



ELSEVIER

Available online at www.sciencedirect.com



Accounting, Organizations and Society 32 (2007) 383–408

Accounting,
Organizations
and Society

www.elsevier.com/locate/aos

The business risk audit: Origins, obstacles and opportunities

W. Robert Knechel

Fisher School of Accounting, University of Florida, Gainesville, FL 32611, USA

Abstract

Is the business risk audit a better way to assess risks leading to focused audit testing, or is it simply a tool for generating opportunities to sell nonaudit services? Many feel strongly that the latter is more representative of the manner in which business risk audits were implemented. In this paper, I argue that the development of the business risk audit methodology in the 1990s was a complex process that arose naturally from the need to compensate for the commoditization of audits that occurred in the 1980s. The contemporaneous growth of risk management theories and processes provided a powerful perspective on which to base the re-engineering of the audit. However, the process of developing and implementing business risk audits was extremely difficult and may have run up against a number of unforeseen and unmanaged obstacles, particularly in regards to the existing rituals of the traditional audit. Given that the sales culture of consulting was taking hold among auditors at about the same time, it is possible that the well-intentioned efforts to revitalize the audit process were derailed by these difficulties and then diverted to support revenue growth via nonaudit services. When Enron and ensuing scandals occurred, questions arose as to whether the business risk audit was effective, or even appropriate. Regulatory initiatives that followed from the aftermath of Enron, such as an increased focus on management incentives for fraudulent reporting and greater in-depth analysis of internal controls, may provide a viable foundation for reconsidering business risk methods and melding the best of traditional substantive audits with the best of business risk auditing.

© 2006 Elsevier Ltd. All rights reserved.

There is now little doubt that the past few years have been a watershed period for the auditing profession. Beginning with the explosion of Enron on the public consciousness, followed rapidly by Worldcom, Ahold, and Parmalat, to name just a few glaring cases, it has become apparent that

something was askew with corporate governance, financial reporting and auditing at the end of the 20th century. Furthermore, given the presence of non-US based companies in the lengthy list of governance and auditing failures, there is also little doubt that this problem has developed global dimensions. A tremendous amount of commentary and research has addressed the root causes and long term effects of these tumultuous events. Fingers have been pointed at the complacency

E-mail address: w.knechel@cba.ufl.edu

of directors and audit committee members; the avarice of management; the conflicts among analysts, investment bankers and executives; the flaws of rules-based accounting; and the deterioration of professionalism among auditors (Arnold & de Lange, 2004; Zeff, 2003b). Undoubtedly, all of these observations are valid to some extent. The purpose of this paper is to examine a further aspect of the auditing profession that may have contributed to this chaos and largely transcends national boundaries, rules and regulations: the audit process itself.

The last 20 years have seen rapid and significant changes in the auditing profession. Deregulation of audit markets allowed firms to become more commercial in their pursuit of revenue growth (Chaney, Jeter, & Shaw, 2003; Healy & Palepu, 2003); cost cutting in the audit process placed pressure on auditors to get audits done efficiently at the same time that technology, globalization and financial engineering were increasing auditors' exposure to risk (Zeff, 2003a); and consulting became the engine for generating rapid fee growth, possibly at the expense of auditor objectivity (Toffler, 2003; Wyatt, 2004; Zeff, 2003b). In order to cope with these pervasive forces, audit firms increased the formal structure of their audit processes in order to obtain needed process consistency and cost certainty (Imhoff, 2003). Some have argued that the effect of these changes was the commoditization of the audit itself into a loss leader for other services (Chapin, 1992; *Wall Street Journal*, March 25, 2004).

While auditors obsessed about efficiency (and protecting themselves from litigation), the business community and certain segments of the accounting profession were pursuing new ideas in risk management. While risk, as a concept, was well-embedded in the culture of auditing as manifested by the audit risk model, it was only with the development of broader perceptions of risk such as enunciated in the COSO report, *Internal Control – Integrated Framework* (1992), that auditors adopted a broader focus on risk and risk management. As a result, conventional approaches to the audit were increasingly challenged inside the profession, leading to new initiatives to reverse the commodity-pricing of audits, undo some of the limiting structure of

formalistic audit processes, and redefine and reposition auditing services (Humphrey, Jones, Khalifa, & Robson, 2004). It is the resulting wave of audit process re-engineering that culminated in “business risk audits” that is the topic of this paper.

Was the business risk audit an improvement over “tried-and-true” audit methods? Did it increase the value of the audit? Was a business risk audit a better way to get at the risks of a client, or a better way to create opportunities for increased revenue? More pointedly, did the business risk audit contribute to the wave of audit failures that started with Enron? While these questions can probably only be answered with access to confidential files and records, there is some observable evidence that, no matter what the intentions of the supporters of business risk based audit methods may have been, the effective development and implementation of business risk audit methods may have been derailed by circumstances. First, the new audit processes may not have been developed fully enough to help auditors cope with the economic forces surrounding the market bubble of the late 1990s (Wilson, 2002). Second, internal forces within accounting firms may have partially diverted the audit process to support the consulting mentality that was rapidly coming to dominate the large firms (Arnold & de Lange, 2004; Toffler, 2003; Zeff, 2003b). Taken together, the series of revelations that followed Enron about perceived breakdowns in management fidelity, failures in corporate governance, and auditor non-feasance raised serious questions about the integrity of the audit process.¹ However, before business risk audit methods are thrown overboard, it is important to understand how and why they developed and how they may have failed. Only then can an informed judgment be made as to whether the business risk audit was a prime culprit

¹ Numerous authors have dissected the fall of Arthur Andersen after the Enron debacle. Interested readers are referred to Arnold and de Lange (2004), Cullinan (2004), Morrison (2004), Reinstein and McMillan (2004), Squires, Smith, McDougal, and Yeack (2003), and Toffler (2003) to name a few sources.

in the audit failures of the past few years or a good idea that arrived on the scene at the wrong moment.

This paper examines how the business risk audit² may be viewed as part culprit and part victim of events. While born of good intentions to improve the quality of auditing (Bell & Solomon, 2002, p. 28; Stewart, 1999), the path to effective implementation was rife with obstacles, many unforeseen and/or poorly managed. The paper addresses the nature of these obstacles, discusses how they may have undermined the potential success of the business risk audit, and speculates on how the business risk perspective may carry forward to the future. As noted by Zeff (2003a), “the paucity of evidence about actual changes occurring within the big firms ... poses a major difficulty in conducting research ...”. Therefore, much of the basis for the following analysis is drawn from field studies, consultations with audit firms, and extended discussions with a large number of practicing auditors, often conducted during training programs in business risk audit methods in a number of countries.³ During the period 1992 through 1998, I was able to discuss the development of audit processes as an insider with two of the then Big 6 firms. Also, I participated in approximately twelve case studies conducted under the auspices of the KPMG-University of

Illinois Case Development Program, some of which are reported in Bell and Solomon (2002).⁴ Also, prior experience with an international application of business risk auditing is reported in Eilifsen, Knechel, and Wallage (2001) and Ballou and Knechel (2002). To these personal experiences, I have added a review of comments published by other commentators, an analysis of relevant empirical and other research, and a review of regulatory and/or firm training materials relevant to the business risk audit.

The remainder of this paper is organized as follows: In the next section, I discuss the nature of auditing in the early 1990s with an emphasis on the role of formalism and structure in the audit process (resulting in the commoditization of audit services), the growth of risk management practices, and the profession’s first steps towards a business risk methodology. The second section discusses how these conditions laid the foundation for the inward revolution within audit practices that culminated in the re-engineering of the audit. In the third section, I discuss why the implementation of business risk audit methods may have been less successful than desired. Switching perspectives, the fourth section introduces and briefly discusses the outward rebellion of market stakeholders brought on by perceptions of self-serving, opportunistic behavior by auditors and systemic failure of the corporate governance system. Finally, I close with a few thoughts about the possible future of business risk based audit methods and discuss why key aspects of the business risk methodology should be retained in the auditing repertoire.

² I use the term “business risk audit” in a generic sense to refer to audit methods that consider client business risk as part of the audit evidence process. All major firms adopted this approach to some extent during the 1990s but the extent and nature of their use of business risk methods varied. Furthermore, because these methods were developed in parallel without much collaboration, there is a range of terminology and processes that constitute a business risk audit. In short, there is not a single form of business risk auditing common to all firms. For further insight into the differences across firms see Lemon, Tatum, and Turley (2000).

³ These discussions have been conducted under the auspices of universities, accounting firms and/or regulators in the US, the Netherlands, Belgium, New Zealand, Norway, Poland, Czech Republic and Germany.

⁴ In total, 10 US based field studies/cases were conducted during the time in question, as well as two international projects. Much of the material gathered during the in-person conversations was and is confidential and/or proprietary so this paper is somewhat constrained to reporting specific facts that are presented in publicly available documents. However, the ideas, impressions and concerns expressed in much of this paper are drawn from the private sources available to the author during the time period of the study.

The origins of the business risk audit

The role of formalism and structure in the audit process

In the 1980s, much of the intellectual debate about the audit process centered on the role of structure and quantification in the audit process. Due to the rapid growth of audit practices, the expansion of the professional personnel pool, improvements in technology, and the perceived need to reduce costs in the audit process, highly structured and formalistic processes were designed and implemented within accounting firms (Imhoff, 2003; Power, 2003). Bamber, Snowball, and Tubbs (1989, p. 286) describe structure as the “the arrangement of people, tasks, and authority to achieve more calculable and predictable control over organizational performance”. Cushing and Loebbecke (1986) consider audit structure to include organizational arrangements and technology, which includes prescribed audit tools and decision aids. In short, audit structure suggests a mechanistic approach to decision making that constrains the range of actions available to individual auditors in specific circumstances.

Increased audit structure was manifested in many aspects of the audit process. Refinements of statistical sampling (Felix, Grimlund, Koster, & Roussey, 1990), risk based testing (Kreutzfeldt & Wallace, 1990), analytical procedures (Knechel, 1988), decision aids (Messier & Hansen, 1987), and going concern evaluations (Mutchler & Williams, 1990) were natural outgrowths of the mantra that increased audit structure was the best way to control wide-spread and diverse audit operations. Consequently, audit structure was often viewed as the natural result of top-down dictates from the leadership of large firms trying to reduce the risk of serious errors in judgment within the audit process (Dirsmith & McAllister, 1982; Knechel, 2000). This view would suggest that more structure was better than less so as to drive the risk of audit failure to a minimum while also controlling costs. Structure was also perceived as a means to make audit conclusions more defensible in the unfortunate event of an audit failure (Francis, 1994, p. 252; Wallace, 1983).

The manner in which audits were planned and executed going into the 1990's was under increasing stress as numerous contemporaneous forces began to clash with the traditions of auditing and the professions' efforts to formalize audit processes. First, clients were exerting tremendous pressure on auditors to reduce fees (Zeff, 2003a). The growth in internal audit services within many clients exacerbated this pressure by allowing management to bring some of their required assurance activity inside the company, presumably at less cost.⁵ Whether open or disguised, the market for audit services was characterized by significant low-balling of fees as firms attempted to capture the future economic benefits of longstanding client relationships (DeAngelo, 1981; Simon & Francis, 1988). While increased fee consciousness among clients may seem like justification for formalizing cost-certain audit processes, clients were also demanding more for their investment in the external audit, suggesting a need for more expertise and knowledge among auditors. At the same time, relaxation of restrictions on advertising and solicitation in many countries (Palepu & Healy, 2003; Zeff, 2003a, 2003b) made it possible for accounting firms to aggressively pursue new business, especially new services perceived to provide significant growth potential and far removed from the basic audit

⁵ See Imhoff (2003). At the same time, the growth in internal audit outsourcing to major external firms also indicated that the internal assurance model was not always cost effective as the full costs of maintaining an internal audit staff became apparent. One element of the fully loaded cost that was probably not always appreciated was the cost of developing and retaining technical expertise that might not be used on a daily basis when focused on a single “client”. As a practical matter, the same personnel stayed with the client and performed the same internal audit work as before. While the debate about the appropriateness of outsourcing internal audit activity has centered on the potential loss of independence by external auditors, much less attention has been directed at the negative effects of “insourcing” assurance. For example, one might question why bringing auditing inside a company makes it more effective when it is less independent? This competing view may suggest that the debate should be about balancing costs and benefits of various assurance or control regimes and less about rigid adherence to one-dimensional rules. See Wallace and Kreutzfeldt (1991) and Rittenberg and Covaleski (2001).

upon which accounting firms were originally built (Wyatt, 2004). However, annuity based rents from audits became difficult to sustain due to the increased competition among firms (Anreder, 1979; Hay & Knechel, 2005). Audits started to be treated as a loss leader in order to leverage lucrative consulting contracts from clients (Imhoff, 2003).

As a result of fee (and cost) pressures, margins for audit services were under a great deal of strain and firms were beginning to investigate alternative models for delivering an audit. As noted, mechanization and imposition of structure were early efforts to standardize cost structures across audits and to wring efficiencies out of the audit process (Cushing & Loebbecke, 1986; Dirsmith & McAllister, 1982; Warren, 1984). One impact of these changes, probably inevitable but rarely acknowledged, was to reduce the amount of time devoted to the conduct of an audit, that is, hours devoted to audit work were systematically reduced across the client pool (Imhoff, 2003; *WSJ*, 3/25/04; Houston, 1999). Even more obvious was the reduction in substantive tests of transactions and related sample sizes in pursuit of efficiency (Power, 2003, Section 2). While not necessarily inappropriate if combined with improved methods of analytical testing and control evaluation, it is not clear that existing audit firm technology kept pace with the cutbacks in traditional testing (Report of the Panel on Audit Effectiveness, 2000; Sullivan, 1984). Coming during a period when businesses were increasingly complex, global, integrated and technology-based, firms may have been gambling on the efficacy of their methods more than they realized, possibly laying the foundation for some of the audit failures ten years later.⁶

An alternative view of the rise of structured audit processes was bottom-up demand for reducing the uncertainty and ambiguity surrounding the responsibilities of new entrants to the profession (Bamber et al., 1989). The expansion of audit firms in the 1980's caused firms to hire more and more personnel. In the US, the mass recruitment of new graduates required a homogenizing process whereby a fungible set of potential recruits were targeted from a large range of academic institutions (Imhoff, 2003). Such an approach to recruiting was not conducive to hiring innovative individuals (e.g., Francis, 1994, p. 262). More likely, the types of graduates caught by the recruiting net circa 1985 would have been students who enjoyed the computational clarity of financial accounting exercises and the rote learning methods often employed in low level accounting courses of the time (Big Eight White Paper, 1989). Upon entering the much more ambiguous environment of the audit profession, such clarity would be lacking, resulting in a level of discomfort for many new staff personnel.

In response, inexperienced professionals sought clarity in their responsibilities and tasks, thus creating an endogenous demand for audit structure. In this view, it is possible to perceive how increased formalism and structure could creep into the audit process and reduce the perception of ambiguity and uncertainty of the audit context without being imposed from above (Francis, 1994). As a formalistic facade allowed structure to pervade the audit process, judgment and individuality became less relevant to the audit process (Lemon et al., 2000; Sullivan, 1984). Taken to the extreme, the loss of judgment and flexibility threatened to reach a level of disfunctionality.⁷ As noted by Healy and Palepu (2003, p. 79): “The deeper problem with a standardized approach to auditing . . . is that it enables auditors to abdicate

⁶ It is also interesting to note the supply-side push for structure that became the focal point of much of the audit research of the time. The influence of quantitative methods on auditing was urged in early papers by Kinney (1983) and Knechel (1983). Subsequent research published in journals such as *Auditing: A Journal of Practice and Theory* reveals the preponderance of “structure” (e.g., quantitative) research in the academy at the time.

⁷ The impact of formalism may explain the result obtained by Fischer (1996) in his field study where he observed that participants did not appear to possess or discuss an in-depth understanding of the technical aspects of the audit technology they used in practice (p. 226).

their primary responsibility as processors of information”. That is, the more mechanization and the less judgment, the more rapid is the potential commoditization of the audit. This realization may have sown the seeds for the looming inward revolution of re-engineering which was unseen just over the horizon.

The growth of risk management

A coincidental and parallel set of developments in the business and auditing world was the increasing focus on risk management as a generalized approach for handling complexity.⁸ The concept of “risk” was not new to auditors as evidenced by the existence of the audit risk model as formally developed in the 1970s.⁹ The Foreign Corrupt Practices Act of 1977 required management to develop and implement systems of internal control to reduce various risks. As part of this mandate, the Act required management to establish an effective system of internal control over financial reporting. This focus was partially acknowledged in US auditing standards by the release of Statement on Auditing Standards No. 55, *Consideration of the Internal Control Structure in a Financial Statement Audit*, issued to address the profession’s so-called expectation gap (AICPA, 1996). SAS 55 required the auditor to obtain an understanding of internal control adequate for planning the audit but did not take the step of requiring testing of the

effectiveness of internal control. As a result of this relatively narrow interpretation of risk and control, auditors tended to focus their attention on risks that financial statements were materially misstated, rather than on a broader view of risk to an organization (Lemon et al., 2000, p. 10).

The profession’s perceptions of risk began to change dramatically with the release of the 1992 report *Internal Control – Integrated Framework* by the Committee of Sponsoring Organizations (COSO). Here, for the first time, auditors and accountants were presented with a view of risk and internal control that reflected something other than accounting errors.¹⁰ Similar initiatives later came out in Canada, *Guidance on Control* issued by the CICA’s Criteria of Control Committee (COCO, 1995), and the UK, *Internal Control: Guidance for Directors on the Combined Code* (the so-called Turnbull Code, 1999). Furthermore, the COSO report went a long way to sensitizing the profession to concepts of risk and risk management by identifying numerous dimensions of internal control that might be relevant to the conduct of an audit. Specifically, the well-known internal control “cube” in COSO (see Fig. 1) identified five components that were necessary for effective internal control, including the circumstances of the client (control environment), the ability to identify threats (risk assessment), the actions taken to intervene (control activities), the maintenance of controls (monitoring), and the ability to coordinate it all (information and communication). Risk management – and the more recent manifestation, enterprise risk management – became something that all businesses were expected to pursue as part of their basic operations. The COSO framework was eventually embedded in US auditing standards when Statement on Auditing Standards No. 78, *Consideration of the Internal Control Structure in a Financial Statement Audit: An Amendment to SAS No. 55* was issued in 1995.

⁸ In his book, *Risk Society: Towards a New Modernity*, Beck (1992) points out that modern society has reached a point where risk distribution may be more important than wealth distribution in driving decisions and determining who succeeds or does not. While his thesis is couched in terms of societal risks (e.g., environmental issues) and politics, the concepts of distributing risk across borders/boundaries/entities is consistent with the risk management view applied to individual organizations. For example, switching from a defined benefit pension plan to a defined contribution plan has the effect of shifting risk from the organization to the individual employee. In a similar manner, outsourcing of operations across international boundaries may have the same effect.

⁹ Culminating in 1983 in the US with the issuance of Statement on Auditing Standards 47, *Audit Risk and Materiality in Conducting the Audit* (AICPA, 1983).

¹⁰ It is interesting to note that the glossary to COSO does not include a general definition of “risk”, suggesting the narrow view of accountants regarding the role of internal control. The 2004 update to COSO, *Enterprise Risk Management – An Integrated Framework*, corrects this oversight.

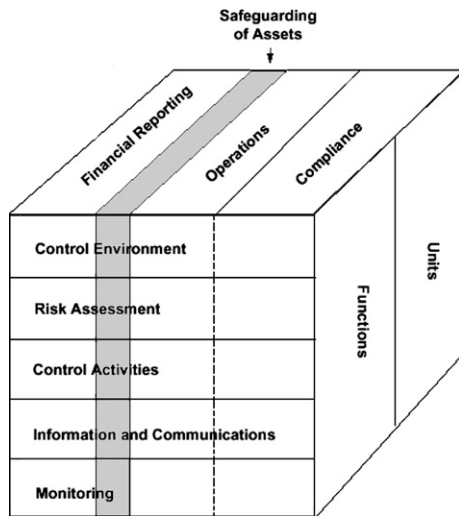


Fig. 1. The COSO internal control “Cube”. Source: Internal Control-Integrated Framework, Committee of Sponsoring Organizations of the Treadway Commission. 1992, AICPA, Jersey City, NJ.

Risk management meets auditing: the birth of business risk auditing

Given the rise of the risk-view of managing an organization, perhaps it is not surprising that concepts of risk management would seep into the world of auditing. On the one hand, client risk management could provide a basis for refocusing the audit process and to help control costs that were increasingly under pressure (Knechel, 2002). Companies that had effective risk management processes in place were arguably of lower risk from an audit perspective and could be audited with fewer resources. Of even more potential importance, perceived gaps in risk management at a client could become fodder for management letter comments (Bell & Solomon, 2002) and might yield lucrative opportunities for spin-off nonaudit services. Here, at last, was a framework for potentially reversing the commoditization of the audit (Lemon et al., 2000, p. 10).

Thoughtful members of the auditing profession began to raise questions about how the structure and formalism of the audit process could be adjusted or loosened so as to integrate the developing concepts of risk management within the audit

process. In short, to make the audit more valuable, it had to provide more value to clients – and the seed was planted that making auditing part of the mosaic of risk management, while leveraging effective risk management as part of the audit process, would provide the framework for such a revolution. This perspective led to a series of questions that, although not necessarily new to the profession, became increasingly important or viewed with a new appreciation.

Does the benefit of structure in the audit process derive from the automation and mechanization of judgment, or enhancing the fabric of judgment? Efforts at imposing structure on the audit process usually took the form of formal decisions aids, checklists and mandated procedures, often computer-based. However, the profession’s experiences with rigid aids that dictated auditor behavior were generally not successful, and were often resisted by auditors insightful enough to realize the threat that such tools might have for their own role in the audit (Francis, 1994). More successful were decision aids that fostered the use of judgment (e.g., memory aids) rather than replacing professional judgment (Ashton, 1990; Knechel, 2000).

Does examining a few transactions in a sea of activity provide adequate assurance over a stream of transactions? Traditional audit testing tended to be substantive in nature with heavy emphasis on controlling sampling risk. Audit sampling technology was developed to provide a basis for rigorous testing of large populations of transactions.¹¹ However, auditors often found themselves facing an uncomfortable dilemma. If they rigorously followed the assumptions of the sampling models, resulting samples were often seen to be uneconomically large (Kachelmeier & Messier, 1990). If they tried to use statistical models to justify smaller sample sizes, the appropriateness of the results might be questioned. Furthermore, when errors

¹¹ As is the case with most decision aids, it is possible that the introduction of “rigorous” methods is more about creating the appearance of rigor than the reality of rigor. The fact that decision aids are often ignored, misused or manipulated (including sample size guidelines) suggests that they are perceived by practicing auditors as either inefficient or ineffective, or both.

or deviations were found, projections often indicated an unacceptable level of risk, necessitating that auditors either expand scope or dismiss the discovered discrepancies as “unique”, i.e., not requiring projection to the population.¹² Consequently, auditors frequently retreated to judgmental sample methods that at least had the virtue of requiring less work, and sample sizes began a steady decline.

Are traditional substantive tests really as good as most believed? If sampling risk was a problem due to shrinking sample sizes, a related concern was the issue of nonsampling risk. While traditional audit tests could be quite effective if used properly in the appropriate situations, it is less obvious whether the nonsampling risks of such tests were well-understood by many auditors. In the infamous Mini-Scribe case, the auditor did an excellent count of inventory boxes only to find out later that they contained bricks, not hard drives (Knechel, 2001).¹³ Was this a case of the wrong test given the riskiness of the client? If auditors perform the wrong test given the underlying risk, misinterpret the results of a test, or are persuaded to discount negative results, nonsampling risk will be higher than an audit team expects. Cullinan (2004) observed that five large recent audit failures in the US were arguably due to nonsampling error in various forms. Furthermore, empirical studies of audit failures and related litigation have shown that most are due to nonsampling errors by auditors (St. Pierre & Anderson, 1984).

While sampling and nonsampling risks related to substantive audit approaches have always existed, it

is likely that technology, globalization, financial complexity and sheer size conspired to make such problems more critical to the audit. Alternative audit approaches were needed in an environment where millions of transactions occurred in a short period of time and were processed at the speed of technology without leaving a paper trail to be observed at the convenience of the auditor. Two traditional sources of audit evidence could have helped with these complexities – testing internal controls and analytical tests of overall results – but their increased use led to further questions about the conventional wisdom of auditing.

What does internal control mean in the context of the audit process? Although auditors have been asked in the past to evaluate internal control over financial reporting, evidence suggests that auditors have never been comfortable or effective at integrating reliance on internal control with other sources of audit evidence (Waller, 1993; Hackenbrack & Knechel, 1997). Part of the problem may have been that auditors tended to focus on very detailed process controls, such as document reliability, rather than focusing on management level controls that might have a more direct impact on the quality of the judgments and estimates which comprise the financial statements (e.g., Ashton & Ashton, 1988). Given developments in technology, the loss of paper trails, the non-transparency of transaction processing, and the possibility of conflicts of interest within the management team, the impact of internal control became increasingly crucial for effective audit planning and execution.¹⁴

Can analytical tests provide evidence that is as strong as evidence from traditional substantive tests? Early efforts to introduce analytical procedures to the audit process were often framed as multi-year comparisons of selected results that could be performed quickly by inexperienced personnel, so-called SALY procedures (Same As Last Year). Analytical procedures were often treated as “quick

¹² See an early edition of Arens and Loebbecke’s (1991) leading audit textbook for more on this issue (e.g., 5th Edition). Francis (1994) suggests that this approach may be a reasonable heuristic for auditors to use to compensate for the fact that the assumptions underlying most statistical sampling methods are not appropriate for accounting populations, i.e., all selected transactions are “not necessarily the same kind of ‘things’ drawn from a population of homogeneous ‘things’” (p. 256).

¹³ The Mini-Scribe case is a particularly notorious accounting fraud in the US. The company was able to fool the auditors by putting standard bricks into packages used for disk drives, shrink wrapping the boxes and piling them in the warehouse. Consequently, the auditor did not detect the over-valuation of inventory balances because it seemed to be “all there”.

¹⁴ Recent research suggests that auditors may be getting better at integrating internal control judgments with the planning of other audit evidence, possibly as a result of developments in internal control over financial reporting linked to the requirements of Section 404 of the Sarbanes Oxley Act of 2002 (Daigle, Kizirian, & Sneath, 2005).

and dirty” audit tests (Biggs & Wild, 1984). Experience has shown, however, that sophisticated and powerful analytical tests may be just as time consuming and expensive as traditional substantive tests.¹⁵ Such tests require an extensive investment in technology, databases and training to be fully effective. However, they have the advantage of providing evidence about populations rather than individual items in a population (Knechel, 1986).

Given some of the perceived problems with traditional audit methods, the possible solutions promised to be challenging and controversial. If substantive tests could not provide adequate evidence, than a shift towards risk and risk management was a logical step in the evolution of the audit. However, this shift in perspective came with its own set of questions. Less and less evidence was obtained independently of the human elements of the client’s environment. No longer could an auditor only rely on reading documents, and discussions of internal control systems and performance results became a larger portion of the body of evidence obtained during the audit (Cullinan & Sutton, 2002). The increasingly close consultations with client personnel made it necessary to re-examine how the auditor related to the client at the interpersonal level.

What are the boundaries of the auditor’s responsibility for policing management fidelity? In the past, the auditing profession has steadfastly refused to accept responsibility for detecting fraud in a client. At the same time, the general public has had the tendency to ask “where were the auditors?” whenever a major fraud became public knowledge. This unrecconciled conflict of opinion became highly salient to the public as a result of a series of audit failures in the 1980s. However, the use of the term “expectations gap” by the profession revealed the belief that the problem was the public’s lack of understanding of the nature (and limitations) of what auditors do (AICPA, 1993), rather than being a flaw in the audit process (Reinstein & McMillan, 2004). Furthermore, with increasing reliance on system controls

and performance measurement as audit evidence, the auditor’s relationship with management may have become increasingly symbiotic since such evidence often necessitated close interactions with management and client personnel. Given that consulting services were also expanding, the interests of auditors were becoming more intertwined with those of management. “Adding value” to the audit was often interpreted as value *to management*, which compounded concerns about the auditor’s ability to fulfill his professional responsibilities to a broader set of stakeholders (Healy & Palepu, 2003).

How can the need to collaborate with client personnel be balanced against the need to maintain professional skepticism? Even in the absence of concerns about fraud, increasingly intimate interactions with client personnel needed to be addressed. Evidence obtained from client inquiries has always been held in suspicion by auditors. However, as transactions and systems became more complex, and utilization of traditional audit tests declined, more and more of the body of evidence accumulated during the course of an audit was traceable to client statements rather than third party or even documentary evidence (*WSJ*, 3/25/04). For example, much of the insight into internal control developed by an auditor comes from direct interviews with critical process owners in an organization. Similarly, most analytical tests necessitate discussions with client personnel about the nature, pattern and meaning of performance results. Human nature causes auditors to be relatively trusting of reasonable stories garnered from such sources (Bedard & Biggs, 1991), possibly at the expense of adequate professional skepticism when the stories are self-serving. This problem can be confounded when the auditor is overly concerned with maintaining legitimacy in the eyes of the client (Power, 2003, p. 384).

Can assurance be expanded beyond the traditional audit without undermining independence? The last question is of extreme importance. The profession has suffered through confusion and controversy concerning the general issue of independence and *ad nauseam* debates about independence in fact versus independence in appearance (Elliott & Jacobsen, 1998; Kinney, 1999). While such debates are

¹⁵ See “Analytical Procedures” in *Auditing Practice, Research, and Education: A Productive Collaboration*, T. Bell, A. Wright, editors (1995) for overview of the development of analytical procedures in auditing and the role of research in that process.

certainly interesting, independence may not have been given much consideration within the discussion of making the audit more valuable and less of a commodity. Rather, much discussion was about making the existing audit relationship more valuable to the client and its stakeholders (Zeff, 2003b). This oversight may have contributed to the perception within the profession that there was little or no conflict in expanding consulting services to audit clients. The blurring, or possible conflicting, of adding value versus expanding consulting increased rather than reduced the controversy surrounding the meaning of “independence” (Elliott, 1994; Jeppesen, 1998).

The profession’s first small steps

The recognition of the limits on traditional audit testing, and the potential for a risk management framework to add value to the audit, led to a debate on whether formalism and structure in the audit process might be part of the underlying problems of the profession. As noted by Francis (1994, p. 253) “In the limit, structure completely removes auditors from substantive judgment which effaces . . . their capacity for practical reasoning over the ends and means of the audit”. In such an environment, the task (i.e., the audit) is refined to fit the tools available to the auditor (i.e., the inflexible audit process). Ultimately, the auditor runs the risk that the purpose of the audit is to demonstrate completion of the process, not necessarily to arrive at correct conclusions.¹⁶ Initial efforts to overcome this march towards structure and to address the questions raised in the previous section initially involved numerous small and moderate changes to the basic audit. Starting in the late 1980s, firms responded by:

- Recruiting better educated and more mature staff personnel. As a result, the ratio of hires of new graduates to experienced hires dropped dramatically at most firms (Toffler, 2003; Wyatt, 2004).

- Expanding investments in new, often just-in-time, training technology and better desktop support for technical analyses.
- Increasing industry specialization among professionals, including reorganizing services in firms along industry lines.
- Introducing new procedures for evaluating potential new clients and retaining existing clients, leading to marginal changes in a firm’s client portfolio.¹⁷
- Reducing reliance on traditional tests of account details as more focus was placed on tests of controls and analytical procedures.¹⁸
- Developing new audit programs for streamlining audit testing based on more comprehensive risk assessment procedures.

None of these changes shifted audit practice in a comprehensive manner. What these small efforts succeeded in doing was to demonstrate that creeping formalism could be reversed. Slowly re-instituting judgment to the audit process could be seen as the first tentative efforts to back away from a potentially dysfunctional audit process that was increasingly viewed as irrelevant to the capital markets and other stakeholders (Sundem, Dukes, & Elliott, 1996).¹⁹ As noted by Francis (1994, p. 241), the need to understand what is occurring in any given audit context “is not simply the act of reproducing tradition, . . . of unreflective obedience [to] tradition”.

¹⁷ See work by Johnstone (2000) and Bell, Bedard, Johnstone, and Smith (2002). An interesting, but unresolved, question related to advances in client acceptance procedures is whether the shifting of clients results in a net reduction in risk in the market. Each firm’s departure is some other firm’s gain so, unless the “fired” client makes efforts to mitigate the issues that caused the audit firm to take that action, the shifting of clients may reduce one firm’s risk but not the entire risk to the market, i.e., shuffling cards does not change the nature of the cards.

¹⁸ For example, see Fischer (1996, p. 225) for evidence about this substitution effect observed in a field study. Power (2003) points out that over-auditing, as evidenced by excessive sample sizes, is a form of business failure for the auditor since it is perceived as inefficient.

¹⁹ An interesting side note is that this was also the period in which the large firms were lobbying for a radical makeover of accounting education in the US based on the argument that educational programs were not adequately reflective of current trends in practice (see *The Big 8 White Paper*, 1989).

¹⁶ Francis (1994, p. 254) noted a similar warning in *A Statement of Basic Auditing Concepts* (AAA, 1973).

Rather, the evaluation of an audit problem requires a degree of judgment that goes beyond a standardized set of parameters provided by mechanization and which may or may not be appropriate to a given context. Although small, these alterations in conventional audit wisdom instigated the momentum that eventually culminated in the mid-decade wave of audit process re-engineering.

The inward revolution: the audit re-engineering phenomena

Against the backdrop of these forces for change, many auditors began to realize that significant changes might be needed in the profession's approach to audits, possibly even a paradigm shift. An internal study by one international accounting firm found that in spite of their best efforts at cost control, an exorbitant amount of unnecessary and redundant work was being done on audits, especially considering the typical tasks assigned to low level staff auditors (Hackenbrack & Knechel, 1997; Knechel, Rouse, & Schelleman, 2005). Using an approach based on the management of total quality, the firm concluded that a large portion of audit work did not increase the level of assurance for the engagement, nor did it provide noticeably improved value to the client. Ironically, much of the wasted time across audits could be attributed to mandated requirements of the structured audit, pointing to the possible need to rethink the nature of the audit process.

Around 1994, a very simple notion seemed to catch hold among influential members of the academic and audit community: "Business risk drives audit risk" (Eilifsen et al., 2001). This notion is depicted in Fig. 2, adapted from Lemon et al. (2000). Stated simply, anything that had the potential to increase the risk that organization would not meet its objectives was also seen as a source of increased audit risk.²⁰ The notion that risks in an audit arose from a deeper fountain of risk in an organization was a pivotal development in

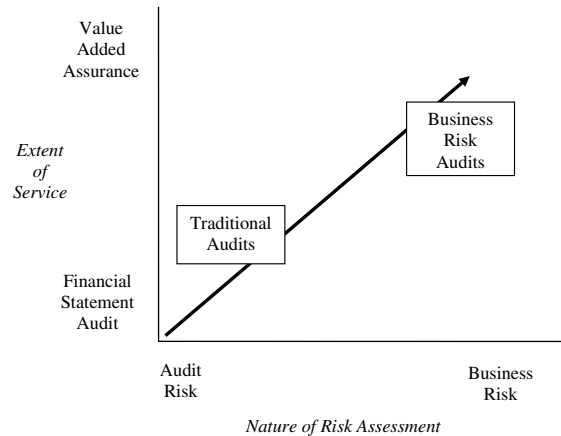


Fig. 2. Expansion of risk considerations in the audit process. Source: Lemon et al. (2000).

auditing concepts. The observation that a bank's loan loss reserves were in some way connected to the state of the general economy may not have been earth-shaking, but it did give pause to auditors who were conditioned to think in terms of accounting errors first. While many partners at the time claimed to be aware of such links, they often went unarticulated, were unevenly acknowledged in many clients, and rarely discussed among members of the audit team. In many instances, the links between business risk and audit risk were sufficiently vague and subtle that it is unlikely that any auditor would have made the connection. For example, the recognition that land deals were being made at unsupportable values in order to pad financial results in Arizona banks eluded many auditors who focused on the documentation of transactions while failing to appreciate their lack of economic substance (Erickson, Brian, Mayhew, & Felix, 2000).²¹

The primary manifestation of the re-engineering wave of the 1990's can be loosely bundled within the rubric the "business risk audit". Contemporaneously, Arthur Andersen began development of *The Business Audit*, Ernst & Young undertook their *Audit Innovation* project, and KPMG commenced the *Business Measurement Process*

²⁰ See Knechel (2001) for an in-depth discussion of the links between audit risk and business risk.

²¹ This is the situation described in the infamous Lincoln Savings and Loan case as documented by Erickson, Mayhew and Felix in Bell and Solomon (2002).

(BMP) project. All three led to significant changes in the way an audit was planned and conducted.²² In one sense, these efforts were undertaken to recapture the spirit of judgment in the audit process that had been mostly replaced with structure and formalism, albeit updated to reflect the modern forces of globalization, technological change and financial engineering.²³ As noted by Lemon et al. (2000, p. 21): “Business risk audit approaches are consistent with an emphasis on the need for judgment in the design of . . . an individual audit”.

What is a “business risk audit”? Bell, Marrs, Solomon, and Thomas (1997) argue that “today’s auditor should direct his attention to the client’s systems dynamics – its strategic positioning within its environment; its emergent behaviors that impact its attained level of performance; the strength of its connections . . . to outside economic agents; the nature and impact of any symbiotic alliances; the specific interrelationships and internal process interactions that dominate its performance; and potential changes [in the] economic web that might threaten the viability of the client’s strategic competencies . . .”. In short, the auditor needs to see the whole organization and its environment to understand the nature of the audit challenges to be faced. This perspective is often referred to as an holistic approach to the audit.

The general precepts of a business risk approach to auditing are relatively straightforward, although they require the acquisition of new analytical tools and different firms have proprietary variations. Figs. 3 and 4 illustrate two different but consistent views of a business risk audit. They both reflect the top-down nature of the audit that underlies the

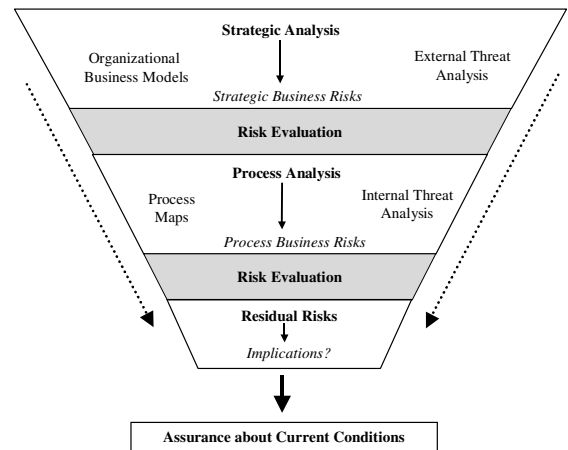


Fig. 3. An overview of the business risk audit approach. Source: Knechel (2001).

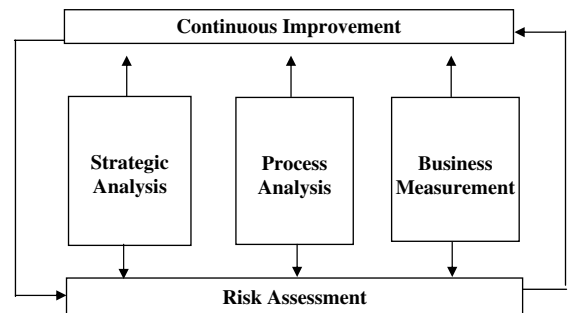


Fig. 4. The KPMG business measurement process. Source: Bell et al. (1997), Exhibit 4, page 34.

business risk perspective, although details and terminology, and the scope of risks to address, can differ significantly across firms. First, auditors must appreciate an organization’s overall strategy for success and develop an understanding of the client’s position within an interlocking web of external entities and agents.²⁴ Second, these relationships are analyzed for indications of potentially significant risks to the client. Analysis then turns to how the organization monitors (i.e., performance measurement) and copes with (i.e., internal

²² See also Winograd, Gerson, and Berlin (2000) for a discussion of audit developments at PricewaterhouseCoopers during this period.

²³ Based on survey results gathered in the UK, US and Canada, Lemon et al. (2000) report the following espoused reasons for adopting a business risk audit methodology: (1) improve audit effectiveness, (2) improve audit efficiency, (3) cope with technological change, (4) add value to client service, (5) enhance corporate governance, (6) foster international consistency, (7) facilitate product differentiation, and (8) reduce auditor engagement risk. In this paper, I focus on (1), specifically how business risk methods may improve auditor judgment.

²⁴ The use of the term “economic web” derives from the discussion of the conceptual foundation of KPMG’s BMP approach, more generally referred to as Strategic Systems Auditing, as described in Bell et al. (1997).

control) each significant risk, especially the design and operation of business processes. Internal processes are simultaneously a source of risk and an instrument for mitigating risk. The final step is to prioritize risks based on their significance to the organization. After the analysis is complete, residual risks represent any identified risks that are considered to be uncontrolled and have the potential to seriously affect the organization. It is residual risk that then becomes the primary focus of the auditor's attention.

Residual risks are significant to the auditor for a number of reasons. First, they may reflect directly on the inherent risk associated with specific assertions, much in the same way that overall economic risk impacts the valuation of bad debts in a bank. Second, residual risk reflects on the control environment, providing insight into the quality of internal processes (that is, indicating when they may be unreliable), as well as the stresses that may be propelling management to behave in ways that are inconsistent with good financial reporting and governance. Expansive analysis of the implications of residual risk suggests the extent to which audit risk may need to be addressed through the selection and performance of substantive tests (Knechel, 2001). It can also be argued that this risk analysis provides a superior knowledge base from which auditors can assess potential going concern problems for an organization.

To provide an example, consider a manufacturer of plastic consumer products such as food storage containers, trash cans, etc. In a time of rising oil prices, the company's profit margins will be squeezed, possibly to the point that the company is unprofitable, since resin (an oil by-product) is the primary raw material used in their products. Simple knowledge of the threat from the commodities market informs the auditor's expectations about the financial results the company can expect to achieve. Of more importance, however, is how the company may choose to respond to the observed threat. One possibility is that they may simply try to pass on the costs to consumers, which may or may not be possible, and if done in the wrong way might foul relationships with key retail customers (e.g., Wal-Mart's buying power is not diminished by the oil market). The company could

also reduce the quality of materials used in production, but this might lead to customer dissatisfaction, increased returns, and production waste. In the extreme, the pressure on the company to achieve sales and profit goals, in spite of the external forces related to the oil market, may encourage management to undertake questionable accounting practices, such as channel stuffing of product, inappropriate rebates to retailers, and/or manipulation of financial results. Whatever happens, the auditor is better able to anticipate issues that might affect the conduct of the audit or the accuracy of the financial reports by having a deep understanding of the business risk complexion of the company.²⁵

When performed properly, there is a great deal of intuitive appeal to this audit approach and, arguably, better positions the auditor to be able to uncover accounting error or fraud (Bell et al., 1997; Knechel, 2001; Lemon et al., 2000).²⁶ Furthermore, it brings areas of an organization to the attention of the auditor that were not previously considered relevant to the conduct of the engagement (Eilifsen et al., 2001). Whether one agrees with the assessment of the potential benefits of business risk auditing, it is hard to argue that knowing more about a client is a bad thing; or that extending the scope of audit assurance over broader aspects of an organization is detrimental. However, it is easy to assert that, when poorly practiced, the new methods could leave auditors vulnerable to second-guessing or outright failure due to the unproven nature of the process and new testing techniques. Given that business risk methods made increasing use of audit tools whose use in the past had been problematic for practicing auditors – internal control evaluations and analytical procedures – implementation was destined to be difficult and likely to encounter unforeseen

²⁵ See Bell and Solomon (2002) for numerous case studies of how a business risk audit approach would be applied to specific client situations.

²⁶ Not all commentators accept this view point. See *WSJ* (3/25/04) and Cullinan and Sutton (2002).

pitfalls. Specifically, “getting it right” created a number of direct challenges to previously sacrosanct audit rituals that were not going to be easy to overcome.

Challenging audit rituals

Rituals reflect behavior patterns, often commonplace and mundane, that are accepted because they have developed through an extended period of experience by a large number of individuals who have shared obligations and objectives (Pentland, 1993). Although rituals may be rational and justified, they also have an emotive element that transcends their ostensible purpose. Furthermore, rituals may manifest at different levels of an audit. Having visualized an historic shift in the nature and conduct of audits, there remained the challenge of redesigning the process and converting various parties to this view of the audit while maintaining the legitimacy of the audit function (Humphrey et al., 2004; Power, 2003).

The most general ritual in auditing is that of purification, the process of transforming a “disorderly” object (e.g., financial statements) into something “clean” (e.g., audited financial statements) (Pentland, 1993, p. 607). In this context, rituals are about obtaining comfort that the audit process will provide support that reported results are worthy of sanctification by the auditor. While the development of business risk audits did not alter the *purpose* of purification, at least at a superficial level, the changes envisioned for the purification process impinged on other micro-level rituals within the audit process, i.e., “converting” audit stakeholders meant more than simple marketing and training, it also meant modifying and adapting existing rituals of interaction (Pentland, 1993, p. 608). In short, what was required was nothing short of a retooling of how auditors thought about auditing, as well as shifting the views of external parties with an interest in auditing (Humphrey et al., 2004).

Client interactions: rituals of social control

One purpose of rituals is to serve as a mechanism for controlling social interactions with others

(Pentland, 1993, p. 607). Since stakeholders may possess various stylized expectations about an audit, one of the first challenges for auditors was to reposition and manage those expectations consistent with the new technologies to be used in the audit. On the one hand, the new methods connoted improved audit quality, namely, higher levels of assurance over broader areas of the environment. However, expectations needed to be managed so that they would not outpace what the auditor was able to deliver, especially in the early days of implementation.²⁷ Well managed companies could be expected to be generally supportive of efforts to increase the value of the audit, but if such benefits failed to materialize, while at the same time the auditor was perceived as cutting back on audit work, a suspicion might develop that the auditor’s initiatives were more marketing than merit. To avoid a disconnection with client expectations, numerous auditor–client rituals needed to be addressed:

- *Avoiding the appearance that an audit was just another form of consulting:* Since the new audit approach was often described as being “value-added”, it was probably natural that some confusion would arise as to whether the new methodology was just a platform for expanding consulting opportunities. To the extent that management interpreted “value-added” as meaning value *to themselves*, the risk increased that the auditor would be perceived as being on management’s “side”. This perception could undermine the already sensitive nature of independence in appearance. Furthermore, the need to disabuse this impression raised the risk that the relationship between management and the

²⁷ Early efforts revealed that changing over from a traditional audit approach to a business risk approach on a specific client often took up to 3 or 4 years as the migration of audit methods was done on a piecemeal basis with incremental implementation during each successive year. Under such circumstances, the so-called added value of the new methods may have been hard to perceive (Eilifsen et al., 2001).

auditor would be conflicted in a way that affected the quality of the fundamental audit, e.g., by making the auditor less willing to disagree with a client's position on sensitive accounting issues (Zeff, 2003b).

- *Overcoming the restraints imposed by accounting executives:* Although firms may have liked the idea of more value for their audit investment, surprisingly, they were not receptive to some of the efforts made by auditors to expand assurance efforts beyond the accounting function. Senior accounting executives (CFOs and Controllers) were accustomed to managing the flow of information to the auditor since most information requests involved access to documents and records. To the extent interviews occurred with client personnel, they were generally associated in some way with the financial reporting process. As a result, the "picture" seen by the auditor could be "managed" by the accounting department. With the introduction of business risk based methods, auditors began to ask for other information – information that was often outside the financial reporting process and not directly under the control of the accounting executive. Regardless of the executive's motives, this situation created discomfort among many clients. However, this is an important element of the transition to a business risk audit, e.g., management's control of information flowing to the auditors has been cited as a primary cause of the Enron audit failure (Morrison, 2004, p. 366).
- *Introducing and evaluating new evidentiary sources:* Related to the need to look beyond the accounting function was the intention to draw evidence from more primary sources within an organization. This often meant interviewing personnel far afield from accounting, often in areas such as production, research and development, and human resources. This created new challenges for the auditor since such conversations would not be part of the normal lexicon of their prior experiences. It was important that the client perceive the auditor as being competent in the performance of these new activities in order to maintain their legitimacy with client personnel (Humphrey et al., 2004;

Power, 2003). Consequently, what seemed like an obvious and logical expansion of the audit process was not so easy to execute.²⁸

- *Managing communications with key stakeholders:* As part of the need to manage client expectations, was the need to redefine and clarify the nature of communications between an audit team and the client. Since auditors were asking for new types of evidence, looking into aspects of an organization previously ignored, talking to more non-accounting personnel, and considering a broader set of risks, it was important for the client to understand what was being done and why it was necessary. A request to see a company's strategic plan is different from a request to see a handful of invoices and senior management might be hesitant to cooperate if they are not attuned to what the auditor is trying to achieve with such requests. Unusual or unprecedented requests, handled lackadaisically, ran the risk of sowing confusion, creating communication breakdowns, and fostering frictions between the client and the audit team.

While convincing clients that a business risk approach made sense resulted in some interesting challenges, it also emphasized the need for good communication between the auditors and their clients.

Audit team interactions: rituals of social cohesion

Auditors are a cohesive social group because they have a well established and accepted manner of achieving their objectives, often performed on a daily basis (Pentland, 1993, p. 608). The business risk audit approach ran the risk of upsetting some

²⁸ A phenomena observed by Eilifsen et al. (2001) was the tendency of low level employees to tattle and/or complain about their supervisors when given the chance to talk to an auditor. While one might expect such employees to be intimidated by an auditor, in that field study employees seem to have treated such discussions as an opportunity. If that type of behavior was common, management's resistance to the new audit methods might be understandable.

of the day-to-day rituals of the audit team, reducing (at least temporarily) the comfort that participants could take from execution of the steps of the audit process. Having been pushed outside their zone of comfort, the reactions of individuals varied depending on their personality and how seriously their personal goals and experiences came into potential conflict with the planned changes in the audit. Auditors who had many years experience but were not yet partners often felt threatened by the changes since they were the ones expected to deliver an engagement on time and within (or under) budget. Due the radical changes in the audit process, they did not now know how to do what they had known how to do in the past. However, obtaining buy-in by the individuals tasked to implement the new methodology was critical to enabling the benefits that might be obtained from the new approach (Fischer, 1996; Lemon et al., 2000, p. 22). Some of these challenges included:

- *Uncertainties about process:* Given the radical changes envisioned by a business risk audit approach, a common question from auditors was “where do we begin?” The business risk approach encompassed a very different set of steps than used in the past and one of the underlying objectives of re-engineering the audit process was to change the timeline for the audit with less concentrated work needed after year-end. How to do this? Risk assessments and process tests could be done prior to year-end but at what point should the audit team assess residual risks? When risk assessment was done at the assertion level, such assessments were clearly linked to year-end financial statements since the assertions in question were determined at that point. However, with risk assessment now focusing on business risk in general, the timing of such assessments became open-ended. In fact, the business risk profile of an organization changes continuously as the economic environment changes so assessments made at any point in time may not be reliable much into the future, thus necessitating an ongoing approach to risk assessment. For example, should the auditor adjust the audit process for significant residual risks identified in May even though they not be considered to be significant in December? Or should the auditor only worry about residual risks as determined at the end of the year?²⁹
- *Uncertainties about staffing:* Once a plan was in place, the next most frequent question was “who does what?” Staffing assignments were generally straightforward in the past: staff did transaction and detail tests, seniors and managers reviewed workpapers and did direct tests of the more complex accounting areas, and partners had overall responsibility for audit quality. Serious questions arose about how to utilize staff accountants in a business risk audit. The new procedures (e.g., strategic risk analysis) seemed to require more experience and expertise than the audit tests typically assigned to staff accountants. Were staff accountants adequately knowledgeable and mature to conduct interviews with process owners as part of the process analysis? Could they develop and evaluate a strategic analysis? Was a new structure needed for the typical audit team? Obviously, staff accountants had to do *something* but, in an environment where seniors, managers and partners were still learning their own way, one suspects that determining the appropriate tasks to assign to different personnel was more a matter of psychic, rather than professional, analysis.
- *Uncertainties about training and support:* Ultimately, the “who does what?” question would be answered through the development of support material and training. There were no established credentials that could be used to signal that an auditor was business-risk-ready (Humphrey et al., 2004). When business risk methods were first rolled out, support material was minimal and training was vague. In one US firm, ten teams in a specific industry were selected, put through a training course giving background on the business risk audit, and tasked with figuring out how to do it. In another firm, virtually every audit partner was put through a

²⁹ A similar problem has been encountered in the ongoing debate about auditor’s reporting on internal control. If auditors are going to report on the quality of internal control over financial reporting should the report pertain to the entire fiscal period or a specific date?

Harvard-style MBA short course on strategy so as to be better positioned to be able to make the judgments necessitated by the audit methodology. Still other firms committed extensive funding to gather a large team of personnel who were assigned on a full time basis to developing and delivering a new audit methodology. These actions would be followed with broader efforts at providing training and support materials. While technical training is important, another benefit of training is the socialization of the audit staff to facilitate group acceptance of the new methods.³⁰ This trial and error process may not have been as effective as desired given that previous efforts to introduce new (and less radical) audit technologies had often failed due to inadequate training and support (Fischer, 1996).³¹

- *Uncertainties about evidence:* While auditors generally confess to finding the expanded risk and control analysis very interesting, at some point in the audit process it was common for auditors to ask the question “so what does it all mean?” Translating knowledge about business risks into evidence that can support conclusions about the financial statements is probably the most difficult challenge that auditors faced (Bell & Solomon, 2002; Bell, Solomon, & Pecher, 2005). Attempts to map business risk to the concepts of assertion-based audit risk proved to be very difficult. The fact that much of the evidence obtained for risk assessments was viewed as traditionally “soft” and difficult for auditors to interpret made some question the level of rigor of the process (Cohen, Krish-

namoorthy, & Wright, 2000; Lemon et al., 2000). Initial efforts to link business risk to inherent risk were often vague and arbitrary, leaving a difficult gap in logic between risk mappings and the selection and planning of assertion level tests (Ballou & Knechel, 2002). While some decision aids could help, the resulting period of uncertainty also created an endogenous demand for more structure and formalism in the process which could partially undo the hoped-for benefits of moving to the new methodology.

- *Uncertainty about personal interactions:* An important aspect of a business risk approach is the need to interview a wide range of individuals within a client’s organization and to reach conclusions about the competence and forthrightness of specific people. Most auditors are usually more comfortable judging documents than people. Being human, auditors are susceptible to smooth, honest-sounding answers in spite of their technical training and professional mandate for “skepticism”. As the volume of audit evidence derived from “client inquiry” expanded in a business risk audit, the need to make such judgments became more critical, an ability that develops with experience, maturity and repeated interactions among stakeholders (Power, 2003). At the start, these interactions were new and awkward, and auditors possessed only a rudimentary foundation for judging the evidentiary value of information exchanges with client personnel outside the accounting area.
- *Uncertainty about the future:* If uncertainties about the process, tasks and evidence were not enough, efforts to shift auditors into a new paradigm had profound ramifications for the career path of individuals. Given a process that was often ill-defined and a work-in-process, the incentives and motivations of individual professionals had to be carefully evaluated. For a senior manager looking to make partner, the challenge of implementing a business risk approach might be seen as an opportunity to reveal his or her deeper talents, or might be perceived as a threat to his or her progress in the firm. Unless individuals were allowed to experiment and fail, new methods might only receive superficial acceptance while a parallel audit was

³⁰ See Fischer (1996, p. 226). One wonders how this shared experience from the training ritual is affected by the trend to just-in-time and computer-based training. Without the formal gathering and shared experience of training, some of the social cohesion that defines the audit team and firm might begin to dissipate.

³¹ Ultimately, issues of training and knowledge carry over to the recruiting area and raise questions about what type of personnel the firm should be hiring. One ostensible advantage of business risk methods was the ability to attract more aggressive and high quality university graduates who might otherwise be drawn to law or MBA programs (Humphrey et al., 2004).

conducted using more familiar (trusted?) methods. In the early days of implementation, it was not uncommon to hear experienced personnel, including partners, mumble about “getting to the real audit”.³² Another way to compensate for this uncertainty was to develop a more sales oriented approach so that an individual could be evaluated on his or her ability to generate growing revenues.

The obstacles that needed to be overcome to get audit teams behind the new audit methodology should not be underestimated. Auditors prefer to avoid ambiguity when possible (Jackson & Schuler, 1985), something that was rampant in a business risk methodology, and many would long for the relative certainty of audit structure. Some would refocus on selling services to compensate for the fear of failing in applying the new audit methods. As a result, the changes to the audit were truly troubling to more than a few professionals. Perturbed auditors often found allies in the general public, which was not so ready to absorb such a radical shift in a profession that they already did not understand.

Stakeholder and societal interactions: rituals of impression management

Rituals are also important for maintaining public perceptions of the members of a group. “[I]n order to be an auditor, you have to act like one” (Pentland, 1993, p. 608). In a sense, the business risk audit paradigm might appear to outsiders as if auditors had stopped acting like auditors.³³ Auditors and their clients were not the only parties with a vested interest in the established rituals of auditing – stakeholders and society relied on established practices to inform their own decisions and

behavior. Even the most successful internal implementation would fail if public perceptions were negative. Consequently, auditors also needed to redefine the rituals of impression management or risk failure in their efforts to shift the audit paradigm. The most significant challenges for managing external impressions included:

- *Managing expectations from the public:* Although often confused as to what an auditor actually does, various outside stakeholders held longstanding expectations about the services of auditors. While the auditing profession could debate the meaning of audit risk and reasonable assurance, outsiders were generally more interested in perfection, especially with the benefit of hindsight with which they could indulge themselves whenever an alleged audit failure arose. Hints leaking out from audit firms that they were radically changing their processes created a suspicion as to what the firms’ were trying to accomplish. Given that these changes were occurring at the same time as the rapid run-up in consulting services, a much more obviously suspicious activity, the efforts at re-engineering ran the risk of being painted with the same scarlet brush. The general lack of communication with the public and regulators about what the firms were doing eventually culminated in the creation of the *Panel on Audit Effectiveness* by the **Public Oversight Board (2000)** to investigate if the integrity of the audit process was being maintained. Although the Panel concluded that the new methods were consistent with professional standards, they did raise numerous other issues of concern, especially related to independence, again highlighting the confusion between value-added auditing and suspect consulting.³⁴

³² The so-called “two-audit” problem was also noted by Fischer (1996) in his field study of other changes in audit technology. This problem could be expected to be even more severe in the case of business risk auditing given the pervasiveness of the paradigm shift being engineered.

³³ Any shift in external perceptions around this time may also have been attributable to real changes in other aspects of the auditor–client relationship, namely, the rapid increase in nonaudit services being pushed onto clients.

³⁴ Another incident that reflected displeasure with the auditing profession even before Enron was the undercutting of the Independence Standard Board when the SEC issued its own comprehensive rules on auditor independence in 2001, leading to the shut down of the ISB (see announcement at <http://www.cpaindependence.org/pubs_db.php3>).

- *Proving that assurance goals were met:* As the re-engineering drive got underway, it was not uncommon for commentators to bemoan the loss of rigor in audit testing (Reinstein & McMillan, 2004). In their most blunt form, these complaints pointed to cuts in substantive testing and related sample sizes, something that had already commenced prior to the re-engineering initiatives. However, the mere substitution of risk assessment, control evaluation and examination of performance measures for detailed tests does not augur a decrease in audit quality since such procedures were perfectly allowable (and desirable) under audit standards at the time. However, the profession also had little evidence available to support the contention that a business risk audit was better from the perspective of overall assurance (*WSJ*, 3/25/04). In fact, internal marketing of the methodologies aimed at modifying audit team rituals was often based on the argument that the new methods would either lead to more efficient audits (read: less work) or better client service (read: more fees). The fact that these methods were rarely argued, even internally, on the grounds that they resulted in a more effective audit (i.e., less risk) left the firms open to charges that the business risk based audit might not be effective (Bell & Solomon, 2002).
- *Convincing the academy:* One set of external expressions that turned out to be especially difficult for firms to influence were the attitudes of academics and the nature of auditing curricula in universities and colleges. While there has been a relatively successful record of interactions between the profession and academy,³⁵ the re-engineering wave of the 1990's seems to have had a delayed and slow influence on the nature of audit education.³⁶ One possible explanation for this lack of buy-in by auditing academics was that they remained unconvinced that business risk methods were effective or

appropriate. In this regard, the more publicly obvious growth in consulting may have swamped any positive messages to be gleaned about the new audit methods being developed. Furthermore, given the very sticky friction caused by professorial tenure, the existing market for auditing textbooks, the effort needed to redesign established courses, and the continuous research demands in academia, the general population of university professors may have been unwilling to invest in such an unknown and controversial shift in audit thinking, fearing that the entire experience reflected the triumph of commercialization over professional responsibilities.³⁷

Whether the profession was effective at managing these changes is debatable. However, what appears to be patently obvious is that these changes were caught up in the turmoil surrounding Enron and ensuing scandals. Although firms have generally not repudiated the business risk approach, this loss of trust and the regulatory response to the perceived root causes of these failures may have a profound impact on the future of business risk audit methods.

The outward revolution: opportunistic behavior begets a backlash

The rampant growth of consulting at many accounting firms, as well as the evolution of a sales culture among audit personnel, is well documented (Squires et al., 2003; Toffler, 2003; Wyatt, 2004; Zeff, 2003b). What is less obvious, but still subject to debate, is how the development of business risk audit methods may have contributed to this swing in values and objectives (Squires et al., 2003). Three possibilities arise: (1) the business risk audit methodology was developed solely to support sales of nonaudit services, or (2) the business risk audit

³⁵ For an overview of joint research between practitioners and academics, see T. Bell, A. Wright, editors (1995).

³⁶ An exception is the KPMG/University of Illinois case development program that ran for three years. See Bell and Solomon (2002).

³⁷ There is now a discernible and significant shift in the interest of academia as evidenced by a number of research studies that have looked at business risk audit issues (for example, see working papers by Ballou, Earley, & Rich, 2004; Kotchetova, 2003; O'Donnell & Shultz, 2003) and new educational initiatives in this area, including textbooks.

was simply a victim of the circumstances of the time, or (3) the business risk audit was diverted by a consulting mentality and misused relative to its original purpose. Numerous commentators would probably reject the first possibility (Bell et al., 1997; Humphrey et al., 2004; Lemon et al., 2000; Morrison, 2004). Interestingly, some of the most damning treatises about Andersen's audit failures have come from professionals not generally associated with the audit practice within the firm (e.g., Toffler, 2003; Squires et al., 2003). On the other hand, the second possibility may be highly naïve given the documented behavior at large accounting firms. This leaves the last possibility, that the business risk methodology may have been misused, diverted or corrupted due to pressures and incentives within accounting firms to support continuing fee growth (Wyatt, 2004).

In a stable environment, the authority of tradition often restrains the worst instincts of individuals – auditors and consultants in this case (Francis, 1994, p. 243). However, the throwing off of traditional constraints opens the way for opportunistic and potentially self-destructive behavior by a subset of any group. Opportunism can be a self-reinforcing process where “opportunistic [individuals] create a culture of self-fulfillment and only those who are prepared to act in a like-minded manner remain in the employ of the company” (Arnold & de Lange, 2004, p. 5). The positive feedback loop linking clients' search for earnings and accounting firms' search for revenues (Zeff, 2003b), at a time when their relationship was becoming more and more symbiotic, may well have contributed to the overall deterioration in the quality of auditing during a period when firms were actually trying to improve their audits (and reduce their litigation risk) through the development of business risk audit methods. The breakdown of rituals and traditions accompanying the introduction of business risk methods may have inadvertently provided a highly fertile ground upon which the worst cases of client aggrandizement may have sprouted in the name of providing value to the client, while incidentally keeping fees growing.

Given the turmoil and experimentation necessary to supplant the restraints of the structured audit, it should not be surprising that opportunistic

behavior arose within some sectors of the profession at a time when the entire market seemed to be driven by a level of avarice fostered by the dot.com (and telecom) market bubble. With the sudden collapse of Enron, the auditing profession, indeed the entire corporate governance structure, became highly suspect in the blink of an eye. As one case of corporate malfeasance and audit non-feasance followed on another, it was inevitable that the public would demand action by the overseers of the business world (Imhoff, 2003; Morrison, 2004).

The extent of the perceived problems and the nature of the backlash made it inevitable that a comprehensive response would be forthcoming, leading in the US to the plethora of new rules and regulations spawned by the Sarbanes-Oxley Act of 2002 (a.k.a. SOX). Whether the regulatory response will rectify problems that may have more to do with breakdowns in judgment and ethics, than failures in standard setting, remains to be seen. What is apparent is that the auditing profession, momentarily considered to be a prime culprit, is now being asked to do more and take more responsibility. The paradox of the current situation is that the profession is roundly blamed for many of the failures in financial reporting while, at the same time, it is being enlisted as a major part of the solution to those same problems.³⁸ While remedies such as placing restrictions on consulting may have been obvious, it remains to be seen what regulatory intervention and increased public scrutiny means for the future of business risk audit methods. If one accepts that fostering judgment within the audit process leads to better auditing, then business risk auditing may have much to offer in a post-Enron, post-SOX world.

Whence the business risk audit?

The cumulative effect of the inward revolution in the practice of auditing and the entropic energy set loose by the public crisis in confidence has raised legitimate questions about the future of the business risk audit approach. It is possible that current pressures and actions will make business

³⁸ See Power (1994).

risk audits an interesting footnote in the history of the profession as auditors revert to an equilibrium condition of increasing audit structure as a response to environmental and institutional complexity. Alternatively, it is possible that the business risk view will be found to have conceptual merit and the worst manifestations of opportunistic behavior that were enabled by the fluid development process will be rectified. In a *Wall Street Journal* article on March 25, 2004, Greg Weaver, head of Deloitte's US audit practice was quoted as saying "It would be negligent not to take a risk-based approach", and this comes from the firm that arguably had the least vested interest to date in the business risk audit approach. Given this attitude, the best of new and old audit wisdom may eventually be merged to provide a stronger foundation for a modern paradigm of audit practice. As Lemon et al. (2000, p. 11) noted: "The emphasis on business risk need not mean that financial statement objectives and the risk of material misstatement are ignored . . . Clearly the business risk approaches rest on an assumption that there is an articulation between business risk and audit risk . . . It may be necessary to have this articulation explained in a very explicit way if business risk approaches are to be generally . . . adopted."

Two developments in the post-Enron era may shed some insight into how concepts of business risk auditing might survive and contribute to an improvement of audit quality. First, as soon as Enron exploded across the media, the Auditing Standards Board pushed through a new standard on fraud (SAS 99, AICPA, 2002), finally admitting that this was something that external auditors should pay more attention to. Although the guidance of the new requirements may have been less effective than could be desired, implicit in its requirements is an important role for business risk audit methods. While requiring an audit team to "design tests that would be unpredictable and unexpected by the client" is common sense, such requirements may not get to the crux of the problem, i.e., understanding management's motives and opportunities. Given the deep understanding of management stress and pressure that comes out of business risk analysis, it is possible that auditors may actually be better able to anticipate

situations where otherwise honest management feels the need to manipulate financial reports. In fact, one of the key implications that an auditor should analyze related to residual risk is the way in which an organization's control environment may be affected by a failure to achieve corporate objectives due to poor performance. In short, business risk analysis may provide a foundation for improving an auditor's assessment of the risk of fraudulent financial reporting for companies facing environmental and industry pressures.³⁹

The much bigger development was the Sarbanes-Oxley Act of 2002, which established the Public Company Accounting Oversight Board (PCAOB), and led to the emasculation of the Auditing Standards Board of the AICPA by giving the PCAOB the right to regulate the profession for the audits of public companies. The extremity of this action and the immediate absorption of audit standard setting could hint that the internally developed audit methods of the firms would be highly suspect to the new regulators, causing them to pressure firms to shift away from business risk auditing (and back to substantive audits?). At the time this article was written, initial actions by the PCAOB in the area of reviewing firm practices and issuing auditing standards indicate their intent to actively and extensively intervene in the way audits are performed in the US.⁴⁰

New rules redefining the relationship between the external auditor and the audit committee have the potential to be extremely helpful to both groups (specifically, see Section 301 of SOX). The legal establishment of mandated responsibilities and authority for the audit committee, and the opening of a direct communication channel between the two groups, should be powerful tools for improving corporate governance and the audit

³⁹ Other commentators have noted the need to understand a client's business and the substance of its transactions without necessarily adopting a business risk perspective. For example, see Merino and Kenney (1994).

⁴⁰ The first significant pronouncement on auditing standards put out by the PCAOB, Auditing Standard No. 2, "An Audit of Internal Control over Financial Reporting Performed in Conjunction with an Audit of Financial Statements", may confirm the fears of some auditors that it will generate detailed rules.

process. Regarding the audit process itself, limited inspections in 2003 of the four international accounting firms, while revealing numerous specific areas in need of improvement, did not raise questions as to the underlying audit processes used by the firms (PCAOB, 2004). To the extent that these processes continued to more or less reflect a business risk approach, the reports from these limited inspections imply that the methods may continue to be acceptable to the PCAOB. Presumably, the full reviews scheduled for 2005 will provide more insight into the PCAOB's attitudes on this issue.

The PCAOB's issuance of Auditing Standard No. 2, *An Audit of Internal Control over Financial Reporting Performed in Conjunction with an Audit of Financial Statements* (2004) may be even more profound. The standard's heavy emphasis on evaluating and reporting on the quality of internal control over financial reporting forces both management and the auditor to make an in-depth analysis of what is going on in processes where critical transaction streams reside. While the extent of this requirement far surpasses anything expected of auditors in the past, in many ways such an analysis is consistent with the process analysis element of a business risk audit. The original formulations of business risk audits foresaw that process analysis would link naturally to the processing of transactions and the evaluation of process controls would include a heavy focus on the controls related to transaction processing, what is now referred to as "internal control over financial reporting". The fact that few audit applications of business risk methods drove the analysis to this level of detail is symptomatic of the implementation problems discussed earlier in the paper and the cost constraints that continued to be imposed by fee-conscious clients. Consequently, the PCAOB may have done the firms a favor by pushing them to complete the implementation of the process-level analysis and providing a legal mandate that could justify the fees necessary to take this step in the audit process. Although the actual costs of complying with Section 404 and AS 2 have already resulted in a nascent backlash against overreaching regulation (Mackintosh & Wrighton, 2004; Pentland, 1993), the message is established: Audi-

tors must consider risks at the process level in order to conduct the integrated audit envisioned by the PCAOB.

Although regulatory efforts to date may or may not be effective, there are clearly a number of challenges that must be navigated by the profession if the best of structured auditing and business risk models are to be effectively integrated. First, and of prime importance, is the need to reconcile the business risk perspective with the reality of the current regulatory environment (Humphrey et al., 2004; Lemon et al., 2000). While cutbacks in consulting are unavoidable (and desirable), the profession should be careful to not overreact and throw out the elements of the business risk approach that can actually improve the quality of auditing and reduce the risk of audit failure. The need to have an in-depth understanding of the client as fostered by business risk audit methods is possibly more important in the complex world of financial reporting today than it was before the dot.com bubble commenced (Solomon & Peecher, 2004). The term "value-added" has lost its luster, but the intuitive and logical structure of a business risk view is no less apparent now than in the pre-Enron era. The audit process can still be "value-added" in terms of increasing assurance as envisioned by the requirements of the PCAOB – it just does not need to be "fee-added".⁴¹

The auditing profession must also face up to a few truths. First, risk assessment is not an audit, meaning that rigorous testing must be considered an integral part of an audit, not a cost that can be minimized. Such rigor should be reinserted into the audit process based on the conclusions reached about residual risks in individual engagements. Second, it is also possible that the profession is in need of a new formulation of the audit risk model that better links business risk to audit risk (e.g., ISA 315, IAASB, 2003). The links between

⁴¹ Wyatt (2004) noted that this approach to bringing value to the audit services is not new and actually predates the growth of nonaudit services that started in the 1950s and 1960s. Such services were "an outgrowth of the audit and ... they were generally viewed as an integral part of the broad audit process and not as free-standing engagements of a fee-generating nature" (p. 47).

risks, controls, and performance measurement, and financial statement assertions and substantive testing remains quixotic. To foster the development and clarification of these links, the auditing profession needs better techniques for evaluating internal control (the new *Enterprise Risk Management* report from COSO may help) and extracting audit evidence from performance measurements, especially nonfinancial data (Cohen et al., 2000; Cullinan & Sutton, 2002). Finally, rolled together these challenges suggest the need for a new emphasis on education, training and the management of knowledge in auditing. Furthermore, greater effort must be expended to drive the risk analysis down to the level of detail that transaction streams and accounts can be properly evaluated, including the use of substantive evidence of a traditional sort when necessary.

Summary and conclusion

Is the business risk audit a better way to assess risks leading to focused audit testing, or is it simply a tool for generating opportunities to sell nonaudit services? Many feel strongly that the latter is more representative of the manner in which business risk audits were implemented. This paper examines the development of business risk audit methods over the past decade. The success or failure of these methods was evaluated in reference to two macro forces that developed in parallel, but came together with the collapse of Enron and surrounding events. First, the pressures and motivations that led to the development of highly structured audit processes began to come undone in the early 1990s, allowing (driving) an inward revolution in the practice of auditing against excess formalism and structure, culminating in a shift to a business risk audit approach which built on concepts in risk management. This radical changeover, combined with opportunistic behavior by individuals wishing to broaden the revenue base of the profession, posed a threat to numerous well-established rituals in the auditing profession, fostering resistance and questionable actions by many stakeholders. Eventually, regulatory and legal forces were awakened by perceptions of rampant management infidelity,

Board complacency, and auditor nonfeasance, causing an external examination of the profession that culminated in new rules and attitudes as reflected in the Sarbanes-Oxley Act. The collision of internal and external forces has caused some to question the appropriateness of business risk audits in the future. However, the increased focus on both fraudulent financial reporting and internal control over financial reporting suggests that business risk audit methods may still have a role to play in the conduct of audits, albeit in a somewhat constrained manner and only if implementation is completed and certain obstacles are finally overcome.

Acknowledgments

I would like to thank Mike Power, Chris Humphrey, Stuart Turley, Rogier Deumes, Lasse Niemi, David Hay, Tim Bell, Ira Solomon, Steve Salterio, Brian Ballou and Lewis Davidson for insights, comments and ideas on which this paper is based. Additional appreciation is extended to the participants of the *Auditing in Action* conference held at the London School of Economics, where many of the ideas in this paper were first exposed. Remaining errors are the responsibility of the author.

References

- American Accounting Association (1973). A Statement of Basic Auditing Concepts. AAA.
- American Institute of Certified Public Accountants (1993). The Expectation Gap Standards: Progress, Implementation Issues, Research Opportunities. AICPA.
- American Institute of Certified Public Accountants (1996). Report of the AICPA Special Committee on Assurance Services (Elliott Committee). AICPA.
- American Institute of Certified Public Accountants (1983). Statement on Auditing Standards no. 47: Audit Risk and Materiality in Conducting an Audit. AICPA.
- American Institute of Certified Public Accountants Statement on Auditing Standards No. 99: Consideration of Fraud in a Financial Statement Audit. AICPA.
- Anreder, S. S., (1979). "Profit or Loss? Price-cutting is Hitting Accountants in the Bottom Line." *Barron's*. (March 12, 1979): 9–31.
- Arens, A., & Loebbecke, J. (1991). *Auditing: An Integrated Approach* (5th ed.). Prentice-Hall Inc.

- Arnold, B., & de Lange, P. (2004). Enron: An Examination of Agency Problems. *Critical Perspectives in Accounting*(August–October), 751–765.
- Ashton, R. H. (1990). Pressure and performance in accounting decision settings: Paradoxical effects of incentives, feedback and justification. *Journal of Accounting Research*(Supplement), 148–180.
- Ashton, R. H., & Ashton, A. H. (1988). Sequential belief revision in auditing. *The Accounting Review*(October), 623–641.
- Ballou, B., Earley, C. E., & Rich, J. (2004). The Impact of Strategic Positioning Evaluation on Auditor Judgments about Business Process Performance Working Paper.
- Ballou, B., & Knechel, W. R. (2002). “Československá Obchodní Banka: Applying Business Risk Audit Techniques in an Emerging Market Economy”. *Issues in Accounting Education*(August).
- Beck, U. (1992). *Risk society: Towards a new modernity*. Sage Publications.
- Bedard, J. C., & Biggs, S. E. (1991). Pattern recognition, hypothesis generation and auditor performance in an analytic task. *The Accounting Review*(July), 622–643.
- Bamber, E. M., Snowball, D., & Tubbs, R. M. (1989). Structure and its relation to role conflict and role ambiguity. *The Accounting Review*(April), 285–299.
- Bell, T. B., Marrs, F., Solomon, I., & Thomas, H. (1997). *Auditing Organizations Through a Strategic-Systems Lens: The KPMG Business Measurement Process*. Montvale, NJ: KPMG.
- Bell, T., & Wright, A. (Eds.), (1995) *Auditing Practice, Research, and Education: A Productive Collaboration*. American Institute of Certified Public Accountants.
- Bell, T., & Solomon, I. (Eds.). (2002). *Cases in Strategic-Systems Auditing*. KPMG/University of Illinois.
- Bell, T. B., Solomon, I., & Peecher, M. (2005). *The 21st Century Public Company Audit: Conceptual Elements of KPMG's Global Audit Methodology*. Montvale, NJ: KPMG.
- Bell, T. B., Bedard, J. C., Johnstone, K. M., & Smith, E. F. (2002). KRisk: A computerized decision aid for client acceptance and continuance risk assessments. *Auditing: A Journal of Practice and Theory*(September).
- Big 8 White Paper, (1989). *Perspectives on Education: Capabilities for Success in the Accounting Profession*. 1989. Arthur Andersen & Co., Arthur Young, Coopers & Lybrand, Deloitte Haskins & Sells, Ernst & Whinney, Peat Marwick Main & Co., Price Waterhouse, and Touche Ross. New York.
- Biggs, S. F., & Wild, J. J. (1984). Note on the practice of analytical review. *Auditing: A Journal of Practice and Theory*(Spring), 68–79.
- Chaney, P. K., Jeter, D. C., & Shaw, P. E. (2003). The impact on the market for audit services of aggressive competition by auditors. *Journal of Accounting and Public Policy*(November–December), 487–516.
- Chapin, D. H. (1992). Changing the image of the CPA. *The CPA Journal*(December), 16–24.
- Cohen, J. R., Krishnamoorthy, G., & Wright, A. M. (2000). Evidence on the effect of financial and nonfinancial trends on analytical review. *Auditing: A Journal of Practice and Theory*(January), 27–48.
- Committee of Sponsoring Organizations, (1992). *Internal Control – An Integrated Framework*. COSO.
- Criteria of Control Committee, (1995). *Guidance on Internal Control*. CICA.
- Cullinan, C. (2004). Enron as a symptom of audit process breakdown: Can the Sarbanes-Oxley act cure the disease? *Critical Perspectives on Accounting*(August–October), 853–864.
- Cullinan, C. P., & Sutton, S. G. (2002). Defrauding the public interest: A critical examination of reengineered audit processes and the likelihood of detecting fraud. *Critical Perspectives on Accounting*(June), 297–310.
- Cushing, B. E., & Loebbecke, J. K. (1986). *Study in Accounting Research No. 26: Comparison of Audit Methodologies of Large Accounting Firms*. AAA.
- Daigle, R. J., Kizirian, T., & Sneather, L. D. Jr., (2005). System controls reliability and assessment effort”. *International Journal of Auditing*(March), 79–90.
- DeAngelo, L. E. (1981). Auditor independence, ‘low balling’, and disclosure regulation. *Journal of Accounting and Economics*, 113–127.
- Dirsmith, M. W., & McAllister, J. P. (1982). The organic vs. the mechanistic audit. *Journal of Accounting, Auditing and Finance*, 214–228.
- Eilifsen, A., Knechel, W. R., & Wallage, P. (2001). Use of strategic risk analysis in audit planning: A field study. *Accounting Horizons*(September).
- Elliott, R. (1994). The future of audits. *Journal of Accountancy*(September), 74–82.
- Elliott, R., & Jacobsen, P. (1998). In search of solutions: SEC independence concepts. *The CPA Journal*(April), 14–20.
- Erickson, Merle M., Brian, W., Mayhew & Felix, William L. Jr. (2000). Why do audits fail? Evidence from lincoln savings and loan. *The Journal of Accounting Research*(Spring).
- Felix, W.L. Jr., Grimlund, R. A., Koster, F. J., & Roussey, R. S. (1990). Arthur Andersen’s new monetary sampling approach. *Auditing: A Journal of Practice and Theory*(Fall), 1–16.
- Fischer, M. J. (1996). Real-izing the benefits of new technologies as a source of audit evidence: An interpretive field Study. *Accounting, Organizations and Society*, 219–242.
- Francis, J. R. (1994). Auditing, hermeneutics, and subjectivity. *Accounting, Organizations and Society*, 235–269.
- Hackenbrack, K., & Knechel, W. R. (1997). An empirical examination of time usage in the audit process. *Contemporary Accounting Research*(Fall), 481–499.
- Hay, D., & Knechel, W. R. (2005). *The Effect of Advertising and Solicitation on Audit Fees.* Working Paper.
- Healy, P. M., & Palepu, K. G. (2003). How the quest for efficiency corroded the market. *Harvard Business Review* (July), 76–85.
- Houston, R. W. (1999). The effect of fee pressure and client risk on audit seniors’ time budget decisions. *Auditing: A Journal of Practice and Theory*(January), 70–86.

- Humphrey, C., Jones, J., Khalifa, R., & Robson, K. (2004). *Business Risk Auditing and the Auditing Profession: Status, Identify and Fragmentation. Working Paper*, University of Manchester, 2004.
- Imhoff, E. A. Jr. (2003). Accounting quality, auditing, and corporate governance. *Accounting Horizons*(Supplement), 117–128.
- Institute of Chartered Accountants in England and Wales. (1999) Internal Control: Guidance for Directors on the Combined Code.
- International Auditing and Assurance Standards Board. (2003). International Standard on Auditing No. 315: Understanding the Entity and its Environment and Assessing the Risks of Material Misstatement. IAASB.
- Jackson, S. E., & Schuler, R. S. (1985). A meta-analysis and conceptual critique of research on role ambiguity and role conflict work settings. *Organizational Behavior and Human Decision Processes*(August), 16–78.
- Jeppesen, K. K. (1998). Reinventing auditing, redefining consulting and independence. *The European Accounting Review*, 517–539.
- Johnstone, K. M. (2000). Client acceptance decisions: Simultaneous effects of client business risk, audit risk, auditor business risk and risk adaptation. *Auditing: A Journal of Practice and Theory*(Spring).
- Kachelmeier, S. J., & Messier, W. F. Jr. (1990). “An investigation of the influence of a nonstatistical decision aid on auditor sample size decisions”. *The Accounting Review*(January), 209–226.
- Kinney, W. R. Jr. (1983). Quantitative applications in auditing. *Journal of Accounting Literature*(Spring), 187–204.
- Kinney, W. R. Jr. (1999). Auditor independence: A burdensome constraint or a core value? *Accounting Horizons*(March), 69–75.
- Knechel, W. R. (1983). The use of quantitative models in the review and evaluation of internal control: A survey and review. *Journal of Accounting Literature*(Spring), 205–219.
- Knechel, W. R. (1986). A simulation study of the relative effectiveness of alternative analytical review procedures. *Decision Sciences*(Summer), 376–394.
- Knechel, W. R. (1988). The effectiveness of statistical analytical review as a substantive auditing procedure: A simulation analysis. *The Accounting Review*(January), 74–95.
- Knechel, W. R. (2000). Behavioral research in auditing and its impact on audit education. *Issues in Accounting Education*(November), 695–712.
- Knechel, W. R. (2001). *Auditing: Risk and Assurance* (2nd ed.). Southwestern Publishing Co.
- Knechel, W. R. (2002). The role of the independent accountant in effective risk management. *Tijdschrift voor Economie en Management*(February), 65–86.
- Knechel, W. R., Rouse, P., & Schelleman, C. (2005). *A modified audit production framework: Evaluating the relative efficiency of audit engagements*. Working Paper.
- Kotchetova, N. (2003). *An analysis of strategy content and strategy process: Impact on risk assessment and audit planning*. Working Paper.
- Kreutzfeldt, R. W., & Wallace, W. A. (1990). Control risk assessments: Do they related to errors? *Auditing: A Journal of Practice and Theory*(Supplement), 1–48.
- Lemon, M., Tatum, K., & Turley, S. (2000). *Developments in the Audit Methodologies of Large Accounting Firms*. Monograph, APB London.
- Mackintosh, J., & Wrighton, D. (2004). GM finance chief slams reforms. *Financial Times*(March 8), 15.
- Merino, B. D., & Kenney, S. Y. (1994). Auditor liability in the savings and loan industry. *Critical Perspectives in Accounting*, 179–193.
- Messier, W. F., Jr., & Hansen, J. V. (1987). Expert systems in auditing: The state of the art. *Auditing: A Journal of Practice and Theory*(Fall), 94–105.
- Morrison, M. A. (2004). Ush to judgment: The lynching of arthur Andersen and Co. *Critical Perspectives in Accounting*, 335–375.
- Mutchler, J. F., & Williams, D. D. (1990). The relationship between audit technology, client risk profiles and the going-concern opinion decision. *Auditing: A Journal of Practice and Theory*(Fall), 39–54.
- O'Donnell, E., & Shultz, J. (2003). *Strategic assessment during business-risk audits: A curse of knowledge for audit planning judgments*. Working paper.
- Palepu, K., & Healy, P. (2003). The fall of enron. *Journal of Economic Perspectives*, 17(2), 3–27.
- Pentland, B. T. (1993). Getting comfortable with the numbers: Auditing and the micro-production of macro-order. *Accounting, Organizations and Society*, 605–620.
- Power, M. K. (1994). *The Audit Explosion*. London: Demos.
- Power, M. K. (2003). Auditing and the production of legitimacy. *Accounting, Organizations and Society*, 379–394.
- Public Oversight Board (2000). Report of the Panel on Audit Effectiveness. August. Available from: <<http://www.pobauditpanel.org/>>.
- Public Company Accounting Oversight Board. (2004) Auditing Standard No. 2: An Audit of Internal Control over Financial Reporting Performed in Conjunction with an Audit of Financial Statements. PCAOB.
- Public Company Accounting Oversight Board (2004) “Reports on 2003 Limited Inspections”. PCAOB, 2004. Available from: <<http://www.pcaobus.org/inspections/index.asp>>.
- Reinstein, A., & McMillan, J. J. (2004). The enron debacle: More than a perfect storm. *Critical Perspectives in Accounting*(August–October), 955–970.
- Rittenberg, L., & Covaleski, M. (2001). Accounting, Organizations and Society.
- St. Pierre, K., & Anderson, J. A. (1984). An analysis of factors associated with lawsuits against public accountants. *The Accounting Review*, 242–263.
- Simon, D., & Francis, J. R. (1988). The effects of auditor change on audit fees: Tests of price cutting and price recovery. *The Accounting Review*, 255–269.
- Solomon, I., & Peecher, M. E. (2004). Does your auditor understand your business? *Wall Street Journal*(May 25), B2.

- Squires, S. E., Smith, C. J., McDougal, L., & Yeack, W. R. (2003). *Inside Arthur Andersen: Shifting Values, Unexpected Consequences*. Prentice Hall.
- Stewart, D. (1999). Understanding the audit of tomorrow. *Accountancy*(December), 126–127.
- Sullivan, J. D. (1984). The Case for the Unstructured Audit Approach. *Proceedings of the University of Kansas Audit Symposium*, 61–68.
- Sundem, G. L., Dukes, R. E., & Elliott, J. A. (1996). *The Value of Information and Audits*. New York: Coopers and Lybrand.
- Toffler, B. L. (with J. Reingold) (2003). *Final accounting: Ambition, greed and the fall of Arthur Andersen*. Random House, Inc.
- Wall Street Journal (2004). Behind Wave of Corporate Fraud: A Change in How Auditors Work. WSJ (March 25): A1.
- Wallace, W. A. (1983). The acceptability of regression analysis as evidence in a courtroom – implications for the auditor. *Auditing: A Journal of Practice and Theory*(Spring), 66–90.
- Wallace, W. A., & Kreutzfeldt, R. W. (1991). Distinctive characteristics of entities with an internal audit department and the association of the quality of such departments with errors. *Contemporary Accounting Research*(Spring), 485–512.
- Waller, W. (1993). Auditors' assessments of inherent and control risk in field settings. *The Accounting Review*(October), 783–803.
- Warren, C. S. (1984). Discussants Response to 'The Case for the Unstructured Audit Approach'. *Proceedings of the University of Kansas Audit Symposium*, 69–71.
- Wilson, G. P. (2002). *Donot Throw Out the Reporting Baby with the Enron Bath Water: Critical Considerations When Reforming the Reporting System*. BDO Seidman.
- Winograd, B. N., Gerson, J. S., & Berlin, B. L. (2000). Practices at pricewaterhousecoopers. *Auditing: A Journal of Practice and Theory*(Fall), 175–182.
- Wyatt, A. R. (2004). Accounting professionalism – they just donot get it! *Accounting Horizons*(March), 45–54.
- Zeff, S. A. (2003a). How the US accounting profession got where it is today, Part I. *Accounting Horizons*(September), 189–206.
- Zeff, S. A. (2003b). How the US accounting profession got where it is today, Part II. *Accounting Horizons*(December), 267–286.