address the relevance of current financial reporting disclosures) activities, and the report entitled "The information needs of investors and creditors". The report incorporates the spirit of the two federal acts regarding disclosure and the general need for more information regarding the internal control environment and management practices. The report also encourages the auditor to report more on the overall health of their client through more detailed disclosure. Yet both the federal acts and the AICPA report fails to address the issue of the auditors' ability to perform such services.

Alderman and Tabor[6] note that an audit should be risk-driven as a result of the issuance of SAS No. 55. Alderman and Tabor note that an efficient and effective audit requires the leadership of key risk factors such as control or inherent risks to direct the allocation of audit resources. Alderman and Tabor note that several auditors tend to follow audit procedures in a blind fashion without regard to the environmental specifics. In other words auditors often succumb to time-budget pressures and

merely perform a checklist rather than judgement-based exercise. Waller[7] also notes in an experiment with actual auditors the tendency to use control-risk assessment to confirm the selection of audit procedures selected in advance rather than the assessment dictating selection of procedures. We agree with the need for audits to be risk-driven. We also feel that the definition of risks should be expanded to ensure that the audit incorporates all of the economic and behavioural factors which can influence the reliability and integrity of financial information.

New trends in the profession

The profession has initiated new practices in the last few years to attempt to address the issue of audit failure. The AICPA mandated membership to its peer review process for firms auditing Securities and Exchange Commission (SEC) clients in 1989. This effort seeks to increase the level of quality control over the audit process and to help maintain the profession's self-regulated status. Walter Schuetze, chief accountant for the SEC, is critical of this process. Schuetze feels that the peer review process is only a post-review and at too high a level to identify the underlying weakness involving audit failure. We recently reviewed the current peer review letters for the top ten accounting firms and noted several cases of supervision and documentation problems. Yet all of the firms received a clean report. This appears to be contradictory to the peer review process.

The Committee of Sponsoring Organizations (COSO) of the Treadway Commission released their report in 1992 regarding the "Internal control-integrated framework". This report defines the framework for evaluating internal control systems, as well as defining the scope, objective and auditor's role in the internal control system. However, the COSO report falls short of defining the internal control, beyond the historic emphasis on the accounting process rather than the managerial process. Although the COSO report refers to the management process, the recommended evaluation tools all focus on the financial side of the equation.

Several firms such as KPMG Peat Marwick have disclosed major organizational changes to their firms to enhance their ability to service clients and to render quality audits. They promote a more team approach across lines of services such as tax and audit and consulting services. However, the proposed plans do not provide for an integrated approach to the audit process where representatives from tax and consulting will assist in the planning and quality control review of the audit. Thus, these reorganization efforts appear to have only a marketing benefit.

These trends suggest a desire to resolve issues related to audit failure. The Public Oversight Board's (POB) 1993 report recognized these trends and also noted that more needs to be done if the litigation issue and related allegations of audit failure are to be addressed successfully. In fact the spirit of the POB's report suggests that government, investors and the accounting profession gain a better understanding of the business environment through the implementation of various initiatives such as broadening disclosure guidelines for financial reporting and providing auditors with more assistance and support in the evaluation of a client's control environment. We feel that our proposed method for risk assessment will meet the needs of the profession as recognized by COSO and POB.

A new fraud detection paradigm

Overall, the extant guidelines for auditing direct the auditor to follow procedures which focus on economic events which should theoretically uncover material levels of fraud. We feel that the historical approach is too narrow and will only provide a limited degree of post-audit detection. We have revised the traditional audit-risk model to provide a more proactive integrated approach to prevent and detect fraud:

$$\text{Fraud detection risk} = (\text{corporate culture} \times \text{industry traits}) + \text{control risks}$$

These variables will be discussed in turn as they relate to the overall model and audit process.

The interaction of corporate culture and industry traits

Corporate culture and industry traits are denoted as interaction terms to parallel the posited relationship between a client's business and its respective industry segment. These variables cover the scope of non-financial information which we feel the auditor already examines or has access to review. Corporate culture is defined as the overall character of the company. For example, Glover[8] noted that the culture for a *Fortune* 500 construction company fostered poor quality which led to fraudulent reporting of completed construction, costs and misleading advertisement regarding materials employed to build each unit. Glover noted that this led to various lawsuits which ultimately resulted in the company filing bankruptcy. Glover noted that the firm's culture permeated throughout hiring practices, promotion and training. Yet the company, which was audited by one of the Big Six accounting firms, never received a qualified audit opinion or management letter which identified the economic consequences of these unethical practices. The overall corporate culture promoted self-maximizing behaviour which, as noted by Watts and Zimmerman[9], leads to a tendency to manipulate financial information to achieve personal objectives. As in the case with Sears, Glover noted that neither the external nor internal auditors determined that the overall corporate culture as

reflected in its human resource management practices influenced the propensity for fraud. Industry traits extend the concept of inherent risks to focus on the nature of the culture of the industry. Certain industries such as the gambling industry have a reputation for irregularities, while other industries, such as publishing, maintain a neutral reputation regarding integrity.

The interaction of corporate culture and industry traits yields the overall effect of the client's management philosophy and the general management style of the industry. If an auditor understands the corporate culture he will better understand where, when, how and why fraud will occur. For example, in the case of MiniScribe, which was accused of fraudulent reporting, the auditor should have investigated the nature of the compensation plans, aggressive expansion attitudes of management, employee morale, along with financial characteristics, to assess the potential for fraud to occur. This should have led to more detailed investigation of certain accounts such as revenue recognition and expenses, to determine whether any irregularities existed. In contrast, under the extant guidelines, the auditor would have only noted that MiniScribe had excellent controls and that the auditor should design the scope of the audit accordingly.

The scope of corporate culture

The corporate culture review should include a review of employee turnover rates at all levels, reasons for turnover, average employee tenure, nature and magnitude of customer complaints, product quality and related warranty expense experiences, nature of legal battles, employee morale as noted via observation, grievances, attendance, newsletter comments, comparison of wages with industry averages, credit rating, better business bureau reports, employee benefits (day care, flexible hours, bonus and profit-sharing schemes, merit increases, performance review and evaluation process, etc.) and investment in employees such as training and office support. The auditor should also assess management philosophy as documented in their policies and procedures manual. The review should also include an analysis of the corporate board minutes to develop a broad perspective of the corporate culture rather than the traditional search for authorization of equity, capital expenditures and other major financial events. The auditor already reviews most of these documents, but fails to focus on the integrated effect of these individual components as noted by Davia *et al.*[10]. For example, Glover[8] noted that the auditor for the construction company noted above should have reviewed the legal files to detect a propensity to cut corners to make a profit. This philosophy led to significant legal expenses which ultimately led to the failure of the company. Likewise, the review of payroll files should reveal conclusions about the fairness of compensation, in addition to a test of the internal control structure.

The scope of industry traits

The review of industry traits should extend beyond the AICPA audit guides available for certain industries such as oil, gas, health care and banking. The review of the industry should consist of research of industry trade journals, business periodicals, newspapers such as the *Wall Street Journal* and other sources of information available through various electronic services provided by companies like Dun & Bradstreet, Standard & Poors or Moody. These sources of information provide information regarding operational, financial and managerial issues related to specific industries as well as specific companies. The auditor should be able to determine new managerial trends, labour issues (including employee morale, compensation and benefits), marketing strategy, and general ethical reputation of industry and certain clients. These sources are often skewed towards larger companies that are traded on the American Stock Exchange or New York Stock Exchange rather than NASDAQ (over-the-counter stocks). However, recent advances in technology (e.g. on-line services such as Prodigy) have opened access to smaller companies. In addition, the advances in technology have influenced larger firms such as Microsoft to remain on NASDAQ since they are now able to access a large market of investors at a lower cost than the larger exchanges.

The use of an organizational specialist

Furthermore, the auditor should seek to supplement the above sources of information with assistance from specialists. SAS No. 11 (Specialists) provides guidance on the utilization of specialists. In view of the significant costs of fraud discussed above and the impact on audit revenues and overall firm viability, it appears very reasonable to employ an organizational behaviour specialist to render an objective opinion regarding the corporate culture and its propensity to foster fraud. The employment of organizational or management consultants for larger firms would only result in marginal costs, since these firms already have staff with the requisite skills assigned to their advisory services divisions. These organizational professionals can provide additional evidence regarding the client's corporate culture after conducting a thorough investigation. This investigation does not have to be conducted annually, since culture remains stable over time and only changes, as noted by Bartunek and Franzak[11] and Katz[12], when a firm undergoes an organizational transformation. Annual updates could be conducted on a limited basis if the auditor feels it is necessary. The results of the review should be considered when developing a risk factor for corporate culture.

The idea for employing an organizational specialist is already being considered by one of the Big Six firms. Jim Hooten, a partner with Arthur Andersen, noted in a presentation at their 1993 Audit and Accounting

Symposium that a review of SEC enforcement letters and related lawsuits revealed the following factors related to audit failure:

- undue reliance on management representations;
- improper focus on form over substance;
- lack of appropriate level of scepticism;
- ignoring contradictory evidence;
- failure to understand the business;
- poor quality control.

Hooten noted that this review included Big Six and non-Big Six cases over the last six years. The factors noted above suggest that auditors have a tendency not to collect sufficient evidence, and rely on management to fill any gaps in information. In addition, the above implies that auditors fail to follow good judgement by not pursuing matters which merit further attention such as red flags. Hooten noted that Arthur Andersen recommends the employment of a behavioural scientist to help resolve these issues noted above and to provide a more comprehensive analysis of the client's background information. Hooten also noted that the firm is initiating a process to monitor client activities on a more frequent basis in order to gain a better understanding of the client's culture.

The scope of control risks

This model essentially broadens the current risk-model factors for inherent risk and detection risk into a more organizational and environmentally-based approach as noted above. The scope for control risks primarily is the same under this new model. As noted by SAS No. 55 the internal control system should provide the scope for determination of risks related to the client's environment for the safeguarding of assets and the assurance for the reliability of information generated by the accounting system. This is still a key risk which should be assessed in the same manner prescribed by GAAS. However, this risk should no longer be the focal point of the overall risk assessment process. Control risk must now be considered as part of the complete client environment. The *Accountant's Liability Newsletter* noted various incidences where auditors noted that the internal controls were operating effectively, yet the client managed to perpetrate a major misstatement in one of three common areas (financial reporting, inventory valuation and embezzlement). Thus, auditors have historically been blinded by the control risks so as not to focus on the big picture. As noted by Hooten above, auditors often failed in the past to respond to negative information or even maintain an appropriate level of scepticism. This suggests that auditors often became too comfortable with the control environment, without consideration for the overall corporate environment.

Using the new model

Once the auditor has completed an assessment of the corporate culture, industry traits (with the assistance of an organizational specialist) and control risks, then they can proceed to assess the client's internal control structure as prescribed by SAS No. 55, SAS No. 60 (Communication of Internal Control Results) along with other standards. The auditor should then develop a risk ranking for corporate culture and industry traits and control risk in the same manner as the traditional model. The lower the risk rankings for corporate culture and industry traits, the lower the fraud detection risk (failure to detect fraud). This new model requires the auditor to consider additional variables when reviewing the same set of information, soliciting information from clients or pursuing background information to establish levels of materiality. The outcome of this process should be an overall assessment of the likelihood for fraud to occur. The auditor would then proceed with the normal steps for planning the audit and establishing materiality levels and audit scope.

Benefits of the new paradigm

The consideration of corporate culture and industry traits provides an auditor with a basic understanding of the organization which supports the system of internal controls, supports management assertions and generates financial information. If the corporate culture promotes unethical behaviour, then the auditor should be alerted to consider the risks associated with this type of culture. The traditional model for planning an audit does not consider corporate culture and thus overlooks a key element which influences the perpetration of fraud. Bologna[13] and Bologna and Lindquist[14] noted that various psychological studies suggest that people can be classified into three categories:

- (1) 20 per cent are honest;
- (2) 20 per cent are dishonest; and
- (3) 60 per cent are as honest as the situation provides.

The last category possesses the greatest risk to auditors. Several of us are guilty of exceeding the speed limit on highways where we feel we will not be ticketed. Yet we obey the law in highly patrolled areas often referred to as "speed traps". Likewise, if the corporate environment promotes an "everybody is doing it, it is okay" attitude, then the auditor should be aware of this trait and consider it accordingly during the planning phase of the audit.

Summary and future implications

This article has offered an alternative approach to risk assessment and determining the likelihood for fraud to occur. The alternative approach is based on the premiss that corporate culture and industry traits significantly

influence the likelihood for fraud to occur. The proposed method cannot ensure 100 per cent detection of all fraud. However, it offers an advantage over traditional risk models since it focuses on the underlying causes for fraud, which should assist the auditor in both prevention and detection of fraud by identifying early warning signs. We also feel that this model will help the profession effectively address the risk of the current wave of restructuring which generally results in the reduction of various organizational levels. These levels have often played a major role in the internal control process. Thus, the profession will need a fresh approach to addressing these and other emerging issues.

Future studies should focus on field research where this approach is applied along with simulated comparisons of this approach versus the traditional models. This will enable practitioners to determine the relevance and effectiveness of this proposed model. This article should also assist standard setters to consider issuance of guidelines which support a more comprehensive approach to fraud detection. This would have to begin with a broader definition of fraud which covers both financial, operational, social and other moral and ethical conflicts beyond the scope of SAS No. 53 (Errors and Irregularities) and SAS No. 54 (Illegal Acts).

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Further reading

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