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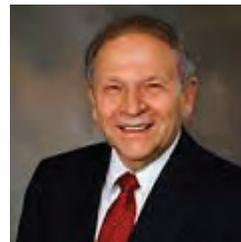
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ABSTRACT

A substantial distance exists between anticipation and retrospection. Rarely do we get an opportunity to systematically assess the chasm between what we thought would happen and what did happen. The current paper contrasts these elements pertaining to the Sarbanes-Oxley Act as it passes fifteen years of existence. Using interviews conducted in early 2004 as a baseline for generalized beliefs and concerns, the paper reviews what has transpired in the intervening years. Much of this is based on a review of the academic literature. The results indicate both important deviations and convergences. The meta-conclusion is that legacies are very difficult to determine, and academic accounting research is limited in determining the direction of truth. Nonetheless, efforts such as these are critical in a free enterprise system if we ever hope to quantify the costs and benefits of corporate disclosure regulation.

Introduction

Despite the so-called Great Recession that began in 2008 and took many years to abate, the accounting world still uses the sudden corporate collapses of 2001-2002 as the start of its modern era. Reforms put into place in the US under the Sarbanes-Oxley Act of 2002 (SOX) changed much about the work of public accountants for publicly traded companies.

Section 404 required every publicly traded company's external auditor to issue a separate report on the state of a company's internal controls for fiscal years ending after November 15, 2004. A material deficiency would be externally communicated and would necessitate corrective action. Many believed that Section 404 would set a new standard of acceptability in financial reporting such that it would trickle down to other domains such as privately held companies, not for profit organizations, and governmental entities. The Section 404 requirements meant that for the first time, more than one report concerning financial reporting matters needed to be filed with the SEC by auditors. This created the concern that the auditor's position would be other than unequivocal and that the investing public's reaction would be less predictable.

Fifteen years after the world changed serves as a suitable timeframe to evaluate what has transpired. For these purposes, merely examining the contours of accounting and auditing practice does not provide sufficient grounding since

what exists could be the result of many factors in addition to the SOX. This paper compares the anticipations of the new regulatory environment by knowledgeable participants of that era with what we now know. In the years that followed SOX, a large amount of academic research that has been produced with this objective. For these purposes, we focus on the core of the Act – the documentation of internal controls in Section 404. As the most revolutionary and controversial part of the Act, this particular issue merits such a focus.

Although there is no shortage of specific points of convergence and divergences about SOX, this paper more generally documents a regulatory cycle that invariably moves from protest/crisis to accommodation/normalcy. A set of interviews conducted with corporate executives sensitized the researchers to the former, allowing the trajectories of the subsequent years to be tracked. The important question is “What have we learned from moving from the panic of needing to fix a pressing problem to the luxury of a reflective plateau?”

The opportunity to compare then and now also bears upon the role of regulation in a free enterprise system. How well can cost and benefits be estimated in advance of their incurrence or realization? As we venture to restrict freedom to deliver a changed degree of confidence about corporate performance, investigations such as this inform the degree to which constraints on behavior are desirable and/or acceptable.

The remainder of this paper is divided into four sections. In the form of a literature review, the first provides information about SOX in general, and Section 404 in particular. The second section describes the methodology of the paper. The findings of the study comprise the third section. These are organized into general categories of ongoing importance include auditing, financial reporting, corporate governance and the ongoing regulatory process. A final section paints the broader context of this exploration.

Literature Review

Many commentators have waxed eloquently on the importance of investor confidence in the capital markets (Levitt 1998; Gates et al. 2006). In most advanced economies, massive resources have been invested in ensuring the production of a sufficient flow of reliable information so that equity pricing approximate the efficient (Fama 1970). However, a growing body of evidence suggests that there are systematic shortcomings of major oversight processes that would hope to reveal unvarnished truth. This skepticism has engulfed auditing procedures (Power 1995), auditor independence (Sikka and Willmott 1995) and financial analysts (Fogarty and Rogers 2005). Although the sudden declines of major corporations in the US during the first few years of the 21st century did not speak for themselves, they pointed toward the possibility that monitoring and warning systems not only have failed, but by design could have had little hope to succeed (e.g., Cullinan 2004). That these events could occur amidst unqualified audit opinions, strong buy recommendations and impeccable credit ratings introduces the prospect that a “house of cards” existed prior to the regulatory regime created by Sarbanes-Oxley.

Section 404 of SOX, as a solution to a major problem should have had a legacy of great success. From inception, several of these characteristics contribute toward the idea that Section 404 was uniquely important, if not the core of the Act. Other sections addressed additional aspects seeking the overall improvement of corporate governance. For example, the updating the composition and role of the board of directors (Section 407), requiring that top executives certify the financial statements (thereby heightening their accountability) (Section 302) and strengthening whistleblower protection and reward (Section 1107). In addition, the entire enterprise of public company audits was also taken away from the de facto control of the accounting profession, and vested in a new entity created for that very purpose (the Public Companies Accounting Oversight Board). However, none of these reforms involved the immediate expense and bold ambition of Section 404. Many believe that no regulatory change had more to do with the quality of financial reporting and the auditing process (e.g., Doyle et al. 2007).

The control environment was perceived by many to be unique to every company, and therefore not readily amenable to a standardized solution. Publicly traded firms were usually large and complex, both technologically and organizationally. Grappling with the essential problem until it could be aligned with a solution approach would then be quite different from company to company. Added to this was the particular company’s ability to spend money on a process that most had not even imagined as necessary prior to Section 404’s enactment. Most also recognized that progress would be slow and that perfection could not be attained (Davern et al. 2005). Firms differed in how much imperfection they were willing to either admit or remedy.

At the same time that the type of response is more open, the fact of a response was determined by law. Binding obligations in this area were backed by criminal penalties for high corporate officials. Unlike other instances of organizations confronting an institutionalized environment, resistance and open hostility were not viable choices. The legal environment created mandatory acquiescence that serve to materially limit organizational autonomy. In the case of Sarbanes-Oxley, companies were required to reorient their activities such that controls were no longer just arguably in the company’s interest, but were now part of a broader and more recognized public responsibility. This exogenous coercive influence likely created new patterns that affected the competitive balance and drew companies closer to the political regulatory process. Not only did this enactment increase the minimum attention that had to be given to internal control, it also challenged the viability of definitions that were developed and adjudicated exclusively by professional accountancy.

As of 2004, most companies have had little actual experience with Sarbanes-Oxley. Alternative interpretations of that which needed to be done flourished in the business media. Various sources of authority had not yet weighed into the situation to preempt other views and to provide a road map that would work and could be followed. As a time marked by considerable fluidity of meaning and continuous interpersonal negotiation, the two years shortly after SOX became law contained great interest. This uncertain atmosphere made it particularly challenging for companies to make plans that would respond to Section 404.

This study reflects upon a corollary of the classic Chicken Little story. Observing in 2004 how several companies might have believed that the sky was falling, but knowing in 2017 that it did not fall, what did we learn? Seeing how several companies planned to approach Section 404, but also knowing in general terms how it worked out, what can we conclude? Answering these questions is not just an exercise in

regulatory history. One should suspect that Section 404 and its SOX wrapper is not an isolated incident, notwithstanding its impressive magnitude. The next crisis will also be met with what at first glance seems like harsh medicine, but proves to be part of the new conventional understanding about the balance of power between business and government.

Methodology

Informal inquiry during the planning process for this paper indicated that those overseeing or working on Section 404 projects might be reluctant to discuss Section 404 with someone they did not know. Because of this, solicitations were built upon personal relationships seeking those that had direct experience dealing with Section 404 or had a background with similar experience. There is a risk that the information obtained and resulting interpretations could have been influenced by these personal relationships.

The sample consists of eleven interviews. The interviewees included chief financial officers, controllers, Section 404 project leaders, Section 404 consultants, a director of internal audit, and academics from the network of one of the authors. Generally, their employment history is with publicly held companies in regulated industries, such as banking or insurance. Companies were primarily domestic but with significant international operations.

The interviews were conducted over February and March 2004. Nine interviews were held at locations of the interviewees' choosing. Two interviews were done via telephone due to geographic constraints. A semi-structured approach was chosen to seek a balance between obtaining data relevant to the research questions and being open to discover other matters of direct or indirect interest.

An interview guide was prepared in advance to elicit discussion and ask questions in a manner that could help identify potential contingencies and variables. The questions were developed after considering prior literature believed to be relevant to the research questions. The interviewees were forthcoming in describing their experiences and views. Interviewees were very engaged as many of them were at the time living their respective approaches and work on Section 404 (as CFOs, controllers, project leaders, and directors of internal audit). The interviewees described their concerns and hopes, pressures felt, and the process for making decisions. The interviews were conversational in nature. Interviewees were encouraged to tell stories concerning their first-hand experience with Section 404 and/or what they have observed or learned through discussion with peers at other companies and consulting firms and/or supplemented by study. Each

interview lasted approximately two hours, was audio taped, and was later transcribed by a transcription service. A more detailed account of the interviews, replete with ample quotation is available from the authors upon request.

Results

The interview can be organized into commentary about four arenas of interest. These constituted how Section 404 would affect auditing, financial reporting quality, corporate governance and the general prospects for financial regulation. All of these areas have garnered the attention of academics over the years.

Auditing

Surprisingly few of the executives interviewed in 2004 appreciated Section 404 as the broad-based attack on the process of auditing that it was. Perhaps this failure of interpretation reflects the poor understanding of auditing that existed even in these sophisticated circles. The auditors that were interviewed had a better understanding of the solid critique of their work that Section 404 had put forth. Two theories were extended about why new legislation had been required to mandate that which auditing perhaps should have already accomplished. The first was that auditors had been overly seduced by the power of their substantive testing to resurrect an internal control focus. Bypassing internal controls, auditing had taken their task to evidence the financial statement assertions, independent of the production process that had initially produced them. Auditors audited around controls they did not understand, making the actual flow of data unnecessary to document. The second theory suggested that materiality had been too liberally applied as a judgment standard. Section 404 now required a closer look and one that tolerated less error. In other words, auditing had stopped looking at any error as potentially symptomatic of a flawed process when it only evaluated the error's magnitude.

While the 2004 corporate respondents did not demonstrate much awareness of the way audits were constructed, they did understand that audit negotiations and communications were extremely constrained. They appreciated that the auditor could put up only limited resistance to accounting choices made by the company due to the equivocal nature of standards. This weakness was compounded by the failure of the audit opinion to rise above the boilerplate. At a minimum, the focus of Section 404 on the importance of controls per se led to the further idea that auditing itself did not generate sufficiently robust information. However, the requirement of a separate report on internal control deficiencies scrambled expectations. Respondents varied in their forecasts about how much Section 404 engagements would unearth, but discomfort

over possibly conflicting signals to the investing community were pervasive. Given that the standard for internal control deficiencies was less agreed upon than what existed for an unqualified audit opinion, many were justifiably reluctant to sully a previously spotless corporate appearance.

The 2004 interviewees were sensitive to the wider symbolic dimensions. Control problems surfaced by the external auditor that pertain even remotely to the financial statements could be taken as indicative of a failure of the general control system. The coercion that could be brought to bear by auditors who had plans to do aggressive Section 404 work was seen as potentially important. Respondents expressed dissatisfaction with the assurance that public accounting has been able to provide about this collateral reputational damage potential.

The best prediction in 2004 was that auditors would begin to err on the side of conservativeness. Executives of that day understood audit firms had to worry more about independence. However, how much this would be done in response to internal controls was more difficult to imagine given the dearth of people who truly understood controls. Nonetheless, new efforts were reported already under way to co-opt the potentially reinvigorated independence auditors might have. But the focus on internal controls suggested attaining “buy in” or “alignment” with the auditor might not always be simple.

Cohen et al. (2010) provide a convincing argument that SOX changed auditing in many ways. However, most of these changes did not relate to Section 404. Although Section 404 work did make auditing more conscious of controls in general, one could also say that auditors became more adept at identifying internal control deficiencies and their implications. For example, Bedard and Graham (2011) estimate that auditors detected 75% of such deficiencies. Although we lack a pre-SOX baseline, we might safely presume that auditing had been somewhat sensitized along these lines.

More general wisdom might be found in DeFond and Francis (2005) who argue that even if one assumed perfect SOX implementation, auditing’s problems would continue since SOX was not designed to remedy more fundamental contradictions. In fact, requiring a separate Section 404 opinion letter may have helped auditing ignore its problems as the industry serviced a stand-alone demand created by SOX, often at premium rates.

The prospect that auditor work would send a mixed message to investors about the state of a client’s financial reporting proved to be a non-event, as judged by the lack of studies reporting such confluences. Yet, some dimensions remain with us. Audit fees probably remained high, to some extent as a permanent testament to Section 404. The infra-

structure of documentation is denser as a result of the unprecedented work on internal controls. Collectively, the fixed costs associated with being a modern publicly traded firm in the US are higher. Meanwhile, the increase in audit fees did not escape attention; a rise that possibly exploited the uncertainty.

In a perfect world, compliance would be predictable and homogeneous. All subject to the Act could have behaved like those companies reported by Wagner and Dittmar (2006) that undertook serious control upgrades initiated by SOX, leading to reduced long-run compliance costs. However, at the other extreme, the failure to change corporate culture means that many have failed to take the spirit of SOX to heart by still managing earnings with an eye on executive bonuses (Cohen et al. 2008). Others continue to push the accounting choice envelope by pressuring auditors to cooperate with aggressive alternatives, all with well documented controls in place.

Although this paper did not dwell on the problems of public accounting during this historical moment, their increased conservatism could be taken as a natural survival reaction. Lobo and Zhou (2006) found a tendency for large firm clients to have lower discretionary accruals during this time. Also, client losses tended to be recognized more rapidly than their gains, as part of a more conservative audit world view.

Financial reporting quality

The need to protect the integrity of financial statements had never been more pronounced than at the time of Sarbanes-Oxley. The 2004 interviewees were very conscious of the importance of high quality of financial reporting. Given the awareness of the stock price consequences of accounting problems, most hailed responses such as Section 404 compliance as the needed cost to restore confidence.

Nonetheless, respondents took the connection between the formal documentation of internal control procedures and quality financial information to be unworthy of critical commentary. Nobody asserted that accounting itself needed to be improved as a basis for unambiguously evaluating the prospects for business success. What people instead considered was the opposition of two structural archetypes for Section 404 work. The “top-down” approach starts with the financial statements and sought to document the processes needed to produce each number. The “bottom-up” approach started with processes and transactional detail and attempts to roll them together, ultimately reaching the financial statements. The latter was believed to be more comprehensive, but also more problematic and expensive.

Section 404 work shared the form versus substance conundrum faced by many accounting rules. But unlike accounting whose elements of form have achieved high degrees of justification within a well-accepted and enduring double entry model, Section 404 work was a new form that was more than somewhat unmoored from substance. Interviewees explicitly confronted the decoupling of structure and operations by articulating the victory of form over substance. Aim was taken at the likelihood that Section 404 would produce documentation without decision making value.

The financial reporting objectives that should have been attained by Sarbanes Oxley were perceived by the 2004 respondents as mostly beyond the reach of Section 404. Asserting the bottom line to be better accounting, several people wondered if the accountability induced by the documenting of controls would ever improve financial reporting. Some suggested the missing element was actual business risks, while others promoted ethical behavior. The best that SOX could have done would be to move the needle in the correct direction. Several studies, including Hammersly et al. (2008) document a stock market reaction to internal control deficiencies. Since investors thereby demonstrate their interest in accounting information that is high quality, efforts to minimize deficiencies were shown valuable. However, Raghunandan and Rama (2006) introduce some doubt whether markets distinguish between the severity and degree of these deficiencies. Nonetheless, SOX created a platform that systematically questioned the dubious ability of individual companies to appreciate how much control problems eroded reporting quality (Bedard and Graham 2011). Commentators produce evidence that the diminishment of accrual-based manipulations that might have been made difficult through Section 404 work, merely changed forms, now appearing as increased real earnings management (Bartov and Cohen 2009; Cohen et al. 2008).

Perhaps the reality of this question has garnered too much academic attention, and needs to be balanced by what the investing public believes. Toward that end, the consensus position is that the massive investment required by Section 404 inspired more confidence in the reliability of accounting information (see Rittenberg and Miller 2005).

The academic literature has failed to resolve the superiority of the basic approach taken by auditors. Anecdotally, the bottom up approach probably possessed theoretical superiority but may also have been abandoned due to its impracticality. Top-down provide superior scoping limits that had better transportability from engagement to engagement. As Section 404 work became more regularized, top-down offered the audit firm more quality control.

Some important points of departure merit mention on the ageless struggle between form and substance. If the general purpose of Section 404 was to fight account manipulation, the transition to real earnings management following the increased difficulty to use discretionary accruals (Bartov and Cohen 2009) could be interpreted as the resurgence of form over substance. However, such a conclusion is constrained by the refusal of managers to admit to any earnings management. Apparently those that left the public market as a reaction to SOX (Engle et al. 2007) felt that form had materially departed from any sense of value added substance. Contrariwise, the form taken by SOX was not so devoid of substance to prevent it from restoring sufficient normalcy to investor confidence and to fuel the resumption of normal market operations.

The argument that Section 404 lacked serious connection to actual business risk seems to lack apparent defense. In stock markets, capital is put at risk in several ways that cannot be evaded in a capitalistic economy. Companies decline and impose losses on investors due to competitive posturing, technological change and managerial induced limitations. In a way, the critique of what SOX did not do is a critique of all efforts at governmental control.

The irrelevance of SOX and Section 404 captured in the 2004 interviews could have also been an expectation that a larger stock market reaction should have occurred. For some, this metric is the only barometer of importance. Beneish et al (2008) show that the imposition of Section 404 had no noticeable influence on the cost of capital. To this, DeFranco et al (2005) add that the stock price reaction to internal control deficiencies was limited to the presumably uniformed selling of smaller traders.

Corporate governance

Sarbanes Oxley and its Section 404 were sufficiently consequential to force the reconsideration of elements of the corporate hierarchy. Internal auditors were expected to be more prominent within operations. Audit committees were also to come to the foreground, as the 2004 respondents reported more frequent meetings, more communications with members and more standing items placed on their agendas. Some reported with reluctance an expanded role for the corporation's general legal counsel. These elevations of status seemed to reduce the existing primacy of the CFO.

Many companies apparently found themselves at a ground zero in 2004 when it came to formal policies over internal controls. The understanding of controls and their importance did not run deep in organizations, even quite large ones. The designation of "process owner" had not yet come

into vogue. It was a time of rapid organizational learning for the companies that did not see doing the minimal compliance as the optimal solution. Those companies committed to a re-engineering mindset had to balance compliance with improvement by deciding how much could be accomplished in the short run. Some companies saw Section 404 as a test of their mettle and as an opportunity to grow.

Despite the fact that the structures that would be put in place appeared to have a technical orientation, a surprising degree of influence was attributed by respondents to “softer” factors. The “tone at the top” of the organization was expected to be a strong driver of what companies did for Section 404 compliance. The respondents as a whole focused upon the variation in the attitude taken by top management. One person saw this running from maximal effort to deceptive compliance. Section 404 represented an excellent test case on how top managers dealt with control issues, ranging from annoyance/denial to proactive/improvement. The Act was a referendum of an organization’s tolerance for openness, atmosphere of interpersonal trust and its general taste for ethicality.

In a rational world, Section 404 would have produced something of obvious and immediate value for the corporations subject to it. However, perceptions of value held by the respondents were more muted and indirect. This quiet call to arms recognized that the acquisition of value added would be an uphill struggle: lagged and indirect, and perhaps isolated to a few areas. Others thought of the enduring value as a by-product that needed to be covertly smuggled into a broader compliance effort. Often, value for money came in the form of already-planned-for information technology investments. Others used the SOX event to accomplish broader organizational change, such as the disciplining of troubled foreign subsidiaries or the unraveling of regretted decentralization decisions.

No discussion about controls would be complete without some sustained consideration of information technology. The automation of business information, relatively new as of 2004, had created different flows through the organization that never existed before, and as a result changed the set of necessary controls. The lack of consensus about controls between those with varying knowledge about the computerized environment complicated the design of the operational core for compliance. Dedicated software provided the glue that made the project work, allowing creative linkages and references. For some, the software provided a perspective about Section 404 that led to unexpected compliance pathways. Such a technological imperative had its limits since every installation would have to be customized to the company.

The accounting scandals that called SOX into existence were readily characterized as governance failures by the academic literature. The Act called for better boards of directors primarily through the requirement that they possess more financial expertise. Linck et al (2009) documented how SOX was successful in altering the composition of boards toward more outsiders and more total members. Illustrating how this worked in conjunction with Section 404, Hoitash et al. (2008) showed that boards that possessed higher levels of these abilities tended to have fewer internal control deficiencies. However, when board strength is contrasted with Section 404 accomplishment, a different picture emerges. Zhang (2007) offers empirical support that governance composition was more consequential to the capital markets than the actual Section 404 outcomes.

A more important question pertains to the successfulness of the effort to increase the role of the board in financial accounting matters. Cohen et al (2010) report that such an increase in involvement distinctly existed, but the interest of the board in the adequacy of internal controls was more fleeting. The Boards’ auditor committee is not always important in resolving disputes with auditors over accounting choices (Cohen et al. 2010).

No evidence exists that internal auditing ascended on any meaningful basis as a result of Sarbanes-Oxley, at least as such is witnessed by the academic literature. The Act may have been complicit in halting the movement of the late 1990s to outsource internal auditing. At a minimum, external auditors recognized such an offering as a conflict of interest. Nonetheless, internal audit continues to be as marginalized as ever in terms of the resources that are devoted to it and the tendency to use it for other purposes. Internal auditing does not seem to have played a major role in Section 404 compliance work.

The work that was needed for Section 404 was extremely computerized in its nature. Accordingly, much proprietary software was written and sold in the effort. Software no doubt constituted a major component of the costs, with non-auditor consultants becoming a larger share of that market. This creative activity no doubt stimulated other creative work that met demands for other forms of business software, thus making indirect contributions toward other objectives. Nonetheless, the specialized nature of this intellectual property means that for the most part it represents dead-weight loss. Krishnan et al. (2008) demonstrates higher Section 404 costs for companies with newer computer systems in place. Apparently the demands of 404 did not dovetail with the existing trajectory of business software. Instead, the lack of familiarity with new systems exacerbated compliance difficulties.

The Section 404 episode may have succeeded in accelerating the central positioning of the information technology function within the modern corporation. The bottom line on many internal control weaknesses was to show that corporations had many information technology vulnerabilities. This led to many companies putting more resources into information technology and then expecting it to deliver better information and information security (Damianides 2005). Correspondingly, internal audit was often reengineered around the audit of these information technology systems (Rittenberg and Miller 2005).

The nature of financial regulation

Most managers accepted the circumstances that precipitated SOX and the compliance dilemma that they were given. Nonetheless, their characterizations of these events highlighted the political expediency of the legislation. Relative to Section 404 in particular, subjects saw little connection between internal controls and the large corporate scandals of the day, suggesting instead that the provision was an ill-conceived legislative afterthought or as an overbroad attempt to enlist private sector enforcement assistance. More than one respondent explained Section 404 as “a political knee-jerk” aimed at restoring faith in the capital markets.

With so much at stake, the respondents predicted that publicly traded companies would be put under the “microscope” like never before. Although all agreed that this would be felt disproportionately by the larger companies, there was disagreement over how deeply enforcement selectivity would go. In this way, the respondents attested to the existence of institutional pressure to create better results not only for their own companies, but also as exemplars for others.

Under section 404, documentation has had a life of its own. Whereas the ultimate objective was effective controls, the failure to document effectiveness was deemed a stand-alone deficiency. This redirection greatly added to the regulatory burden, in part because of an overestimation of the formality of extant controls by the 2004 interviewees.

Section 404 cut across much of what any company does. Establishing its boundaries seemed to be the initial dilemma in constructing appropriate response structures. Controls are only effective if they are consistently implemented, an aspiration that included a massive training effort not contemplated by the Act. Moreover, many corporations had controls but lacked the culture of controls that the law now demanded. The complexity of modern corporate structure also involves relations with subsidiaries that had to be ruled in or out of the 404 processes. Considerable uncertainty

surrounds where the financial statements begin and the rest of the company ends. Materiality was a different boundary question. Without known thresholds, Section 404 seems to demand that companies not only be better than they have ever been, but perhaps perfect. Lacking the periodicity of the audit, Section 404 demands appeared ever-present. In 2004, Section 404 appeared boundary-free and therefore amorphous in how it would be enforced.

Although the decoupling of problem and solution was apparent to many in the academy, the academy has been complicit in allowing Section 404 to have a life of its own. With the exception of parenthetical remarks in the critical accounting literature, the academic literature vested Section 404 with automatic and assumed importance notwithstanding its lack of connection with the high level systematic fraud that triggered its inception.

Accepting what the 2004 interviewees said as their truth that could not be compromised by subsequent work, we need to ponder the prospect that solutions need not be connected to problems. More specifically, we should accept that a real solution would have had dysfunctional effects that would render it much more problematic than a less proximate remedy. Perhaps we have entered a post-truth-era where “solutions” that are palatable are preferred, especially if they do not call into question that which we cannot afford to challenge. Section 404 promised to shore up that which was somewhat neglected and was in the general vicinity of the problem of permissive accounting standards, spineless auditing and massive fraud by top managers. Section 404 also worked on the symbolic level of reminding all participants that accounting needed to return to fundamentals.

SOX was, by design, a major discrimination that heightened the departure between the public and private companies, and for that matter between the largest and the not so large public companies. Although its passage triggered much trepidation that its mandates would trickle down to others as it became the new definition of proper stewardship, such did not happen and therefore the deviation of those that were subject to Section 404 and those that were not became permanent.

A proper study of this question has never been conducted, in part because it requires comparisons across types that tend to be incomparable. Some indirect evidence bears on the question, mostly pertaining to the impact of SOX. For example, Bergeron et al. (2010) found that those that were subject to the Act (i.e., large publicly traded firms) were less inclined to take on risky projects. This conclusion tended to be driven by the distribution of material weakness that was

discovered, rather than the process of looking for such. For example, Ge and McKay (2005) found that such problems existed in greater abundance for firms that were more complex and less profitable. Consistently, Beneish et al. (2008) found that smaller firms that had more pre-disclosure information uncertainty had their stock prices more adversely affected by the discovery of internal control deficiencies.

The research does not support the notion that larger companies per se were more adversely affected by Section 404. If anything, the legacy of SOX in this regard was to discover firms that had latent defects previously undiscovered by the market, and to disproportionately punish them under a Section 404 rationale.

Unquestionably, Section 404 increased the amount of documentation that existed around internal controls for U.S. corporations. Documentation is expensive and naturally concerned those that were asked to produce it. Documentation seems not to be of interest to academics for several reasons. First, the proprietary nature prevents it from having usefulness to constituents. For many, that which cannot be connected to market pricing or trading volume does not exist. Second, documentation is past-oriented. Unlike accounting, also past-oriented, documentation does not even attest to a transaction that once reflected a market reality. Accordingly, other than general acknowledgements that practitioners were correct about the total pure formalization created by Section 404 (e.g., Rittenberg and Muller 2005), documentation is not an issue in the accounting literature. Nonetheless, absent value, mandatory documentation is a regulatory deficiency.

The rate of technological and organizational change should cast doubt on the ongoing value of the documentation that was produced to conform to the requirements of Section 404. Although the continuous updating of control documentation is in process, the value that appears to exist is the discipline of doing it rather than having it per se. Surprisingly, the practitioner literature does not contain testimonials about the importance of this documentation, or the implicit value of its re-construction to reflect new processes or procedures. However, we also do not continue to hear the case against documentation without purpose. Therefore, it would be reasonable to believe that excessive compliance documentation was produced above and beyond that which Section 404 actually intended, and continuing the documentation production exists less further from that which can be cost-justified.

Although not discovered by the academic literature, boundaries for Section 404 did eventually emerge. Public accounting teams did converge on the work that would be

needed for this engagement. Over time the variance in the judgments needed lessened and the expense became more predictable. Even so, Ge and McVay (2005)'s finding that material weaknesses were more likely to exist in environment where less money had been spent on documentation suggests the discovery of floors beyond which auditors were unwilling to go. Only anecdotal accounts exist of companies being gouged to ceiling spending levels where auditors defined much more to be controls. Qualitative work with unlimited access would have been necessary to learn if such events were commonplace.

The academic literature has failed to create a consensus on whether the regulatory excesses of Section 404 of the SOX had a silver lining. Auditing as a scholarly field is suffuse with theoretical abstractions but rather weak on organizational specifics. Whereas the distribution of material weaknesses findings fit nicely into the former, we are not likely to have observed the work of audit teams in reaching these conclusions. Industries and their constituent firms tend to be sui generis, and therefore judgments about the adequacy of their controls are unlikely to be comparable. We may never know how much waste was created by an over-reaching statute placed into the hands of those well-paid not to be terrible efficient.

Unquestionably, failing to include the cost of compliance for Section 404 would be a major mistake. Krishnan et al. (2008) estimates average company Section 404 costs at \$2.2 million. Sneller and Langendijk (2007) put this total in context by noting that compliance was much more expensive than originally estimated by the SEC. Leuz (2007) argues that estimates of costs are flawed since they include that which would have transpired in its absence. More generally, to the extent that audit expenses varied with the extent of weaknesses found, companies incurred the costs they deserved (Hoitach et al. 2008).

The costs of Section 404 were apparent and real from the inception of the legislation, even if the 2004 interviewees tended to under-appreciate their magnitude. The benefits were unclear and intangible, at best. In hindsight, enacting legislation with this critical calculus so skewed has not proven advantageous in any certain way. Bryan and Lilien (2005) suggest the continued prevalence of costs exacerbated by a distribution of weakness weighted towards non-industry leaders. Zhang (2007) also questions whether the costs proved justified, and illustrating how less spending could have accomplished the same.

Surprising few have hailed the benefit of Section 404 work over the years. Writers tend to suggest that more will be perceived in the longer run, but provide little means of

quantifying them (e.g., Coates 2007). To some extent, better controls mean that better accountability is produced. But like the greater transparency that documentation enables, the intended beneficiaries are mostly unaware of their bounty. This situation means that benefits will probably never be quantified but are always believed to exist (e.g., Bedard et al. 2007).

Without question, Sarbanes-Oxley punished the innocent after the guilty has departed the stage. That characteristic is shared with any reactive legislation. However, associated additional distributional consequences need to be recognized. As shown by Jain and Rezaee (2006) compliance costs were disproportionately felt by firms that had the poorest controls. These firms probably intersected with the least profitable firms, a group identified as the largest SOX losers by Ge and McVay (2005). Thus, it would be easy to say the innocent that were most punished were those least fit to survive, even in the absence of SOX. In this way, the massive costs of Section 404 added to the concentration of industries.

In a perfect world, compliance would be predictable and homogeneous. All subject to the Act would have behaved like those reported by Wagner and Dittmar (2006) that took control of issues initiated by SOX to heart, leading to reduced long-run compliance costs. However, at the other extreme, the failure to change corporate culture means that many have opted not to take the spirit of SOX to heart by still managing earnings with an eye on executive bonuses (Cohen et al. 2008). Others continue to push the accounting choice envelope by pressuring auditors to cooperate, all with well-documented controls now in place.

Conclusions and Areas for Future Research

The interviews conducted in early 2000s to study the internal controls section of the SOX offer the rare opportunity to contrast what was thought by practitioners at the inception of a regulatory cycle and what has come to be believed during the maturity of that cycle. Practitioners are asked to comply with new requirements and must ready their companies to do that which has not been done before, and therefore are the best source of immediate reactions. Academics have the freedom to select interesting aspects of the regulatory regime, design tests that shed light on them, and tell us what is more likely than not, armed with data that becomes available only on an after-the-fact basis. This juxtaposition offers a unique design for this paper.

In order to structure the vast arrays that comments and research can populate, four general areas were offered.

Section 404 was first looked at as auditing concern. Drilling down toward the ultimate objective of the Act and of auditing, the paper attempted to develop financial reporting quality considerations. Section 404's vast scope also enables the paper to consider how compliance may have altered corporate governance in a broad sense. Finally, Sarbanes Oxley and Section 404 offer general lessons related to the prospects for financial regulation.

The interviews conducted in 2004 are not offered as scientific evidence of what the corporate community thought, primarily because they are too few in number. Accordingly, what these practitioners said at that time has been generalized and highly summarized. The paper does not quote from this source, since that approach would tend to individualize thoughts. Backing away from the specific, the interviews collectively work as sensitizing materials attempting to recapture the early period of an important regulatory episode.

The results highlight the disconnect that appears to exist between the problem that led to its enactment and its general action imperatives. The wisdom of the several interviewees who were very skeptical about the prospects that the new regulation would reduce fraud, is certainly borne out by the corporate fraud that has continued. These executives said the Act would not detect fraud since the impulse to steal would outlast control processes. There would also be negligible impact on sudden business failures. Although this seems absolutely correct, Section 404 may have changed the character of the corporate fraud that followed it.

At the time of the interviews, the manner of compliance with Section 404 has not reached the point of regulatory crystallization. Practitioners reported on what they had seen of a very dynamic situation that included a potentially bottomless pit for compliance spending, as a result of legislative haste. In a perfect world, not much imagination is necessary to retrospectively conjure an alternative regulatory regime in which firms could isolate areas where controls could have been improved. SOX was a hand grenade where maybe a scalpel was needed.

SOX complicated the implications of being publicly traded, and may still represent the high water mark of governmental interference in the equity markets. The magnitude of that which was attempted can be usefully contrasted with the Wall Street led improprieties that triggered the Great Recession less than five years later, to which there was much more muted governmental reaction.

Although much evidence exists in support of broad decoupling of actual compliance and the requirements of Section 404, some general and enduring value is likely to be

achieved. Many more people have been made aware of controls and their importance. This would include a heightened appreciation for the link between accounting and other operating cycles and for the articulation of the financial statements and the business plan. More organizational members have reason to understand the continuous role of internal auditing as a value-added feature of the organization. Sarbanes-Oxley may have even help public accounting firms recover their professional traditions by again bringing rigor to controls.

On the other side, Sarbanes-Oxley was, at its inception and remains, fundamentally political. Going much deeper into corporate procedure than ever before, some thought this Act could be the proverbial camel's nose under the tent. At that time, the precarious balance between the private and public sector has been decisively tipped. Perhaps the politics of more recent days have walked this back, making Section 404 more phantasmagorical to today's sensitivities.

Legacies are difficult properties to judge. Academic research conducted upon that which plays out over time also has its limits, often not even trying to give us the answers we want. Nonetheless, the Section 404 record is quite mixed once we get into the specifics. On balance, practitioners seem quite right to have been skeptical. A regulation designed without great forethought that required companies to throw near endless money at a problem most people did not think they had, winds up as less of a success than we hoped. A classic American story.

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An Examination of Gender Diversity in Accounting Decision Making

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ABSTRACT

Free Enterprise systems suggest a ready accessibility and inclusion of the greatest range of participants. Various sources advocate that diversity in business organizations may lead to more optimal decision-making because of differing decision styles, etc. between genders. This study examines that premise within a business decision, testing whether there are gender differences when deciding upon a transfer price that will optimize profits for the firm. The findings suggest that at least with respect to the decision-making regarding transfer price choice, there were no significant differences between males and females when choosing transfer prices. Across the variables suggested by the literature, this study did not find pervasive, significant differences between genders. However, an analysis of the individual variables showed that under some conditions, gender differences did surface regarding perceived fairness, perceived performance evaluations, maximizing overall corporate profits and potentially some marginal differences when considering maximizing one's compensation. The study found no significant differences between genders with respect to risk aversion.

Keywords: Gender, Diversity, Decision-making, Transfer Pricing, Accounting

Introduction

Motivation of this study rests on the premise of whether businesses are increasing gender diversity and more specifically whether such diversity change affects business decision-making with respect to differing management styles, outcome effects and so forth. Various sources decry the obstacles that hinder movement to a more diverse representation within business management while either implying or touting the advantages of gender diversity. In some instances, even the courts have been tasked to weigh in on issues of gender underrepresentation such as the case with Wal-Mart (United States Reports 2011; Beisner and Wyatt 2012). While not mitigating legal implications, this study focused on the business decision-making aspects of gender diversity.

First, examining gender diversity obstacles within the business community from an empirical perspective, prior studies have found that women not only earned less than their male counterparts, but also frequently experienced a "glass ceiling" (Timmers et al. 2010; Singh et al. 2002; Oakley 2000). The literature provides evidence that women have been under-represented in male-dominated senior management positions as key business decision-makers in large corporations for decades (Appelbaum et al. 2003; Bertrand and Hallock

2001; Oakley 2000; Chow 1995; Okanlawon 1994; Lee and Hoon 1993). For instance, Appelbaum et al. (2003, 43) reported that in the year 2000 only 12.5% of Fortune 500 corporation officers were women, and women accounted for just 11.7% of the board of director membership. Bertrand and Hallock (2001) found that women represented only 2.5% of high level executives of large U.S. firms for the period 1992 to 1997. Gender inequality was also found in other countries such as Singapore, the United Kingdom (UK) and Hong Kong (Lee and Hoon 1993). Oakley (2000) argued that gender stereotyping played a significant role in salary disparities and "the glass ceiling" which prevented women from being promoted to senior management positions in large corporation. The stereotyping also prevented women from accessing important internal informal channels such as the "old boy network" that excludes less powerful men and women, which was found to be essential for promotions.

Although the representation of women in decision-making positions has been low, the number of women employed in management and business positions today seems to be increasing. For example, according to the U.S. Department of Education, National Center for Education Statistics in Table I, women employed in management, business and financial operations positions increased by 6.2% from 2004

to 2010 while the employment of men in such positions only increased by 2.7% during the same period. Women made up 42.6% of the total in 2010.

These changes may be partially explained in that more of today's women attain higher levels of education, such as master's degrees in business, than a decade ago. Higher education in business opens doors for women with respect to career advancement in management.

As the number of women in business management positions increases, it becomes increasingly important to understand how gender diversity affects decision-making processes as well as outcomes. Francoeur et al. (2008, 83) found that "firms generated positive and abnormal returns when they have a high proportion of women officers." However, Choi and Rainey (2010) reviewed previous empirical research on the effects of diversity on organization performance and found

inconsistent results. These inconsistent findings suggest that further inquiry is needed to better understand whether and to what extent gender may affect decision-making processes, and thereby affect a company's performance, particularly in an international business environment setting.

Prior gender diversity studies primarily focused on issues such as how females and males differed with respect to a variety of interpersonal and behavioral issues as well as effects stemming from affirmative action, glass ceilings and the wage gap. Recently, a growing body of research has examined gender differences with respect to competitive environments and risk taking. However, few, if any, have examined how gender differences might affect business decision-making processes particularly given conflict interaction and/or resolution. The purpose of this study is to examine gender differences in the context of transfer pricing decision-making. This study contributes to the existing literature by examining gender

Table I
Employment in Management, Business and Financial Operations
Positions by Gender 25 years old or older

	2004		2010		Difference	
	Number	%	Number	%	Number	%
Men	11,305,000	58.26%	11,606,000	57.44%	301,000	2.66%
Women	8,098,000	41.74%	8,600,000	42.56%	502,000	6.20%
Total	19,403,000	100.00%	20,206,000	100.00%	803,000	4.14%

Table II shows that the number of women who received Masters degrees in business increased by 81.10% from the period of 1999-2000 to the period of 2000-2010.

Table II
Master Degree in Business Earned by Gender

	1999-2000		2009-2010		Difference	
	Number	%	Number	%	Number	%
Men	67,544	60.17%	96,709	54.43%	29,165	43.18%
Women	44,714	39.83%	80,975	45.57%	36,262	81.10%
Total	112,258	100.00%	177,684	100.00%	65,427	58.28%

differences within the business decision-making noted as it pertains to perceptions of fairness, performance evaluation, maximizing compensation, maximizing corporate profits and risk taking. Frequently, these variables can be in conflict with one another. For instance, maximizing one variable, such as maximizing the profits of one's own division/unit can result in adversely affecting another variable such as overall corporate profits.

The findings of this study suggest that at least with respect to the transfer price choice, there were no significant differences between males and females when choosing transfer prices. In addition, across the various variables suggested by the literature, this study did not find pervasive, significant differences between genders. However, an analysis of the individual variables showed that under some situations, gender differences did surface regarding perceived fairness, perceived performance evaluations, maximizing overall corporate profits and potentially some marginal differences when considering maximizing their own compensation. The study found no significant gender differences between genders with respect to the other variable tested; namely, risk aversity.

Literature Review

With regard to gender in decision styles, a fairly lengthy body of research has yielded conflicting results. For instance, Gerritann et al. (1987) found that there were no differences between male and female entrepreneurs in terms of motivation to include the need for money, independence, goal-orientation and identification of business opportunities. In contrast, other studies have found that gender differences did exist regarding decision styles. Specifically, Powell and Johnson (1995) summarized that differences in decision styles between males and females were due to differences in objectives (Hodgson and Watson 1987; Rubin and Brown 1975; Kohlberg and Kramer 1969) and due to differences in aspects of the decision process (e.g. Hudgens and Fatkin 1985; Welsch and Young 1984). Kohlberg and Kramer (1969) argued that females selected strategies that supported relationships, in contrast to males who seemed to follow rules. Eagly (1978) noted that females emphasized ensuring a smoothly functioning group by resolving interpersonal conflict. Interpersonal conflict may arise when decision-makers must choose or make a decision when facing different conflicting corporate objectives which are perceived as equally important to the firm. However, outcomes from each alternative objective may create uncomfortably difficult scenarios among divisions or colleagues. Women prefer a less competitive work environment than men (Migheli 2015; Croson and Gneezy 2009) and thus prefer making business decisions that minimize conflicts that could arise in their work environments. Noting

the existence of conflict, female decision-makers may make decisions that avoid or minimize the conflict; however, the decision may not be in the best interest for the company as a whole. This may be one of the explanations as to why prior accounting research in decision-making studies found that decision-makers, when facing potentially ambiguous and even conflicting choices, did not make decisions that maximized overall corporate profits (Chan 2011, Luft and Libby 1997).

The differing approaches to conflict noted above suggests the following hypothesis:

H1: Women choose different transfer prices than men in scenarios with multiple potentially conflicting variables.

Prior studies have theorized that men were better negotiators than women and therefore men received better negotiation outcomes due to behavioral and gender differences. However, empirical research results provide mixed results. Stuhlmacher and Walters (1999) reviewed the literature and noted that men achieved more profits stemming from negotiations than women, while other studies found no differences. Stuhlmacher and Walters suggested that “women are motivated by maintaining relationships while men are motivated by competition and status (1999, 655)”. When negotiating, women were more reluctant than men to engage in competitive interaction like bargaining (Croson and Gneezy 2009, 464). Thus, women attempt to allocate profits between themselves and others, in order to minimize possible conflict and provide a “win-win” situation. In contrast, men were taught to “win” in competition (Heim and Golant 2005). Heim and Golant (2005) suggested that women were more concerned with compromise when it comes to conflict resolution, and fairness. Miller and Ubeda (2012) noted that women differed from men with respect to how to process “fairness” in decision-making contexts. Migheli (2015) found that, within an incentive scheme environment, women preferred non-competitive work environments, the opposite of men.

As noted in Chan (2011), equity theory (also called distributive justice) may provide explanations of why females are concerned with fairness instead of maximizing their compensation, even when they were paid for maximizing their economic benefits in an organizational setting. Distributive justice refers to the fairness of the actual outcome (Wentzel 2002). “Organizations are both task and social systems that involve simultaneous pressures for economic performance and the maintenance of social cohesion. The distributive principles that people adopt when trying to achieve these two goals are different, and indeed, inimical to each other

(Kabanoff 1991, 421)”. That may occur when managers are expected to achieve different goals/objectives, or they perceive themselves in a situation where the company’s policy is perceived as unfair. Consequentially, decision-makers may make a decision that will minimize or avoid conflicts, or it may be that an individual’s manipulative disposition may affect his or her behavior (Ghosh 2000, 7). Thus, perceived fairness may affect business decisions when agents are given potentially competing instructions to maximize corporate profits and subsidiary profits/performance, even if they were given compensation inducements to behave in self-interested ways. Based upon the preceding literature review, we hypothesize the following:

H2: Women perceive fairness as more important than do men.

Prior research of gender differences found that male leaders tend to focus on goal achievement (Metwally 2012). Concerning whether decision-makers maximize their compensation, prior studies found inconsistent results (see Stuhlmacher and Walters 1999 for review). Heim and Golant (2005) suggest that boys are taught to compete and win against others in competition when growing up. Heim and Golant (2005, 80) further noted that men behave in similar competitive ways when at work. Men, for instance, were found to want their divisions (or teams) to perform better than other divisions (or teams); and they tend to compete with respect to performance against others within the same division or team. Thus, men tend to maximize compensation when making business decisions, particularly with respect to incentive payments. In gaming situations, Rubin and Brown (1975) found that males attempt to maximize their winnings, whereas females were found to be more responsive to the social attributes of the other players. Stuhlmacher & Walters (1999, 655) found that “women consistently allocate less resources to themselves than men when determining their own compensation or dividing profits among themselves and others” during negotiations. This may be explained by the Fletschner et al. (2010) finding that women were willing to forgo higher wages to work under preferred conditions, such as in less competitive or noncompetitive environments. In contrast, in a competitive environment, monetary incentives may induce men to perform better than women in tournaments (Migheli 2015). Kaplan and Atkinson (1989) suggest that when making decisions, women tend to place greater emphasis on non-financial considerations thus inferring less emphasis on financial considerations. Based upon this reasoning, we hypothesize the following:

H3: Women perceive performance evaluations as less important than do men.

H4: Women perceive maximizing their compensation as less important than do men.

H5: Women perceive maximization of overall corporate profits as less important than do men.

The literature has also suggested that other differences exist in decision styles between genders. Females were more easily persuaded or influenced by outside inputs in their decisions regardless of the risks (Worchel and Cooper 1976; Hovland and Janis 1959). Gender differences in levels of aggression in terms of risk-taking may be one of the reasons (Powell and Johnson 1995; Migheli 2015). Berkowitz (1962) noted that males were more aggressive risk takers. Freedman et al. (1970) concluded that females were generally more persuadable than males. In a more recent study, Charness and Gneezy (2012) also found that women were more risk averse than men in investment decisions. However, Sonfield et al found mixed results of whether women were more risk averse than men (2001). Croson and Gneezy (2009) reported that women were more risk adverse than men in non-manager and professional populations. They concluded that managerial women and men show similar risk preferences and make similar decisions. Ertac and Gurdal (2012) argue that further research on gender difference in decision-making is needed in order to understand the reasons.

In order to test the gender difference in risk preference, we hypothesize the following:

H6: Women are more risk averse than are men.

Methodology

Participants and Research Tasks

The 108 volunteer participants were full-time professionals, all with undergraduate degrees, in Australia participating in an accounting certification course. Each participant was asked to make a transfer price decision, acting as though he/she was the manager of a subsidiary and that the price chosen would be the final transfer price, without having to negotiate with the other party. Participants were instructed that the subsidiary was a captive one and that all

Table III
Descriptive statistics for the perception of customer profitability analysis adoption impediments

Cell #	1 Fixed Prediction	2 Div Prediction	3 Corp Prediction	4 Fixed Prediction	5 Div Prediction	6 Corp Prediction
Fairness	2	2	2	4	4	4
Evaluation	7	7	7	7	7	7
Max Prof	7	7	7	1	1	1
Comp	-	7	7	-	7	1

Fixed Comp = Compensation plan based on a fixed salary

Div Comp = Compensation plan based on a fixed salary + Subsidiary's Profitability

Corp Comp = Compensation plan based a fixed salary + Overall Corporate's Profitability

output had to be purchased by the downstream subsidiary. A total of 108 participants voluntarily participated in the research exercise with 18 subjects randomly assigned to one of six cell treatments. They were informed that they could withdraw from the participation anytime, and that all aspects of their participation would be anonymous. They were paid an average of US\$17, although the exact pay depended on a combination of compensation mode (fixed only, fixed plus a bonus based on subsidiary profitability, or fixed plus a bonus based on overall corporate profitability) and the participant's particular transfer price choice. The first three cells were in an environment where both the subsidiary profits and the corporate profits were maximized if the participant chose the maximum transfer price for their own subsidiary. The remaining three cells offered a different outcome where the subsidiary profits and corporate profits were in conflict. If the participant chose a transfer price to maximize his/her own subsidiary, the corporate profit would be lower and vice-versa. This possibility was operationalized via having different income tax rates between the subsidiary and corporate entities. Each participant was provided partial financial statements showing the effect of his/her transfer pricing decision on both his/her subsidiary and the corporation overall. The research exercise was conducted in classrooms.

In real, dynamic situations, decision-makers are often faced with multiple corporate objectives, sometimes conflicting. Therefore, in order to add some realism to the research, participants were placed in scenarios to consider such possible conflicts. For example, participants were instructed that

corporate strategies included goals of maximization of overall corporate profit, maximization of their performance evaluation based on maximizing their subsidiary's profitability, and making a decision that would be fair to both subsidiaries. The predicted choices, by cell treatment, are noted in Table III.

Dependent variable

The primary interest of this study was to examine how gender diversity affected decision-making in a specific context. The dependent variable in this study is a transfer pricing decision. Participants were asked to make a transfer price decision given a set of facts.

Independent Variables

Data was collected as follows:

1. Gender: participants reported their gender.
2. Perceived Fairness: Participants responded to a question asking their self-perception of how important Fairness was in making their transfer price decision on a 5-Point Likert scale.
3. Performance Evaluation: Participants responded to a question asking their self-perception of how important Performance Evaluation was in making their transfer price decision on a 5-Point Likert scale.
4. Compensation: Participants were told that they would be paid, and in fact were paid, according to the instructions entitled "Compensation" in the packet they received. Participants responded to a question asking their self-perception of how

important their compensation was in making their decision on a 5-Point Likert scale.

5. Maximization of Overall Corporate Profit: Participants were asked to respond on a respective 5-Point Likert scale their perception of the maximization of overall corporate profits.

6. Risk Preference: Participants responded to a question with three options about getting paid for their participation. The 3 options measured whether the respondent was risk averse, risk neutral, or a risk taker.

Control Variables

Variables that were not of interest in this study were controlled by keeping them constant or by randomization as suggested by Schulz (1999).

Results

Descriptive Statistics

Demographic data is presented in Tables IV through VII.

Table IV
Descriptive Statistics – Transfer Price Choices

	N	Minimum	Maximum	Mean	Std. Deviation
Overall Choice	108	1	7	4.33	2.087
Male Choice	59	1	7	4.58	2.291
Female Choice	49	1	7	4.04	1.791

Table V
Descriptive Statistics – Gender

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Male	59	54.6	54.6	54.6
Female	49	45.4	45.4	100.0
Total	108	100.0	100.0	

Table VI
Descriptive Statistics – Gender Breakdown by Cell

Cell #	Male	Female
	Frequency (%)	Frequency (%)
1	7 (38.9%)	11 (61.1%)
2	10 (55.6%)	8 (44.4%)
3	13 (72.2%)	5 (27.8%)
4	12 (66.7%)	6 (33.3%)
5	9 (50.0%)	9 (50.0%)
6	8 (44.4%)	10 (55.6%)
Total	59 (54.6%)	49 (45.4%)

Table VII
Descriptive Statistics – Age

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 21-25	85	78.7	78.7	78.7
26-30	21	19.4	19.4	98.1
31-35	2	1.9	1.9	100.0
Total	108	100.0	100.0	

Inferential Statistics

To test whether Gender is significant when predicting transfer prices, we utilized the following model:

$$\text{TransferPrice} = b_0 + b_1(\text{Gender}) + b_2(\text{Fairness}) + b_3(\text{Evaluation}) + b_4(\text{Comp}) + b_5(\text{MaxProfit}) + b_6(\text{Risk}) + \varepsilon$$

Where:

Gender = Male or Female

Fairness = Perceived Fairness

Evaluation = Performance Evaluation (Subsidiary Profit)

Comp = Compensation

MaxProfit = Maximization of Overall Corporate Profit

Risk = Risk Preference

Table VIII delineates the nonparametric Kruskal-Wallis results of the overall model:

Table VIII
Kruskal-Wallis Nonparametric Test – Overall Model

Source	Sig.
Gender	.246
Fairness	.007***
Performance	.024***
Compensation	.231
MaxProfit	.108
Risk	.853

*** Significant at 0.025

The results for all subjects combined indicate that Perceived Fairness and Perceived Performance Evaluations were statistically significant at the .05 level. Gender, Maximizing Compensation, Maximizing Overall Profits, and Risk Preferences were not statistically significant, although the significance for Maximizing Overall Profits was just outside the marginally significant threshold of .10. Since Gender was not significant, Hypothesis 1 was not supported. Note that Hypothesis 1 was a two-tail versus a one-tail test, because different cells had varying treatments leading to differing

predicted outcomes as noted in Table III. Table IX further examines the results for Hypothesis 1 using a nonparametric Mann-Whitney U-test. Of the six treatments, only Cell 3 indicated a statistically significant difference. In that treatment, subjects were paid based on Overall Corporate Profitability where subsidiary and corporate profits would be similarly affected; e.g., selection of high transfer price for the subsidiary would increase both the subsidiary and corporate profits while a low transfer price selection would decrease both such profits:

Table IX
Summary of Results for Hypothesis 1

<i>H1: Women choose different transfer prices than men in scenarios with multiple, potentially conflicting variables.</i>					.Kruskal-Wallis (K-W)	
					Sig	
					.246	
Planned Comparisons: Gender Differences					Mann-Whitney	
		Males	Females		U Test	
Cell	Comp.	Mean	Mean	Difference	Sig	
1	Fixed	5.86	4.73	1.13	.331	
2	Div	5.80	5.38	0.42	.338	
3	Corp	6.08	3.40	2.68	.021***	
4	Fixed	2.83	3.67	-0.84	.145	
5	Div	4.11	4.11	0.00	.641	
6	Corp	2.63	2.76	0.13	.613	

*** Significant at 0.025

Note:

Fixed Comp = Compensation plan based on a fixed salary

Div Comp = Compensation plan based on a fixed salary + Subsidiary's Profitability

Corp Comp = Compensation plan based a fixed salary + Overall Corporate's Profitability

Mann-Whitney U-tests were performed in order to test Hypotheses 2 through 6. Tables IX to XIII provide the output for those tests. Table X shows that Perceived Fairness was statistically significant in the overall model. However, when examining the individual cell treatments, although the differences in means were all in the predicted direction, statistically significant differences between genders existed

in just two of the six treatments, namely when subjects were paid based on Overall Corporate Profitability. No significant differences existed when subjects received pay either on a Fixed Compensation scheme or based on their respective Subsidiary's Profitability. Consequently, Hypothesis 2 was supported in two of the conditions, but not supported in the other four conditions.

Table X
Summary of Results for Hypothesis 2

<i>H2: Women perceive fairness as more important than men.</i>					.Kruskal-Wallis (K-W)	
					Sig	
					.007***	
Planned Comparisons: Gender Differences					Mann-Whitney	
		Males	Females		U Test	
<u>Cell</u>	<u>Comp.</u>	<u>Mean</u>	<u>Mean</u>	<u>Difference</u>	<u>Sig</u>	
1	Fixed	3.57	3.73	-0.16	.740	
2	Div	3.10	3.88	-0.78	.228	
3	Corp	3.00	4.20	-1.20	.027**	
4	Fixed	4.33	4.83	-0.50	.405	
5	Div	3.89	4.00	-0.11	.816	
6	Corp	2.88	4.40	-1.52	.018***	

*** Significant at 0.025

** Significant at 0.05

Note:

Fixed Comp = Compensation plan based on a fixed salary

Div Comp = Compensation plan based on a fixed salary + Subsidiary's Profitability

Corp Comp = Compensation plan based a fixed salary + Overall Corporate's Profitability

The Perceived Performance Evaluation variable was statistically significant in the overall model. Table XI shows that four of the treatments had mean differences in the predicted direction, while two of the cells had mean differences not in the direction predicted. Furthermore, only one of the cells indicated a statistically significant difference in the predicted direction, namely Cell 2. This treatment had the subsidiary

and corporate profits result in the same direction based on the transfer choice; e.g., if the subject set the transfer price high, then both the subsidiary and overall corporate profits would be higher. The opposite would hold in terms of both subsidiary and overall corporate profits if the transfer price was set low. With the exception of the one noted treatment, Hypotheses 3 was not supported.

Table XI
Summary of Results for Hypothesis 3

<i>H3: Women perceive performance evaluations as less important than men.</i>					.Kruskal-Wallis (K-W) Sig .024***
Planned Comparisons: Gender Differences					Mann-Whitney
		Males	Females		U Test
Cell	Comp.	Mean	Mean	Difference	Sig
1	Fixed	4.43	3.91	0.52	.118
2	Div	4.40	3.75	0.65	.019***
3	Corp	4.38	4.60	-0.22	.423
4	Fixed	4.25	4.33	-0.08	.717
5	Div	4.22	4.11	0.11	.664
6	Corp	4.00	3.70	0.30	.330

*** Significant at 0.025

Note:

Fixed Comp = Compensation plan based on a fixed salary

Div Comp = Compensation plan based on a fixed salary + Subsidiary's Profitability

Corp Comp = Compensation plan based a fixed salary + Overall Corporate's Profitability

The Maximizing Compensation variable, as noted in Table XII, was not statistically significant in the overall model and none of the treatment conditions were shown to be significant at the .05 level. At best, only one cell, that again being Cell 2, was marginally significant at the .10 level. In sum, Hypothesis 4 was not supported.

Table XII
Summary of Results for Hypothesis 4

<i>H4: Women perceive maximizing their compensation as less important than men.</i>					.Kruskal-Wallis (K-W) Sig .231
Planned Comparisons: Gender Differences					Mann-Whitney
		Males	Females		U Test
Cell	Comp.	Mean	Mean	Difference	Sig
1	Fixed	2.86	3.00	-0.14	.850
2	Div	4.20	3.63	0.57	.100*
3	Corp	4.15	4.00	0.15	.957
4	Fixed	2.58	2.33	0.25	.842
5	Div	3.78	3.89	-0.11	.851
6	Corp	4.25	3.80	0.45	.259

* Marginally Significant at 0.10

Note:

Fixed Comp = Compensation plan based on a fixed salary

Div Comp = Compensation plan based on a fixed salary + Subsidiary's Profitability

Corp Comp = Compensation plan based a fixed salary + Overall Corporate's Profitability

The Maximizing Overall Corporate Profit variable was not statistically significant in the overall model nor with respect to differences between genders except in one treatment. Table XIII provides the statistics for Hypothesis 5. While most of the treatments were in the predicted direction, one was not. The only treatment indicating a significant gender difference was

Cell 1 where subjects were paid a Fixed amount. In that cell treatment, both subsidiary and corporate profits would move in the same direction as Cell 2 as discussed for Hypothesis 3. Hypothesis 5 was not supported with the exception of that one treatment.

Table XIII
Summary of Results for Hypothesis 5

<i>H5: Women perceive maximization of overall corporate profits as less important than men.</i>					.Kruskal-Wallis (K-W)
					<u>Sig</u>
					.108
Planned Comparisons: Gender Differences					Mann-Whitney
					U Test
		Males	Females		<u>Sig</u>
<u>Cell</u>	<u>Comp.</u>	<u>Mean</u>	<u>Mean</u>	<u>Difference</u>	
1	Fixed	4.86	4.27	0.59	.044**
2	Div	4.60	4.13	0.47	.595
3	Corp	4.62	4.20	0.42	.125
4	Fixed	4.75	4.67	0.08	.718
5	Div	4.33	4.56	-0.23	.518
6	Corp	4.63	4.60	0.03	.916

** Significant at 0.05

Note:

Fixed Comp = Compensation plan based on a fixed salary

Div Comp = Compensation plan based on a fixed salary + Subsidiary's Profitability

Corp Comp = Compensation plan based a fixed salary + Overall Corporate's Profitability

Finally, the Risk preference variable was not statistically significant in the overall model. Table XIV indicates no significant gender differences among any of the cells. Four of

the cells did show mean differences in the predicted direction, while two did not. Hypothesis 6 was not supported.

Table XIV
Summary of Results for Hypothesis 6

<i>H6: Women are more risk averse than men.</i>					.Kruskal-Wallis (K-W)
					<u>Sig</u>
					.853
Planned Comparisons: Gender Differences					Mann-Whitney
					U Test
		Males	Females		<u>Sig</u>
<u>Cell</u>	<u>Comp.</u>	<u>Mean</u>	<u>Mean</u>	<u>Difference</u>	
1	Fixed	2.14	1.73	0.41	.394
2	Div	1.70	1.50	0.20	.475
3	Corp	1.31	1.20	0.11	.839
4	Fixed	1.50	2.00	-0.50	.195
5	Div	1.67	1.50	0.17	.873
6	Corp	1.38	1.60	-0.22	.873

Risk preference (1-3 scale); 1=risk averse; 2=risk neutral; 3=risk taker

Note:

Fixed Comp = Compensation plan based on a fixed salary

Div Comp = Compensation plan based on a fixed salary + Subsidiary's Profitability

Corp Comp = Compensation plan based a fixed salary + Overall Corporate's Profitability

Conclusions and Areas For Future Research

The overall results suggest minimal significant gender differences among the variables tested in this study. The treatments varied pay schemes as well as creating situations where subsidiary and corporate profits moved in some cases in the same direction and sometimes in opposite directions assuming selfish selection of transfer prices. Subjects also had to reconcile possible contradictions in objectives: maximize overall corporate profits, maximize subsidiary profits, and/or apply fairness. In terms of a specific management accounting decision with respect to transfer price choice, gender was generally not significant.

Only a few scattered significant differences existed across the variables in this study. While in many cases the predicted directions arose, this was not the case for all six of the cells. In hypothesis 2, two of the six cells reported significant gender differences. In hypotheses 1, 3, 4 and 5, only one cell each indicated significant or marginally significant gender differences. In the remaining hypothesis (H6), no cells indicated any gender differences.

There were no conflicts found between choosing to maximize subsidiary or overall corporate profits, although fairness did offer a potential conflict. Implications of our findings suggest that females and males might not be that far apart in making typical management decisions, at least in choosing transfer prices. These findings should not be interpreted as a need to lower the desire for gender diversity in management. There is still a substantial body of literature to support the positive aspects of gender diversity for organizations. In a system of free enterprise, expanding the 'brain trust' to get differing ideas and perspectives should most likely help, rather than hurt, organizations. Given the conflicting results in this study, giving more thought and research to reassessing, combining, and/or reforming theory-based approaches to gender differences certainly warrants more attention.

Concerning limitations, this study only looked at one type of management decision. One could posit that gender differences could exist across other types of decisions, thus warranting research focusing on such other decisions. The subjects in the study consisted of accounting focused people pursuing an accounting certification (Chartered Accountant in Australia, analogous to a CPA in the US) as opposed to managers more broadly defined. These subjects may have been more knowledgeable of transfer pricing than the average person and that could have affected their participation inputs. On the other hand, the students were not in top-level management positions. Chan and Landry (2011) discuss this subject validity issue in length noting that if the experimental

design is sufficiently understandable, then the experience of the participant might not factor. Nevertheless, this could still be a limitation of the study.

Another potential issue may be validity of the self-perception variables in the study. Other than pilot testing the questions and presenting the paper to peer audiences, there was no specific validity testing. It is also possible that the sample size was not large enough to detect significant differences suggesting increasing participant numbers in studies such as ours. With respect to incentives, while they were part of the experiment, they were not within a competitive framework. Participants were not competing against one another for incentive pay. This may have affected some of our results particularly noting Migheli's (2015) results which did find significant performance differences where incentive pay was competitive. Adding a competitive element would be a suggestion for future research. As with any experiment, while the literature provided a path to identify pertinent variables, the possibility exists that the study still did not take into account potentially confounding variables.

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Market Response to Chief Accounting Officer Hiring Announcements

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ABSTRACT

With the passage of the Sarbanes-Oxley Act of 2002 that established new and extended requirements for management oversight of financial reporting, and the expansion of accounting tasks demanding the attention of Chief Financial Officers (CFOs), many firms have added a new member, the Chief Accounting Officer (CAO), to their top executive teams. We investigate stock returns surrounding 409 CAO hiring announcements made between 2000 and 2015 and find a positive stock price reaction, suggesting that the market perceives the hiring of a CAO as being value-increasing. We also find more positive stock price reactions when we compare the mean market response of firms appointing CAOs relative to firms appointing controllers, underscoring the unique roles that these two accounting executives play.

Keywords: Chief Accounting Officer, Controller, event study, market reaction, accounting quality

Introduction

This paper studies the market response to Chief Accounting Officer (CAO) hiring announcements. In particular, we investigate how investors perceive the hiring of a CAO, and how that perception differs from the replacement of a traditional corporate controller, by comparing stock price reactions to news of these events. With the passage of the Sarbanes-Oxley Act of 2002 (SOX) that established new and expanded requirements for management oversight of financial reporting, and the expansion of accounting tasks demanding the attention of Chief Financial Officers (CFOs), many companies have added a new member, the CAO, to their top executive teams (Sammer 2006; McKinsey 2013; Johnson 2015). CAOs assume broader responsibilities than controllers and generally have greater accounting expertise and direct accounting responsibilities than CFOs, with whom they work closely (Sammer 2006). A CAO's main tasks include financial accounting and reporting, oversight of internal controls, financial planning, tax compliance and planning, and audit/assurance support. Many CAOs also serve as the consultant on accounting matters to the rest of the top management team, providing guidance on the accounting treatment of complex transactions such as mergers and acquisitions, meeting with external financial experts to discuss compliance issues, and educating the rest of the firm, including the board of directors, on how new rules and regulations affect the business (Sammer 2006).

Unlike a controller, a CAO's role reflects the need for someone in the top executive team who can better navigate a growing field of regulatory oversight over public firms. For example, the CAO and vice-president of 3M Company spent considerable time visiting overseas operations, working with senior management to ensure the integrity of financial reporting, and serving as the company's liaison with external agencies and regulators, such as the Securities and Exchange Commission (SEC), the Public Company Accounting Oversight Board (PCAOB), and the Financial Accounting Standards Board (FASB) (Sammer 2006). Gary Kabureck (former CAO at Xerox) expressed, "I think what happened over the last 15 years is that the accounting function started to separate from the controller function." At Xerox, a separate controller focused intensively on budgeting and planning, while Mr. Kabureck was heavily involved in the board's audit committee meetings and also personally sent multiple comment letters to the FASB (Johnson 2015).

The role of a CAO is also different to that of a CFO. A CFO plays a crucial role in risk management, formulating and implementing a business's strategy, enhancing the perceptions of internal and external shareholders, and identifying value-adding activities in general (Ernst & Young 2007; The Wall Street Journal 2013). In reviewing the backgrounds of CFOs of the top 100 companies globally with the highest market capitalizations, only 28 percent reported having advanced accounting degrees (McKinsey 2013). Because of the other job functions, only a small percent of a CFO's time is allocated to the accounting function. A growing number of

firms dedicate this important function to a separate executive officer, the CAO, who provides continuous attention and concentrated professional knowledge on accounting issues and shields the CFO from time-consuming accounting tasks that the CFO may not possess the education or expertise to handle effectively.

Although the CAO position has existed in practice for a number of years, the perceived value of this position to investors still remains a nascent and developing research area for accounting academics. Considerable accounting literature assesses the economic impact of differences in CEO and CFO characteristics on firm accounting outcomes, such as accrual quality and financial reporting restatements (e.g., Uddin and Gillett 2002; Barua, Davidson, Rama, and Thiruvadi 2010; Huang, Rose-Green, and Lee 2012). Many studies also document a significant market reaction when firms appoint directors and audit committee members with financial expertise (e.g., DeFond, Hann, and Hu 2005; Davidson, Xie, and Xu 2004). Yet, extant literature has revealed very little about investors' perceptions of CAO appointments. In fact, prior research has treated the CAO and controller positions as the same. For example, Vafeas (2009) examines the value of the controller's accounting education by studying market reaction to appointments of controllers with varying accounting educational backgrounds. The author includes both CAOs and controllers in his sample and finds that the market values the accounting education of these executives positively.

In practice, whether CAO is simply a glorified title for a controller is also debatable. The business press often uses these two terms interchangeably. For example, in a recent news story in the financial press, Amato (2017) writes, "The CFO and the business are requesting the controllership function to play a more active role in shaping and executing strategic priorities. How exactly that strategic contribution occurs is one controllers and chief accounting officers are uncertain about..." However, the controller and CAO positions are very different in terms of scope. A CAO has much broader job responsibilities than a controller. Because these two positions differ significantly, an examination of investor perception of CAO hiring announcements is warranted. A related paper by Vafeas and Vlittis (2015) investigates board attributes and the likelihood of appointing an external accounting executive. However, they do not separately examine the market's response to the appointment of a controller versus a CAO. In sum, investor reaction to CAO hiring announcements is an unexplored research topic, and our paper fills this gap in the literature.

We address this research question by performing an event study. We use the RavenPack database to collect infor-

mation on CAO and controller hiring announcements from 2000 to 2015. After eliminating duplicates and keeping only the first news report of each hiring event, our final sample includes 409 CAO and 529 controller hiring announcements during this 16-year period. We gather daily stock returns around the hiring announcements and adjust for market indexes to calculate cumulative abnormal returns (CARs) for various windows (3-, 5-, and 7-day) surrounding the event dates. We predict and find that the stock market responds positively to CAO hiring announcements. We also find that, compared to hiring a controller, hiring a CAO elicits higher CARs, indicating that investors perceive the CAO position (and the associated duties and responsibilities) as more value-enhancing to the company than the controller position.

We contribute to the literature in the following ways. First, while prior studies focus on CEO, CFO, and audit committee characteristics in explaining accounting quality, we examine the role of the CAO, which heretofore has received little academic attention. The CAO position is worthy of investigation because, according to Sammer (2006) and corroborated by our descriptive statistics, corporate demand for well-trained CAOs is growing, creating job opportunities for experienced Certified Public Accountants (CPAs). Second, the findings of this study contribute to our understanding of investors' perceptions of the CAO position. Positive CARs surrounding CAO hiring announcements provide evidence that CAO appointments convey positive signals to investors of enhanced accounting quality in the future. This result is especially pronounced in firms with poor accounting quality (evidenced by restatement announcements) prior to the CAO hiring announcement and in firms appointing their first CAO (as opposed to replacing an existing CAO). In addition, the presence of a CAO to handle the corporate accounting function frees time for the CFO to tackle other key responsibilities of his or her job, including financing and investing decisions. Thus, indirectly, we investigate investors' perceptions of the value of assigning accounting tasks to the CAO so that the CFO may focus on other duties. Lastly, we provide evidence that investors view CAO hiring announcements more positively than controller hiring announcements, emphasizing the unique roles that these two accounting executives play in their firms.

The remainder of this paper proceeds as follows. The next section reviews existing literature related to the benefits of accounting expertise, the CAO position, and market response to news releases of executive appointments. This section also presents our hypotheses. Next, we detail our research design, describe our sample selection process, and define variables used in our empirical analyses. Then, we present the results

of our analyses and discuss the interpretation of the findings. Finally, we conclude and offer suggestions for future research.

Literature Review

The Benefits of Board/Executive Accounting Expertise

A long stream of accounting literature (both pre- and post-SOX) has examined accounting expertise, in particular the benefits associated with audit committee members' financial/accounting expertise. In 1991, the General Accounting Office released a study entitled *Audit Committees: Legislation Needed to Strengthen Bank Oversight*, which found that many failed banks had audit committees lacking members with banking expertise. Relatedly, in 1993, PriceWaterhouse released a study entitled *Improving Audit Committee Performance: What Works Best*, which suggested that audit committee members' expertise in accounting, internal controls, and auditing is key to overall audit committee effectiveness. Prior to SOX, researchers investigated various operationalizations of "expertise" (e.g., DeZoort, Hermanson, Archambeault, and Reed (2002). For example, McMullen and Raghunandan (1996) define expertise as audit committee members holding CPA certifications and find that this aspect of expertise is negatively associated with two types of financial reporting problems: SEC enforcement actions and restatements of quarterly earnings. Archambeault and DeZoort (2001) define expertise as audit committee members possessing "either formal training or familiarity with review of financial statements, internal controls, and auditing" (p. 38) and find that this element of expertise is negatively associated with auditor opinion shopping (i.e., suspicious auditor switches).

Subsequent to SOX, research into audit committee effectiveness has focused on the requirement in SOX Section 407 that public companies' audit committees must include at least one member with financial expertise. Abbott, Parker, and Peters (2004) find a negative association between restatements and audit committees that include at least one member with financial expertise (as defined by the Blue Ribbon Committee on Improving the Effectiveness of Corporate Audit Committees). Similarly, Agrawal and Chadha (2005) find that the probability of restatement is lower in companies whose boards or audit committees have an independent director with financial expertise (as defined by the major US stock markets—NYSE, NASDAQ, and AMEX). Bédard, Chtourou, and Courteau (2004) report that aggressive earnings management (both income-increasing and income-decreasing) is negatively associated with the financial expertise of the audit committee, defined as holding professional certification in accounting (CPA) or financial analysis (Chartered

Financial Analyst, CFA) or having professional experience in accounting or finance. Carcello, Hollingsworth, and Neal (2006) find a positive association between audit committees' financial expertise and their meeting frequencies, a proxy for their diligence. Raghunandan and Rama (2007) find the same positive association when looking specifically at accounting experts (defined as experience as a public accountant, auditor, controller, or chief/principal accounting officer) but not for non-accounting financial experts. In two related papers, Krishnan and Visvanathan (2008, 2009) report that audit committee accounting expertise, but not non-accounting financial expertise, is positively associated with accounting conservatism and negatively associated with audit fees, respectively. Finally, Dhaliwal, Naiker, and Navissi (2010) find that audit committee accounting expertise is positively associated with accruals quality, especially if the accounting-expert audit committee members are independent and not busy (i.e., not holding multiple directorships) with short-tenure. They also find that in the presence of an accounting expert, a non-accounting financial expert also enhances accrual quality.

For our study, the key takeaway from the literature on audit committee effectiveness is that financial expertise, particularly expertise focused on accounting knowledge/experience, is associated with positive firm outcomes. One strategy available to public firms in facing increases in regulatory oversight of our markets is to appoint another top executive who can navigate a field that is growing increasingly crowded and complex.

Prior research also has investigated the accounting expertise of the CFO. Although not all prior research finds positive outcomes associated with CFO accounting expertise (e.g., Ge, Matsumoto, and Zhang 2011; Feng, Ge, Luo, and Shevlin 2011), the consensus in the literature is that the accounting expertise of the CFO improves firm accounting quality. Specifically, Aier, Comprix, Gunlock, and Lee (2005) report that firms whose CFOs have more work experience as CFOs, who possess MBA degrees, and who possess CPA certifications are significantly less likely to restate their earnings. Similarly, Li, Sun, and Ettredge (2010) find that firms receiving adverse SOX 404 opinions (i.e., internal control material weaknesses) have less qualified CFOs (in terms of accounting knowledge and experience as CFOs), experience more CFO turnover, and hire more qualified new CFOs; in turn, firms hiring more qualified new CFOs receive better SOX 404 opinions in the subsequent year. Given the benefits associated with the accounting expertise of audit committee members and CFOs, we expect that investors view the addition of a CAO with this unique type of expertise to the top executive team as a value-enhancing event for the firm.

The Effectiveness of Chief Accounting Officers

Extant research on the CAO position is very limited. Rhodes and Russomanno (2013), Russomanno (2014), and Bratten, Jennings, and Schwab (2016) are the first to investigate the effectiveness of these accounting executives. Rhodes and Russomanno (2013) comment that the lack of research in this area is primarily due to lack of machine-readable data on the CAO position. In order to identify the existence of a CAO position in a firm, the authors analyze the job titles of individuals signing Form 10-Ks from 2000 through 2010. Rhodes and Russomanno (2013) first explore the determinants of a firm's choice to include a separate CAO on the executive team and find that prior restatements, firm size (both market value of equity and number of employees), leverage, industry competition, auditor quality, restructuring activities, discontinued operations, and issuance of equity are positively associated with the probability of employing a CAO. Using four different proxies for accounting quality, the authors provide evidence that firms employing CAOs experience enhanced accounting quality. The findings of Rhodes and Russomanno (2013) are consistent with Chakravarthy, deHaan, and Rajgopal (2014), who report that firms take reputation-building actions following restatements to repair their damaged reputations. However, Chakravarthy et al. (2014) do not specifically examine the appointment of CAOs as such a reputation-building action.

Russomanno (2014) uses propensity-score matching to investigate internal control quality between firms with a CAO and firms without this executive. He finds that firms exhibit significantly fewer internal control weaknesses and incur lower audit fees in the first and second year following the initiation of the CAO position. Bratten et al. (2016) examine the accuracy of footnote disclosures of employee stock option fair values. These authors find that differences between the reported and calculated fair values are larger for firms that do not have a CAO as one of their most highly compensated employees, indicating that the presence of a CAO is associated with higher financial reporting quality. Taken together, these three papers indicate that the presence of a CAO is associated with better accounting quality. However, their results are silent on how investors perceive the hiring of CAOs.

Market Response to Executive/Board-Appointment Events

Prior literature suggests that the stock market responds favorably to executive officer/board member appointments when the new hire is expected to enhance firm performance. For example, Chatterjee, Richardson, and Zmud (2001) find that, for firms competing in industries undergoing rapid

information technology change, the stock market responds positively to announcements of newly created Chief Information Officer (CIO) positions. Shen and Cannella (2003) study the benefits of CEO succession planning by examining investor reactions to announcements of new CEO appointments and find that stock prices respond positively to promotions of heirs apparent (i.e., internal employees who have been groomed as replacements for outgoing CEOs) and negatively to non-heir inside successions. Fich (2005) finds that CARs associated with the appointments of new outside directors are significantly positive when the appointees are CEOs elsewhere, suggesting that investors view outside CEOs as sources of superior managerial talent and unique expertise. Beasley, Pagach, and Warr (2008) examine investor perceptions of the appointment of Chief Risk Officers (CRO) and find positive market reactions to these hiring events for nonfinancial firms that had not engaged in enterprise risk management prior to these CRO appointments. Vafeas and Vlittis (2009) investigate the stock price reaction to Chief Marketing Officer (CMO) announcements; their result reveals that the average CAR is greater for firms appointing a CMO with prior marketing experience. In an accounting setting, DeFond et al. (2005) and Davidson et al. (2004) show that the market reacts favorably to the appointment of directors with financial expertise on the audit committee. Geiger, Lennox, and North (2008) examine the market's reaction to companies hiring accounting and finance officers (specifically, CFOs, CAOs, controllers, treasurers, and vice presidents of finance) directly from their external audit firms, a practice known as the "revolving door," and find that investors positively valued these revolving-door appointments.

In our study, we argue that delegation of the accounting function to a separate CAO allows the CFO to better focus on other functions of the job (e.g., financing and investing decisions), thereby signaling an increase in the firm's future performance. Also, because CAOs are equipped with financial and accounting expertise, their presence on the top executive team should be associated with enhanced accounting quality and an increased ability to deal with the growing regulatory requirements faced by a public firm. As a result, we expect that a CAO hiring announcement is a positive signal to investors regarding the firm's accounting quality. Because of the above two reasons, we predict a significantly positive CAR surrounding the CAO hiring announcement day:

H1: The stock market responds positively to the hiring announcement of a Chief Accounting Officer.

Vafeas (2009) investigates stock price reaction to controller hiring announcements and reports that investors respond more positively to appointments of controllers with degrees from prestigious accounting programs, providing evidence that accounting executives' educational training is valued by the market. The author states, "The controller is the top accounting executive in a firm. This individual heads the entire accounting function and is responsible for all facets of accounting: financial accounting and reporting, costing and budgeting, accounting information systems, and taxes" (p. 1146). While all large corporations employ an executive (generally titled the controller) to oversee the accounting function, many corporations have added a CAO to the top executive team in the years subsequent to the end of the Vafeas (2009) sample period in 2005. According to Sammer (2006), "Many companies that do not have a CAO are likely to be adding one to their management roster in the future."

Vafeas (2009) includes in his regression model a control variable, coded one for controllers who also hold the title of vice president or CAO, and finds that returns surrounding the appointments of these controllers are incrementally positive. However, Vafeas (2009) does not separately examine market reactions to CAO and controller hiring announcements when these two positions are distinct. According to executive recruiter Chuck Eldridge (Sammer 2006), 49 percent of the CAOs employed by Fortune 500 companies in 2006 also held the controller title, as examined in Vafeas (2009), while the CAO and controller were distinct positions at the other 51 percent, which is the focus of our paper. In companies with both a CAO and a controller, the two roles are complementary but delineated (Sammer 2006). According to Gina Wilson, CAO of Cendant Corporation (the parent company of Avis Rent A Car and Holiday Inn), the controller keeps the books while the CAO is involved in due diligence regarding business acquisitions and dispositions. At Eli Lilly, CAO Arnie Hanish manages a business consulting group of approximately 65 employees that goes beyond traditional accounting and financial reporting to support overall corporate strategy and business development: "We had to achieve acceptance by showing we could add value." While only half of the newly hired controllers in the sample from Vafeas (2009) hold an undergraduate degree in accounting, CAOs tend to be CPAs with at least 10 to 15 years of technical accounting experience (Sammer 2006). Given the higher-level responsibilities performed by CAOs and the more stringent education and experience requirements for CAOs relative to controllers, we hypothesize that investors react more positively to CAO hiring announcements than to controller appointments:

H2: The stock market responds more positively to the hiring announcement of a Chief Accounting Officer than to that of a controller.

We note that the announcement of a CAO can include the creation of a new CAO position and the replacement of an existing position. In our supplemental results section, we address this issue by comparing the announcement of the replacement of an existing CAO with the replacement of the controller.

Methodology

Sample Selection

We use the RavenPack database to locate announcements of CAO and controller hiring events. RavenPack is a comprehensive database that tracks global news, such as traditional press outlets (e.g., *The Wall Street Journal* and *The New York Times*) and social media (e.g., online blogs), and transforms this unstructured information into structured, granular data. RavenPack maintains different categories for different types of news. These separate categories, such as corporate mergers and acquisitions, natural environment disaster occurrences, litigation cases, bankruptcies, initial public offerings, and patent filings, allow researchers to identify news events related to their research questions.

We use RavenPack's executive appointment subcategory within the labor issues category. This subcategory stores news information related to all hiring events for positions on the executive team, such as the President, the CEO, the CFO, the CAO, the Chief Operating Officer (COO), the CMO, the CIO, and any member of the board of directors. Each position is distinguished from the others with a RavenPack position ID. We filter by RavenPack position ID to retain news items related to "Chief Accounting Officer" and "Controller." RavenPack classifies titles such as "Principal Accounting Officer" and "Chief Accounting Officer" under the "Chief Accounting Officer" category and maintains separate categories for the CFO and the controller. Each news item is assigned to only one category. We use news in the "Chief Accounting Officer" category and news in the "Controller" category. See Appendix A for an example of a CAO hiring announcement. Our sample period covers a 16-year span starting in January 2000 and ending in December 2015. After retaining only the first announcement news for each hiring event, our CAO sample contains 409 hiring announcement observations with available Compustat and CRSP variables. The controller sample has 529 hiring announcements.

Table I provides yearly (Panel A) and industry (Panels B and C) distributions of the sample. The number of CAO

hiring announcements increased shortly after the accounting scandals of the early 2000s (and the resultant passage of SOX) and has remained relatively stable since then, consistent with the prediction of Sammer (2006) that hiring CAOs was an emerging trend. The number of controller hiring announcements increased slightly in the early 2000s but has decreased in more recent years. Panels B and C indicate that CAO and controller hiring announcements, respectively, do not appear to be concentrated in particular industries; rather, they occur relatively uniformly in the industries represented in our sample.

Table II presents descriptive statistics for firm characteristics of the CAO hiring announcement sample (Panel A), controller hiring announcement sample (Panel B), and the entire Compustat universe during our sample period (Panel C). Comparing Panel A with Panel B, the two announcement samples are similar in terms of total assets, market capitalization, market-to-book ratio, and return on assets. However, firms in the announcing samples are larger and more profitable, on average, than the typical Compustat firm during our same sample period.

Empirical Methods

To investigate the market response to CAO hiring announcements and to compare this response with that of controller hiring announcements, we calculate cumulative abnormal returns (CARs) surrounding the appointment dates. We follow DeFond et al. (2005) and use Brown and Warner's (1985) market-adjusted model to calculate the CARs. We compute the 3-day CAR beginning the day before the announcement and continuing through the day after, the 5-day CAR beginning the day before the announcement and continuing through three days after, and the 7-day CAR beginning the day before the announcement and continuing through five days after. We begin our event windows on the day before the announcement (i.e., day -1) because it is possible that information leaks to the market in advance of the formal announcement, such that we are unable to pinpoint precisely the date when the information reaches investors (McWilliams and Siegel 1997; Boehmer, Broussard, and Kallunki 2002). The CAR calculation is as follows:

$$AR_{i,t} = R_{i,t} - R_{m,t}$$

$$CAR_{(-1,+n)} = \sum_{t=-1}^{+n} AR_{i,t}$$

Where: $AR(i,t)$ is the daily abnormal return adjusted for the market return, $R(i,t)$ is the return for firm i in the CAO or controller announcement sample for day t , and $R(m,t)$ is the market return on CRSP for day t (Brown and Warner 1985). We use value-weighted market indexes in our main analyses and use equal-weighted market indexes in untabulated robustness tests to adjust the firm return. $CAR(-1,+n)$ is the cumulative abnormal return over the test window of $(-1, +n)$, where n equals 1, 3, or 5, respectively, for the 3-day, 5-day, and 7-day windows, and day 0 is the event date (i.e., the CAO or controller hiring announcement date). Appendix B provides definitions of all variables used in this study.

Results

Primary Results

We first use univariate analyses to test H1 that the stock market responds positively to CAO hiring announcements and H2 that the stock market responds more positively to CAO hiring announcements than controller hiring announcements. Table III presents the results of these tests using samples of 409 CAO appointments and 529 controller appointments. We calculate CARs for the three event windows (3-, 5-, and 7-day) for the two positions separately and then compare these CARs between the two positions. As shown in Table III, the 3-day average CAR of 0.17 percent surrounding CAO hiring announcements is not significantly different from zero at conventional levels, but the 5-day average CAR of 0.68 percent and the 7-day average CAR of 1.26 percent for CAO announcements are both significantly positive at 0.1 and 0.01 levels (one-tailed), respectively. Untabulated robustness analyses suggest that our results remain largely the same when we begin our event windows on the day of the announcement (i.e., day 0). Thus, we find univariate support for H1. On the other hand, the average CAR for none of the three windows surrounding controller announcements is significantly different from zero at conventional levels. Further, t-tests of differences between CARs surrounding CAO and controller hiring announcements reveal that investors respond more positively on average to CAO hiring events than to controller hiring events. Thus, we also find univariate support for H2. We also note that the magnitude and significance of our returns increase with our window size in the CAO announcement sample (while it does not for our controller announcement sample). Although we do not perform a comprehensive review of the data obtained from Ravenpack, in checking a few observations, we found some ambiguity as to the precise announcement date. Ravenpack also reports announcements at media outlets with varying national coverage, and an an-

Table I
Hiring appointments sample distribution
Panel A: Frequency distribution by year

Year	CAO hiring announcements		Controller hiring announcements	
	Frequency	Percentage (rounded)	Frequency	Percentage (rounded)
2000	2	0.49%	21	3.97%
2001	2	0.49%	33	6.24%
2002	5	1.22%	47	8.88%
2003	11	2.69%	36	6.81%
2004	19	4.65%	43	8.13%
2005	41	10.02%	68	12.85%
2006	26	6.36%	64	12.10%
2007	42	10.27%	53	10.02%
2008	50	12.22%	51	9.64%
2009	28	6.85%	29	5.48%
2010	22	5.38%	23	4.35%
2011	18	4.40%	16	3.02%
2012	20	4.89%	7	1.32%
2013	29	7.09%	11	2.08%
2014	44	10.76%	18	3.40%
2015	50	12.22%	9	1.70%
Total	409	100.00%	529	100.00%

Table I
Panel B: Frequency distribution of CAO announcements by 2-digit SIC industry code

SIC_2	Frequency	Percentage (rounded)
73-Business Services	39	9.54%
67-Holding & Other Investment Offices	33	8.07%
13-Oil & Gas Extraction	32	7.82%
60-Depository Institutions	24	5.87%
36-Electronic & Other Electric Equipment	23	5.62%
35-Industrial Machinery & Equipment	22	5.38%
49-Electric, Gas, & Sanitary Services	22	5.38%
28-Chemical & Allied Products	14	3.42%
63-Insurance Carriers	14	3.42%
48-Communications	13	3.18%
20-Food & Kindred Products	11	2.69%
38-Instruments & Related Products	11	2.69%
87-Engineering & Management Services	10	2.44%
Other industry	141	34.48%
Total	409	100.00%

Table I
Panel C: Frequency distribution of controller announcements by major 2-digit SIC industry code

SIC_2	Frequency	Percentage (rounded)
49-Electric, Gas, & Sanitary Services	50	9.45
36-Electronic & Other Electric Equipment	42	7.94
73-Business Services	40	7.56
60-Depository Institutions	36	6.81
28-Chemical & Allied Products	34	6.43
13-Oil & Gas Extraction	30	5.67
38-Instruments & Related Products	29	5.48
35-Industrial Machinery & Equipment	28	5.29
37-Transportation Equipment	23	4.35
63-Insurance Carriers	18	3.4
20-Food & Kindred Products	13	2.46
48-Communications	12	2.27
67-Holding & Other Investment Offices	12	2.27
26-Paper & Allied Products	11	2.08
Other industry	151	28.54
Total	529	100.00%

This table presents sample composition by year and by industry. Panel A presents the CAO and controller hiring announcements by year. Panel B and Panel C present industry distributions of the CAO and controller hiring events, respectively, in descending order by frequency.

Table II
Descriptive statistics

Panel A: Firm characteristics of CAO announcement sample						
Variable	N	Mean	Std Dev	Q1	Median	Q3
Total assets	409	9,631.94	17,877.33	548.97	1,990.96	8,589.44
Market cap.	409	7,265.94	14,048.62	443.42	1,448.67	5,431.82
MTB	409	2.83	2.69	1.34	2.00	3.25
ROA	409	0.01	0.14	-0.01	0.03	0.06
Panel B: Firm characteristics of controller announcement sample						
Variable	N	Mean	Std Dev	Q1	Median	Q3
Total assets	529	10,730.92	18,266.09	776.50	2,649.36	10,600.28
Market cap.	529	7,414.32	12,521.38	532.34	1,911.05	7,932.69
MTB	529	3.17	4.21	1.40	2.07	3.20
ROA	529	0.03	0.09	0.01	0.03	0.07
Panel C: Firm characteristics of Compustat universe during the 2000-2015 sample period						
Variable	N	Mean	Std Dev	Q1	Median	Q3
Total assets	132,177	3,854.61	13,928.37	30.09	235.24	1,406.69
Market cap.	132,177	2,390.00	7,619.86	25.46	151.74	983.78
MTB	132,177	2.25	7.41	0.81	1.55	2.95
ROA	132,177	-0.44	2.16	-0.14	0.01	0.05

This table presents descriptive statistics for the CAO, the controller announcements samples, and the Compustat universe during the 2000 – 2015 sample period in Panel A, B, and C, respectively. All variables are winsorized at the 1st and 99th percentiles.

nouncement at a more localized outlet likely requires more time for the effect of the announcement to be fully reflected in the firm's stock price. Further, Bloomfield (2002) argues that information with more complex implications may take longer to be reflected in the market price of a firm. In summary, the evidence in Table III is consistent with both of our hypotheses that (1) investors value the hiring of a CAO and (2) the hiring of a CAO is perceived as more value-enhancing to the company than the hiring of a controller.

We further examine H2 in a regression setting in Table IV. We regress 3/5/7-day CARs on an indicator variable CAO that we code 1 for CAO hiring events and 0 for controller hiring events. We follow Vafeas (2009) and control for firm size and performance. Specifically, *Lag_In_Assets* is one-year-lagged, log-transformed total assets, and *Lag_In_ROA* is one-year-lagged, log-transformed return on assets (i.e., net income / total assets). We also control for growth opportunities: *Lag_In_MTB* is the one-year-lagged, log-transformed market-to-book ratio. Regression results in Table IV corroborate our univariate results in Table III. Specifically, the CAO coefficient in the 3-day CAR model (0.0027) is insignificant, but the CAO coefficients in the 5-day and 7-day CAR models (0.0076 and 0.0113, respectively) are positive and significant at the 0.1 and 0.05 levels. Across all three models, the coefficients on *Lag_In_MTB* are significantly positive, while the other two control variables (*Lag_In_ROA* and *Lag_In_Assets*) do not appear to provide additional explanatory power. Overall, the evidence in Table IV supports our prediction that investors perceive the CAO as a different position than the traditional controller, and the market response to the announcement of a CAO hiring is significantly higher. As noted earlier, the fact that our 3-day CAR result is not significant, but our 5- and 7-day CAR results are, is consistent with the logic of Bloomfield (2002) and may also reflect the effect of possible errors in the exact announcement date. Thus, one possible conclusion from our results is that the market takes longer to fully "digest" the positive implications of the appointment of a CAO.

Supplemental Results

We further probe our research question by examining cross-sectional variation in the CAO hiring announcements sample along two dimensions. First, if the mechanism by which the appointment of a CAO results in positive stock returns is by enhancing accounting quality, reducing idiosyncratic risk, and thereby reducing cost of capital, we should find more positive stock-price reactions to CAO hiring announcements among firms with poor accounting quality prior to the ap-

pointment (i.e., firms in which the potential for the CAO to improve accounting quality is more prominent). Thus, we partition our sample of 409 CAO hiring announcements into observations with (*restatement=1*) and without (*restatement=0*) restatements announced during the two years prior to the CAO hiring announcement. Our research design of using financial restatements to proxy for poor accounting quality follows prior research (Desai, Krishnamurthy, and Venkataraman, 2006; Hennes, Leone, and Miller, 2008; Plumlee and Yohn, 2010; see Dechow, Ge, and Schrand, 2010, for a review of papers on the subject). Restatement data come from the Audit Analytics database. As shown in Table V, Panel A, the 5- and 7-day CARs are significantly positive (at 0.1 and 0.05 levels, respectively) for the restatement subsample. The mean 7-day CAR is significant at 0.05 level for the non-restating subsample. We then compare 3-, 5-, and 7-day CARs between these two subsamples. While the mean 3- and 5-day CARs do not differ between these subsamples, the mean 7-day CAR for firms with poor accounting quality in the two years prior to their CAO hiring announcements is significantly greater than that for the non-restatement subsample at the 0.1 level (one-tailed), providing weak results that the announcement of CAO hiring elicits a stronger market response for firms that have made a prior restatement, consistent with our expectations.

Second, we compare market reactions to CAO hiring announcements for firms without existing CAOs (i.e., the creation of a new position in the top executive team charged with overseeing the accounting function) and firms with existing CAOs (i.e., firms hiring replacement CAOs). A firm hiring its first CAO may send a signal to investors that accounting quality is a priority. However, a firm hiring a replacement CAO may send a signal to the market that the outgoing CAO was ineffective and/or the incoming CAO brings enhanced accounting expertise relative to her predecessor. In either scenario, investors may perceive a new or renewed emphasis on accounting quality associated with the CAO hiring announcement, resulting in higher stock returns surrounding the CAO hiring announcement. Thus, we place no expectation on which subsample (i.e., the new- or replacement-CAO subsample) experiences more positive CARs surrounding CAO hiring announcements. Table V, Panel B presents the results of this analysis. We hand collect the new- or replacement-CAO data by reading the press releases surrounding the announcements. Note that our sample size for this analysis is reduced because not all CAO hiring announcements specify whether the CAO is the first person to hold this position or is replacing an existing CAO. In the new-CAO subsample, the 5- and 7-day CARs are significantly positive ($p < 0.05$, one-tailed). However, in the replacement-CAO subsample, the average CAR for

Table III**t-tests of differences between cumulative abnormal returns (CARs) around CAO and controller hiring announcements**

	CAR means				Difference			
	CAO	t-statistics		Controller	t-statistics	CAO-Controller	t-statistics	
No. obs.	409			529				
3-day CAR (-1,1)	0.0017	0.59		-0.0011	-0.51	0.0028	0.79	
5-day CAR (-1,3)	0.0068	1.53	*	-0.0007	-0.24	0.0075	1.43	*
7-day CAR (-1,5)	0.0126	2.53	***	0.0004	0.13	0.0122	2.06	**

This table presents t-tests of the differences between 3/5/7-day CARs around the CAO and controller hiring announcements. See Appendix B for variable definition. *, **, and *** denote one-tailed statistical significance at 10%, 5%, and 1% level, respectively.

Table IV**Comparison of market reaction to hiring announcements between CAO and Controller**

DV=	3-day CAR		5-day CAR		7-day CAR	
intercept	-0.0118		-0.0183		-0.004	
	(0.0086)		(0.0125)		(0.0142)	
CAO	0.0027		0.0076	*	0.0113	**
	(0.0035)		(0.0051)		(0.0057)	
Lag_In_Assets	-0.0003		0.0002		-0.0009	
	(0.0009)		(0.0013)		(0.0015)	
Lag_In_ROA	-0.0111		-0.0151		-0.0325	
	(0.0127)		(0.0184)		(0.0208)	
Lag_In_MTB	0.0109	***	0.0133	***	0.0104	**
	(0.0032)		(0.0046)		(0.0052)	
Adj. R2	0.92%		0.70%		0.75%	
F value	3.18	**	2.66	**	2.77	**
N	938		938		938	

This table presents results for OLS regressions of the differences between 3/5/7-day CARs around the CAO and controller hiring announcements. See Appendix B for variable definition. *, **, and *** denote two-tailed (one-tailed when there is a directional hypothesis) statistical significance at 10%, 5%, and 1% level, respectively.

none of the three event windows is significantly different from zero at conventional levels. We also find the difference in mean CAR between the two subsamples to be significant in the 5-day and 7-day event windows at the 0.1 and 0.05 levels, respectively, with more positive returns for the new-CAO subsample, suggesting that the hiring of a new CAO elicits a stronger market response than replacing an existing CAO. In untabulated results, we compare the 7-day market response to the announcements of replacement CAOs ($n=115$, $CAR=0.23\%$ in Table V Panel B) with the announcements of controllers ($n=529$, $CAR=0.04\%$ in Table III). The difference between these two market responses is not statistically significant.

Conclusions and Areas for Future Research

In this paper, we argue that a CAO on a firm's executive team enhances the firm's accounting quality, improves the firm's ability to navigate the growing regulatory requirements imposed on public firms by various government agencies, and frees up the CFO's time to pursue value-creating projects that would otherwise be spent on the accounting function. As a result, CAO hiring announcements should be viewed positively by investors, engendering a positive market response. Our findings of positive and significant CARs around the appointments of CAOs are consistent with our expectations. The evidence demonstrates that investors perceive the benefits of adding a CAO to the top executive team to outweigh the costs (i.e., the CAO's compensation) and appreciate the hiring of a separate and possibly more knowledgeable executive to oversee the accounting function. We also demonstrate that investors react more positively to CAO hiring announcements than controller hiring announcements, emphasizing the unique roles that these accounting executives play in their firms. Finally, in supplemental analyses, we find evidence that CARs surrounding CAO hiring announcements are significantly more positive among firms with poor accounting quality, proxied by a restatement announcement in the two years prior to the hiring of the CAO, and for announcements of initial CAO hiring appointments relative to replacement CAO hiring announcements.

Our paper is not without limitations. One of our challenges is the relatively small sample size with low statistical power in our analyses, and many variables require extensive hand collection. However, this challenge highlights the potential of future research making a contribution in this research area. Our paper documents empirical evidence supporting the CAO's enhancement of shareholder value. The findings in our study also help practitioners, investors, and academics better understand the role of CAOs when regulations related to public exchange listing have become an increasing burden.

We believe that there are still many unanswered questions regarding the CAO position as an important executive in the C-Suite. Future research can further explore the costs and benefits of adding such a position in the company, as well as additional sources of cross-sectional variation in the market response to the CAO hiring announcements. We hope our study serves as a pioneer and will foster more research in this area.

Table V

t-tests of subsample differences in cumulative abnormal returns (CARs) around CAO hiring announcements

Panel A: Sample partitioned by restatement									
	CAR means						Difference		
	restatement=1	t-statistics		restatement=0	t-statistics		(restatement=1)- (restatement=0)	t-statistics	
No. obs.	65			343					
3-day CAR (-1, 1)	0.0063	0.80		0.0009	0.30		0.0054	0.68	
5-day CAR (-1, 3)	0.0135	1.38	*	0.0060	1.20		0.0075	0.62	
7-day CAR (-1, 5)	0.0311	2.28	**	0.0092	1.72	**	0.0219	1.60	*
Panel B: Sample partitioned by new-hire									
	CAR means						Difference		
	new_hire=1	t-statistics		new_hire=0	t-statistics		(new_hire=1) - (new_hire=0)	t-statistics	
No. obs.	173			115					
3-day CAR (-1, 1)	0.0059	1.14		-0.0009	-0.18		0.0068	0.92	
5-day CAR (-1, 3)	0.0154	1.73	**	0.0013	0.29		0.0141	1.41	*
7-day CAR (-1, 5)	0.0208	2.17	**	0.0023	0.45		0.0185	1.70	**

This table presents t-tests of subsample differences in 3/5/7-day CARs around the CAO hiring announcements partitioned by restatement (Panel A) and by new-hire (Panel B). See Appendix B for variable definition. *, **, and *** denote one-tailed statistical significance at 10%, 5%, and 1% level, respectively

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Appendix A: An example of a CAO hiring announcement

Headline: Analog Devices Promotes Seamus Brennan to Vice President, Corporate Controller, and Chief Accounting Officer

NORWOOD, Mass.--(BUSINESS WIRE)--December 03, 2008--

Analog Devices, Inc. (NYSE: ADI), a global leader in high-performance semiconductors for signal processing applications, today announced that Seamus Brennan has been promoted to vice president, corporate controller and chief accounting officer, reporting to the CFO, effective December 8 2008.

“Seamus has been instrumental in building a world-class finance and accounting organization dedicated to operational excellence, and transparency,” said Jerald G. Fishman, ADI president and CEO. “In this new position, he will continue to help ADI comply with the highest standards of financial reporting and corporate governance, and maximize the efficiency of its business processes.”

Since joining ADI in Limerick, Ireland in 1984, Mr. Brennan has played a key role in the development and implementation of the Company’s worldwide financial systems, processes, and controls. After serving as Limerick’s plant controller from 1989 to 1994, he transferred to ADI’s corporate headquarters in Norwood, Massachusetts to manage the implementation of the company’s worldwide enterprise software system for transaction processing and financial reporting. In 1997, he became assistant controller and in 2002, was promoted to corporate controller. For the past six years, Mr. Brennan has been managing ADI’s worldwide accounting and transaction processing, internal control, management planning and reporting, internal audit, and SEC reporting functions.

Prior to joining ADI, Mr. Brennan served for six years as a controller and financial systems manager for a regional development agency in Ireland. Earlier in his career, he spent five years in public accounting. Mr. Brennan holds a Bachelor of Commerce degree from the National University of Ireland, Galway. He is also a fellow of the Institute of Chartered Accountants in Ireland and an associate of the Irish Taxation Institute.

In a separate press release, ADI also today announced that David A. Zinsner has been appointed vice president of finance and chief financial officer, effective January 12, 2009. (See press release, “Analog Devices Names David A. Zinsner Vice President and Chief Financial Officer”.)

About Analog Devices

Innovation, performance, and excellence are the cultural pillars on which Analog Devices has built one of the longest standing, highest growth companies within the technology sector. Acknowledged industry-wide as the world leader in data conversion and signal conditioning technology, Analog Devices serves over 60,000 customers, representing virtually all types of electronic equipment. Celebrating over 40 years as a leading global manufacturer of high-performance integrated circuits used in analog and digital signal processing applications, Analog Devices is headquartered in Norwood, Massachusetts, with design and manufacturing facilities throughout the world. Analog Devices’ common stock is listed on the New York Stock Exchange under the ticker “ADI” and is included in the S&P 500 Index.

This release may be deemed to contain forward-looking statements which include, among other things, our statements regarding expected operating performance, growth strategy, organizational leadership and management transition that are based on our current expectations, beliefs, assumptions, estimates, forecasts, and projections which are subject to change. The statements contained in this release are not guarantees of future performance, are inherently uncertain, and involve certain risks, uncertainties, and assumptions that are difficult to predict. Therefore, actual outcomes and results may differ materially from what is expressed in such forward-looking statements, and such statements should not be relied upon as representing Analog

Devices' expectations or beliefs as of any date subsequent to the date of this press release. We do not undertake any obligation to update forward-looking statements made by us. Important factors that may affect future operating results are described in the risk factors section our most recent filings with the Securities and Exchange Commission.

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Appendix B: Variable definitions

Variables of interest

CAR = the 3-, 5-, or 7-day value-weighted market index-adjusted cumulative abnormal return around the CAO (or the controller) hiring announcements

CAO = 1 for CAO hiring events, and 0 for controller hiring events

Other variables

Lag_In_Assets = the one-year-lagged natural logarithm of total assets

Lag_In_mkt_cap = the one-year-lagged natural logarithm of market capitalization (common shares outstanding × closing price of stock)

Lag_In_MTB = the one-year-lagged natural logarithm of the market-to-book ratio (market capitalization / total common stockholders' equity)

Lag_In_ROA = the one-year-lagged natural logarithm of the return-on-asset ratio (net income / total assets)

restatement = an indicator variable coded 1 for observations with restatements announced in the two years prior to the CAO hiring announcement, 0 otherwise

new_hire = an indicator variable coded 1 for new CAOs and 0 for replacement CAOs

PCAOB Auditing Standard No. 5 Impact on Auditor Size, Auditor Dismissals and Audit Risk

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ABSTRACT

In 2007, the Public Company Accounting Oversight Board (PCAOB) issued Auditing Standard No. 5 (AS5) as a response to criticism that AS2 (auditing standard effective after 2004) was too prescriptive and costly for smaller firms whose risk profile did not support the unnecessary audit procedures. AS5 was effective for all fiscal years ending after November 14, 2007. In addition, AS5 mandated audits be more risk-focused and tailored to the specifics of the client firm's business operations. This study incorporates audit risk to investigate AS5's impact on the likelihood of auditor dismissals relative to AS2. The study attempts to test whether riskier audits are more strongly associated with auditor dismissals in the AS5 regime compared to the AS2 regime. Results show auditor dismissals are more likely for higher risk firms in the AS5 regime compared to AS2. Additional tests show the main effect is more pronounced for dismissals where the dismissed auditor is Big 4 (Ernst & Young, PwC, Deloitte, KPMG) and the successor auditor is non-Big 4. This paper provides evidence that risk may play a larger role in auditor dismissals in the AS5 era compared to AS2. This evidence is important to the free enterprise system because of the accountability that external auditors provide. This accountability is relied upon by financial information users in their decision-making. This paper examines client risk's impact on auditor dismissals which impacts the auditor's role in a free enterprise market.

Keywords: Auditing standards, audit dismissals, audit risk

Introduction

In 2002, in response to several highly public and devastating accounting scandals, the Sarbanes-Oxley Act (SOX) of 2002 created stronger and more stringent reporting requirements on financial reporting and auditing. For example, Section 103 of SOX required audit work paper retention for at least seven years and Section 404 (SOX 404) required that auditors attest to management's assessment of its internal controls over financial reporting (ICFR). In 2004, Public Company Accounting Oversight Board (PCAOB) Auditing Standard No. 2 (AS2) was issued to address the new SOX audit requirements. AS2 governed how audits were run after SOX, which was a direct response to major accounting scandals of the early 2000's. AS2 was mandated for accelerated filers (public companies with a public float of at least \$75 million). After AS2 was implemented, companies needed to incur additional significant costs with the increased audit fees associated with the added audit procedures on the company's internal control system (Krishnan et al. 2008). PCAOB Auditing Standard No.5 (AS5) was created as a response to the criticism that SOX was too costly for smaller, non-Big 4 audit firms (SEC 2007). AS5 was effective for all fiscal years ending after November 14, 2007. This study incorporates audit risk into an investigation on AS5's impact on the likelihood of auditor dismissals relative to the AS2 era.

Critics of AS2 felt that the auditing standard was too prescriptive and required many procedures that were not necessary for all firms, more specifically, smaller firms (SEC 2005). AS5 rules encouraged a "top-down, risk-based" approach to audit procedures that were designed to make audits focus on risky audit areas and use available resources to increase audit efficiency and reduce audit costs by avoiding unnecessary procedures (PCAOB 2007). All required audit work under the AS2 regime imposed high governance costs on both client firms and audit firms alike. AS5 represented a regulatory shift to promote less prescriptive audits that were more risk-focused with a high degree of auditor judgment and less unnecessary costs. Research has found that audit fees in the years following implementation of AS5 were lower relative to the last year of the AS2 regime (Krishnan et al. 2011). Given the expected reduction in audit costs for low audit risk firms, the expectation is that one of the likely side effects would be a reduction in auditor turnover for smaller firms with less complex accounting processes that did not need the prescriptive audit tests required under AS2. This reduction in dismissals would be a result of the new auditing standard reducing the higher fixed cost component of the SOX/AS2 regulations. With the lessening of the fixed costs component, it may be more affordable for these firms to afford to keep the same auditor that would not be dismissed for non-financial reasons. Also, for smaller audit firms with

less financial resources, being able to conduct audits that are more tailor-made to the specific client characteristics, AS5 doesn't require these smaller firms be audited using audit procedures that are deemed unnecessary but would have been required under prior legislation (SOX/AS2). Therefore, in prior years (in the AS2 era), firms may have been more inclined to dismiss auditors to reduce fees; but with the less prescriptive, more efficient and, hopefully, less costly AS5 audits, it would be logical to assume the dismissal rates would decline. Much of the existing literature on dismissals has examined the consequences (or lack thereof) of dismissals or compared audit dismissals and resignations (Johnson and Lys 1990; Dhaliwal et al. 1993; Klock 1994; Sankaraguruswamy and Whisenant 2004; Knechel et al. 2007; Griffin and Lont 2010). This paper differs from the other papers by examining a potential determinant of auditor dismissal. This paper tests the relationship between AS5 and auditor dismissal likelihood by studying whether the shift to AS5 is negatively associated with the trend in auditor dismissals during the 2004 to 2014-time frame, and whether audit risk has an effect on this association. This paper focuses on dismissals because the vast majority of research on auditor turnover shows datasets where the number of auditor dismissals is significantly higher than the number of resignations (Griffin and Lont 2010). In addition, Audit Analytics has also disclosed in the yearly Auditor Changes Roundup that the majority of auditor departures are dismissals and analysis of the auditor change database in Audit Analytics confirms that the vast majority of auditor changes are dismissals (Audit Analytics).

Prior research on AS5 has focused mostly on the legislation's impact on audit fees and audit quality (Jiang and Wu 2009; Doogar et al. 2010; Krishnan et al. 2011; Wang and Zhou 2012; Hogan and Schroeder 2013; Acito et al. 2014; Mitra et al. 2015). However, there has been little if any, empirical research analyzing the effect of AS5 and auditor turnover. Given the discussion of mandatory auditor rotation since 2011 (PCAOB 2011) and the increasing commoditization of assurance services by audit clients (thus leading to potentially higher likelihood of dismissing one auditor for another less expensive auditor of similar quality), discussing auditor change in the context of the current auditing standards is very relevant to the accounting profession, public firms and regulators. This paper extends the existing research stream by analyzing AS5's impact on auditor dismissals for riskier client firms.

Literature Review

Research Related to Auditor Dismissal

There is a significant research stream analyzing the determinants and consequences of auditor turnover. Griffin and Lont (2010) used market effect tests to analyze differences between auditor dismissals and resignations. Using the change in stock price around the auditor change date, the authors find that auditor resignation announcements are significantly associated with negative market value changes for the announcing firm and there is a minimal (yet still statistically significant) market impact around auditor dismissal announcements. In addition, the negative market response is magnified for firms that were involved in prior securities litigation and have higher bankruptcy risk. After the authors control for those two factors, auditor resignations are more significantly associated with the negative market value impact around auditor turnover announcements relative to auditor dismissals. This result lends to the interpretation that a resignation is a sign of accounting quality issues or higher audit risk (Ghosh and Tang 2015; Burks and Stevens 2017). However, researchers have also found contrasting evidence on the market's perception of dismissals. Mande and Son (2013) theorize that capital market pressures after a restatement will lead to auditor dismissals by the restating firm. This dismissal will help the firm restore lost reputational capital and audit quality after the restatement announcement. The results show a positive association between restatement announcements and the likelihood of an auditor dismissal for the restating firm. Additional tests show this positive association is stronger for more severe restatements and firms with stronger corporate governance. Market tests find a positive association between stock returns around the auditor dismissal announcement and the severity of the restatement. The authors conclude that the market does care about auditor dismissals, and investors view the auditor dismissal after restatements to be a positive move by the restating company. Hennes et al. (2014) also study auditor dismissals after restatements. The authors use a sample of auditor dismissals following a restatement to examine the characteristics of the restatement that led to the auditor dismissal as well as the market consequences of the dismissal announcement. The study found that there is a positive association between financial statement restatements and auditor dismissals, but only for severe restatements. Further analysis showed that the severity effect was mostly related to the type of auditor being dismissed with the restatement-dismissal association linked to dismissal of non-Big 4 auditors as opposed to Big 4 auditors. Additionally, the authors show that larger and more complex firms

with Big 4 auditors are less likely to dismiss their auditors following a restatement. The paper's findings suggest that after restatements, the availability of new auditors and switching costs determine whether auditors are dismissed. A market consequence analysis shows a more positive market impact following a severe restatement compared to less severe restatements when the firm chooses a comparable new auditor (in terms of size).

Much of the literature on auditor dismissals has provided conflicting results due to the various legislative changes affecting the accounting (and more specifically, auditing) profession that have occurred since 2002. Of those legislative changes, SOX was the most impactful on the accounting profession and there has been significant research devoted to the multitude of ways in which SOX impacted the accounting profession. Etrredge et al. (2007) studied the relationship between audit fees and auditor dismissals in the period immediately following SOX. The authors found evidence of a positive association between audit fees and the likelihood of auditor dismissal. They also show that smaller companies, going concern companies and companies that report material weaknesses in their internal controls in the future are more likely to dismiss auditors. The analysis also showed that the majority of Big 4 clients who dismissed their audit firm switched to a non-Big 4 auditor. However, this result was driven by the smaller of the Big 4 client firm sample. Overall, the authors concluded that in the high audit cost period following SOX, firms did seem to dismiss auditors with the hopes of lower fees from the successor auditors. DeFond and Lennox (2011) examined the effect SOX had on auditor exits from the market during the period of 2001-2008 and found a higher proportional turnover rate after SOX for small audit firms (less than 100 SEC clients) leaving the market compared to large audit firms. The authors concluded that this was most likely due to the costs imposed by SOX and the tougher audit quality regulations put in place by the PCAOB. The paper also showed evidence of higher quality audits from the successor auditor in terms of a higher likelihood of issuing a going concern opinion. The authors limited their analysis to end at 2008 because they found that after 2008, the number of small auditor exits was fairly small.

Recent research views auditor changes in unique and interesting paradigms. For example, Barua et al. (2017) collect data on auditor ratification shareholder votes from 2011 to 2014 and find that post-vote auditor dismissal decisions are more likely if the proportion of shareholders not ratifying the auditor increases. Fan (2015) uses audit committee-auditor interlocking (defined as a situation where two firms have at least one common audit com-

mittee member and share the same external auditor) to analyze the likelihood of auditor dismissal around restatements. The author finds that auditor dismissals after a restatement occurs are less likely if audit committee-auditor interlocking is present for the company with the restatement. Contrary to the prior literature, Schneider (2013) examined the impact of auditor dismissals and resignation on commercial lending decisions. Using an experimental setting with 85 commercial lending officers, the author provided participants differing hypothetical scenarios where participants must decide whether to offer a line of credit to the applicant company. The author found the risk assessments of applicant companies were not affected by whether or not the commercial loan officer had knowledge of the auditor change. Findings also showed no significant difference between auditor dismissals and resignations, and even disclosure of a disagreement between the client and auditor did not impact the lending decision. Overall, based on the body of academic research on auditor dismissals, it can be concluded that the signals provided to the market by an auditor dismissal can be interpreted as ambiguous at best.

Research Related to AS5 Implementation

The majority of literature analyzing AS2 and AS5 investigates audit fees and audit quality. With the goal of increased audit efficiency leading to reduced audit costs, the AS2/AS5 research stream, on the whole, has found evidence of reduced audit fees. Jiang and Wu (2009) found only a small increase in the post-AS5 regime, which was a significant result because at the time, audit fees tended to increase at a steady pace. The author's findings showed a slowing of that pace in audit fees after implementation of AS5. Krishnan et al. (2011) compare audit fees in the years immediately following implantation of AS5 to the last year of the AS2 era and found that audit fees in the first two years following the effective date of AS5 were significantly lower than the last year of AS2. However, the author also found that the initial drop does not continue, and the fees stabilize after the initial year of AS5 implementation. The study limited the sample to firm-auditor combinations that existed in both the AS2 and AS5 eras. In addition, the paper showed no evidence that the smallest firms benefited from the switch to AS5. The only exception was for small firms that were considered "complex" (measured by multiple segments and international operations). Wang and Zhou (2012) expand on the Krishnan et al. (2011) study by focusing on large accelerated filers and incorporating audit quality into the model. The authors find that the audit fees paid by the sample of large accelerated filers after the AS5

effective date are lower and audit quality remains unchanged compared to the AS2 regime.

Hogan and Schroeder (2013) focus on studying the risk characteristics and portfolio makeup of Big 4 audit firms in the AS5 era. The authors incorporate the economic recession into the paper to examine Big 4 client portfolios under the pressure of potential revenue declines and auditor personnel capacity increase. The results show that in 2009 there was an overall increase in client risk in Big 4 client portfolios. However, Big 4 audit firms did offset increases in risk associated with new clients was offset by net reductions in audit risk from continuing clients.

Acito et al. (2014) focus on internal controls by examining differences in likelihood of identifying material weaknesses during integrated audits in the AS5 versus AS2 eras. Focusing on accelerated filers during 2004-2011, the study analyzed changes in the likelihood of, and changes in the determinants of, material weakness identification between the PCAOB AS2 and AS5 regimes. With declining material weakness disclosures and adverse audit opinions, the auditors found that it is less likely that material weaknesses were identified in the AS5 era as well as lower rates of material weakness disclosure and lower financial reporting quality. Mitra et al. (2015) study how AS5 affected the timeliness of the audit process by testing whether AS5 had an impact on audit report lags from 2006 to 2011. Their paper reported findings of lower audit report lags in the AS5 years (2007-2011) relative to the AS2 years (2006-2007). However, the lower lags are mostly due to firms with clean SOX 404 opinions. When the authors test a sub-sample of firms with material internal control weaknesses (ICW), audit report lags are higher for that sub-sample and AS5 does not produce any incremental mitigating effect on the lags. But, overall, the authors' results show an immediate decrease in audit report lags after implantation of AS5 and that decrease does not taper off significantly in the later years of the study's time period.

Overall, the AS2/AS5 research stream suggests that implantation of AS5 has had the intended effect with initially lower audit fees, sustained audit quality and more efficient audits. This paper extends that research by examining how AS5's emphases on increased efficiency and on a risk-based audit approach impact auditor dismissal for riskier firms relative to the AS2 regime. This paper also looks at a longer time period in analyzing the impact of the AS5 legislation.

Hypothesis Development

AS5 was designed to produce a more risk-based, flexible, efficient and less-costly audit process that includes not only an assessment of financial reporting, but also the inter-

nal controls over financial reporting (SEC 2007). Auditor dismissals are typically a result of a disagreement between the auditor and client regarding multiple issues (e.g., fees, mergers, auditor independence, accounting issues, etc...), but are mostly associated with fees, and therefore are not typically considered to be as serious as auditor resignations. However, dismissals do make up the majority of auditor changes, and therefore dismissals are an important topic in audit research. AS5 was designed to create a less costly audit for companies because AS5 requires the auditor to focus more on risk areas as opposed to following a set of prescriptive audit procedures that do not match the risk profile of the client firm being audited. Therefore, an auditor could potentially reduce the number of audit hours related to lower-risk audit areas. This potential reduction in audit hours should translate to lower audit fees and a less costly audit for lower-risk clients. Based on this logic, it would be reasonable to assume that the implementation of AS5 could potentially reduce the number of auditor dismissals in the AS5 era.

However, while AS5 is designed to be less prescriptive, there is an increased emphasis on auditor judgment because of the increased focus on risk areas in the audit. This increase in auditor judgment and assessment of risky areas requires increased auditor planning and potentially an increase in auditor billable hours because more time is spent assessing risk as opposed to just following prescribed audit procedures. Therefore, AS5 could produce more expensive audits for riskier (from an audit perspective) companies and less expensive audits for low risk companies. The more expensive audits for riskier companies could potentially lead to an increase in auditor dismissals because firms may not be willing to pay the higher fees associated with the audit (with the increased number of audit procedures creating more costs). Therefore, it could be argued that AS5 could potentially lead to more dismissals for higher risk firms relative to the AS2 period. Due to this tension, the study of how AS5 has impacted auditor dismissals due to the risk-fee relationship is an empirical question and this paper tests the following hypothesis:

Hypothesis 1: In the AS5 regime, auditor dismissals are more (less) likely for high (low) risk companies relative to the AS2 regime.

The second hypothesis focuses on the type of auditors being dismissed and engaged by the companies going through an auditor change. This second test examines whether AS5 has a differential impact on the association between auditor dismissal and client risk level based on the types of auditors being dismissed and the new auditor on the engagement. Non-Big 4 auditors are typically smaller with less resources than their Big 4 counterparts. A switch from Big 4 to non-

Big 4 auditor could occur due to the lower fees charged by or negotiated with a non-Big 4 auditor, especially for a risky client that may have no other option in terms of other Big 4 auditors who do not want to increase the risk profile of their client portfolio. Therefore, the effect from H1 (riskier client → more judgment required → more audit hours → higher audit fees → higher likelihood of auditor dismissal) should be more pronounced for the sample of firms where a company switched from a Big 4 to a non-Big 4 auditor in the AS5 era relative to the AS2 era.

Hypothesis 2: In the AS5 regime, auditor dismissals are more likely for high risk companies relative to the AS2 regime when the auditor dismissed is a Big 4 auditor and the new auditor hired is a non-Big 4 auditor.

Methodology

Following prior literature (Simunic 1980; Hay et al. 2006; Hogan and Wilkins 2008; Han et al. 2016), audit fees are used to proxy for audit risk. Auditors are cognizant of the

risks associated with auditing a client such as business and financial reporting risks. In order to compensate for that risk, audit fees incorporate such risks in the amounts. Given that only using one measure of audit risk is insufficient, a second metric of discretionary accruals is also employed to measure audit risk.

Accruals quality is impacted by financial reporting choices, implementation decisions and managerial mistakes (Francis et al. 2005). These actions result in a discretionary component of total accruals. These discretionary accruals can be used to manipulate the financial reporting of a firm. The financial reporting quality (impacted by discretionary accruals) is incorporated into audit pricing. Therefore, a secondary model (Model 2) using discretionary accruals as a proxy for audit risk (Becker et al. 1998; Francis et al. 1999; Allen and Woodland 2010; Cho et al. 2017) is used as an additional proxy in place of audit fees. To research the hypotheses, related to whether AS5 impacts the likelihood of auditor dismissals based on the risk profile of the company, the following logistic regression models are estimated:

Model 1:

$$\text{DISMISSAL}_{t+1} = \hat{a}_0 + \hat{a}_1\text{AS5} + \hat{a}_2\text{AUD_FEES} + \hat{a}_3\text{AS5*AUD_FEES} + \hat{a}_4\text{INVREC} + \hat{a}_5\text{LEV} + \hat{a}_6\text{ASSETS_GR} + \hat{a}_7\text{BTM} + \hat{a}_8\text{ROA} + \hat{a}_9\text{LOSS} + \hat{a}_{10}\text{GOING_CONCERN} + \hat{a}_{11}\text{COUNT_WEAK} + \hat{a}_{12}\text{MATERIAL_WEAKNESS} + \hat{a}_{13}\text{SIZE} + \hat{a}_{14}\text{BIG4} + \hat{a}_{15}\text{TENURE} + \hat{a}_{16}\text{DISAGREEMENT} + \hat{a}_{17}\text{LITRISK} + \text{FIXED YEAR EFFECTS} + \text{INDUSTRY CONTROLS} + \hat{a}$$

Model 2:

$$\text{DISMISSAL}_{t+1} = \hat{a}_0 + \hat{a}_1\text{AS5} + \hat{a}_2\text{DACC} + \hat{a}_3\text{AS5*DACC} + \hat{a}_4\text{INVREC} + \hat{a}_5\text{LEV} + \hat{a}_6\text{ASSETS_GR} + \hat{a}_7\text{BTM} + \hat{a}_8\text{ROA} + \hat{a}_9\text{LOSS} + \hat{a}_{10}\text{GOING_CONCERN} + \hat{a}_{11}\text{COUNT_WEAK} + \hat{a}_{12}\text{MATERIAL_WEAKNESS} + \hat{a}_{13}\text{SIZE} + \hat{a}_{14}\text{BIG4} + \hat{a}_{15}\text{TENURE} + \hat{a}_{16}\text{DISAGREEMENT} + \hat{a}_{17}\text{LITRISK} + \text{FIXED YEAR EFFECTS} + \text{INDUSTRY CONTROLS} + \hat{a}$$

Continued on next page

Where:

DISMISSAL	= 1 if the company dismisses its auditor in the one-year window (365 days) after the filing of the annual financial statements, 0 if otherwise
AS5	= 1 if the announcement date of the auditor dismissal is after November 14, 2007, 0 if otherwise
AUD_FEES	= the natural log of total audit fees
INVREC	= inventory plus trade receivables scaled by total assets
DACC	= discretionary accruals as measured using the Jones (1991) model modified by Dechow et al. (1995)
LEV	= total liabilities scaled by total assets
ASSETS_GR	= change in total assets scaled by total assets from year t-1
BTM	= total book value divided by market value of the firm in year t
ROA	= income before extraordinary items divided by average total assets from year t
LOSS	= 1 if the firm reports a loss and 0 if otherwise, where a loss is defined as reporting net income before extraordinary items less than zero
GOING_CONCERN	= 1 if the firm received a going concern opinion in year t-1
COUNT_WEAK	= number of material weaknesses disclosed in the company's SOX 404 report
MATERIAL_WEAKNESS	= 1 if the firm disclosed a material weakness in its SOX report in year t, 0 if otherwise
SIZE	= log of total assets in year t
BIG4	= 1 if the auditor is from the Big 4 (PricewaterhouseCoopers, Ernst & Young, KPMG, Deloitte), 0 if otherwise
TENURE	= the number of years between the predecessor auditor's engagement begin and end date
DISAGREEMENT	= 1 if it is disclosed that the dismissal was due to a disagreement involving accounting treatment, internal controls or fraud.
LITRISK	= 1 if the company engages in a high litigation risk industry designated by SIC codes 2833-2836, 3570-3577, 3600-3674, 5200-5961 and 7370, 0 if otherwise

Prior research has found associations with several factors and the likelihood of auditor dismissal (Carcello and Neal 2003; Ettredge et al. 2007; Bronson et al. 2009; Hoitash and Hoitash 2009; Ettredge et al. 2011; Hennes et al. 2014). These variables are included in the model to control for factors beyond AS5 and audit risk that may be associated with the likelihood of auditor dismissal. Client financial distress is expected to be positively associated with the likelihood of future auditor dismissal. Therefore, LOSS is an indicator variable equal to one if the client firm reports a loss in the year before auditor dismissal disclosure. The model also controls for financial performance using return on assets (ROA) and financial risk with the percentage of total assets in inventory and trade receivables (INVREC) and leverage (LEV). Firms with higher market capitalization and lower book-to-market ratios are more likely to be sued. Therefore, BTM and SIZE control for that association. Client growth and audit failure risk are also likely associated with auditor dismissals. Therefore, variables for asset growth (ASSETS_GR), auditor tenure (TENURE), the existence of a material weakness (MATERIAL_WEAKNESS), the number of material weaknesses reported (COUNT_WEAK), audit fees (AUD_FEES) and issuance of a going concern opinion (GOING_CONCERN) in the preceding year are included to control for these factors. Tanyi et al. (2010) compare involuntary and voluntary auditor changes using audit report lags as a quantitative proxy for auditor effort. The model also includes an indicator variable (DISAGREEMENT) that takes on the value of one if the client firm discloses a disagreement with the auditor that involves accounting treatment, internal controls or fraud. In addition, the model controls for litigation risk using industry codes known for having higher risk of litigation. The second model uses discretionary accruals as a proxy for audit risk. DACC, which is the firm's discretionary accruals, is calculated using the modified Jones model (Dechow et al. 1995).

Sample

The sample time-period runs from 2004 to 2015. The sample period starts in 2004 because as of November 15, 2004, accelerated filers are required to provide internal control opinions as part of SOX 404 in 10-K filings. Internal control opinions, auditor dismissals and all audit-related information is identified using Audit Analytics. Compustat is used to obtain company financial data for the control variables and discretionary accruals.

Panel A of Table I shows the sample selection procedure while Panel B breaks down the sample by industry. After deleting duplicate firm observations, and merging audit data from the auditor change, auditor opinion and SOX 404 databases within Audit Analytics, there are 16,751 auditor change

observations. The study only focuses on auditor dismissals, so 5,265 auditor resignation observations are removed from the sample. Compustat is used to provide the financial and informational data for the control variables in the model. Therefore, the dismissals data sample is merged with the Compustat dataset to create a dataset with 7,152 observations. After deleting observations that did not have sufficient Compustat data to create the control variables. The final dataset sample has 2,040 auditor dismissal observations.

Table II presents descriptive statistics for both dependent and independent variables used in the models. Because all of the observations in the sample are auditor dismissals, Table II shows that 6.7% of the dismissals occurred within one year of the annual financial statement filing date. The LOSS variable shows that, on average, there are more profitable companies in the sample compared to companies that reported a loss. Of the 2,040 observations, 3.3% involved dismissals following a going concern opinion. Looking at the TENURE variable, the average length of time an auditor is engaged by a company in the sample is almost 15 years. Also, to be expected, the DISAGREEMENT variable shows that 22.6% of the dismissals in the sample involved a disagreement about internal controls, fraud or accounting treatments between auditor and client that was disclosed.

Table III presents the Pearson correlation matrix. The correlation matrix shows that auditor dismissals are higher in the AS5 era in general and dismissals are more common with higher audit fees and discretionary accruals. The matrix also shows dismissals being negatively correlated with going concern opinions, the number of material weaknesses disclosed and with the disclosure of an accounting-related disagreement between auditor and client.

Short-term audit tenure (2-3 years) relative to medium tenure (4-8 years) can result in lower audit quality (Johnson et al. 2002). Carey and Simnet (2006) show that long-term audit tenure results in a tendency for auditors to avoid issuing a going concern opinion, and this may be motivated by a need to avoid being in disagreement with management. New auditors may also inhibit audit quality due to their inexperience with the firm (Carey and Simnet 2006). Based on this evidence, we include controls for audit tenure and new auditor effects. In addition, we incorporate a control for audit fees since prior research suggests that audit fees are associated with audit quality (Palmrose 1986; DeAngelo 1981). Finally, Kim et al. (2012) substantiate that earnings quality and CSR are related by providing evidence that CSR firms have lower discretionary accruals. Therefore, we consider the impact of earnings quality by including absolute discretionary accruals in models 2 and 4.

Table I: Sample

Panel A: Sample selection procedure		
	Company-Year Observations	
Auditor change observations from 2004 to 2015 with duplicate fiscal year observations deleted	16,751	
Less:		
Auditor resignation observations	(5,265)	
Auditor dismissal observations	11,486	
Auditor dismissal observations available after merging with Compustat database	7,152	
Auditor dismissal observations available after deleting missing control variables data	2,040	
Panel B: Industry Representation		
Industry	No. obs.	Sample %
Agriculture (SIC 0100-0999)	9	0.4%
Mining and Construction (SIC 1000-1999, excluding 1300-1399)	63	3.1
Food (SIC 2000-2111)	56	2.7
Textiles and Printing/Publishing (SIC 2200-2799)	108	5.3
Chemicals (SIC 2800-2834, 2840-2899)	112	5.5
Pharmaceuticals (SIC 2830-2836)	126	6.2
Extractive (SIC 1300-1399, 2900-2999)	111	5.4
Durable Manufacturers (SIC 3000-3999, excluding 3570-3579 and 3670-3679)	511	25.0
Transportation (SIC 4000-4899)	161	7.9
Utilities (SIC 4900-4999)	102	5.0
Retail (SIC 5000-5999)	256	12.5
Services (SIC 7000-8999, excluding 7370-7379)	164	8.0
Computers (SIC 3570-3579, 3670-3679, 7370-7379)	224	11.0
Other	<u>37</u>	<u>1.8</u>
	2,040	100.0%

Table II: Descriptive Statistics

	Mean	Std. Dev.	Q1	Median	Q3
DISMISSAL	0.067	0.250	0.000	0.000	0.000
AS5	0.751	0.433	1.000	1.000	1.000
DACC	-0.105	3.314	-0.056	0.001	0.072
INVREC	0.242	0.1777	0.094	0.221	0.343
LEV	0.225	0.241	0.006	0.178	0.351
BTM	0.076	17.897	0.276	0.529	0.848
ROA	-0.038	0.374	-0.047	0.027	0.075
LOSS	0.354	0.478	0.000	0.000	1.000
GOING_CONCERN	0.033	0.178	0.000	0.000	0.000
COUNT_WEAK	0.183	0.819	0.000	0.000	0.000
MATERIAL_WEAKNESS	0.089	0.284	0.000	0.000	0.000
SIZE	6.306	1.642	5.269	6.206	7.335
BIG4	0.642	0.479	0.000	1.000	1.000
TENURE	14.992	13.186	7.000	11.000	18.000
DISAGREEMENT	0.226	0.418	0.000	0.000	0.000
LITRISK	0.263	0.440	0.000	0.000	1.000

Table III: Pearson Correlations

		1	2	3	4	5	6	7
1	DISMISSAL	1.00						
2	AS5	0.03	1.00					
3	AUD_FEES	0.09	-0.09	1.00				
4	DACC	0.01	-0.03	0.00	1.00			
5	INVREC	0.03	-0.05	0.09	0.02	1.00		
6	LEV	0.00	0.04	0.20	0.06	-0.17	1.00	
7	BTM	0.01	-0.01	-0.02	0.00	0.02	-0.19	1.00
8	ROA	0.08	-0.04	0.16	0.00	0.08	-0.10	0.04
9	LOSS	-0.10	0.10	-0.09	0.02	-0.07	0.07	-0.02
10	G_C	-0.02	0.06	-0.05	0.04	-0.05	0.15	-0.05
11	COUNT_WEAK	-0.04	-0.04	-0.02	-0.04	0.03	-0.03	0.01
12	MAT_WEAK	-0.05	-0.05	-0.02	-0.04	0.04	-0.01	0.01
13	SIZE	0.15	-0.03	0.76	0.01	-0.07	0.29	-0.01
14	BIG4	0.05	-0.03	0.35	-0.01	-0.01	0.10	-0.03
15	TENURE	0.08	-0.07	0.28	0.00	0.11	0.01	-0.05
16	DISAGREE	-0.06	-0.05	0.03	-0.05	-0.01	0.02	0.00
17	LITRISK	0.00	0.15	-0.08	-0.03	0.02	-0.13	0.02

8	9	10	11	12	13	14	15	16	17
1.00									
-0.44	1.00								
-0.24	0.23	1.00							
-0.06	0.08	0.14	1.00						
-0.05	0.08	0.11	0.72	1.00					
0.34	-0.29	-0.15	-0.11	-0.12	1.00				
0.21	-0.20	-0.10	-0.10	-0.13	0.45	1.00			
0.06	-0.04	-0.02	-0.06	-0.08	0.26	0.10	1.00		
-0.08	0.07	0.10	0.26	0.33	-0.07	-0.10	0.02	1.00	
-0.09	0.09	0.00	0.00	0.00	-0.13	-0.06	-0.07	0.02	1.00

Results

Results from the two main hypotheses test are shown in Tables IV and V. Table IV shows the coefficient estimates for the model using audit fees as the proxy for audit risk (Model 1) and the other model using the Modified Jones Model discretionary accruals proxy for audit risk (Model 2). If dismissals are more likely for riskier companies relative to the AS2 regime, the estimated coefficient on the interaction variables, $AS5*AUD_FEES$ (Model 1) and/or $AS5*DACC$ (Model 2) will be positive and statistically significant. The model's estimated coefficient for the $AS5*AUD_FEES$ is positive and statistically significant (coeff = 0.118, $\chi^2=5.512$, p-value = 0.029), which supports the predicted outcome. This result supports H1 by showing the likelihood of an auditor dismissal within one year of the filing of an annual financial statement is higher for higher audit risk firms in the AS5 regime relative to the AS2 regime, when audit fees are used as proxy for audit risk.

(Table IV about here)

Looking at Model 2 where discretionary accruals is used as a proxy for audit risk, the estimated coefficient for $AS5*DACC$ is also positive and statistically significant (coeff = 0.152, $\chi^2=6.012$, p-value = 0.014). Therefore, using multiple proxies for audit risk, the results are consistent with the first hypothesis. Another way to interpret the coefficients is to calculate the odds ratio for both test variables. The odds ratio for the $AS5*AUD_FEES$ coefficient is 1.1252. This can be interpreted as a 12.5% increase in the odds of a higher risk auditor being dismissed in the year following the filing of annual financial statements in the AS5 regime relative to the AS2 regime. When discretionary accruals are used as the proxy for audit risk, the increase in odds is 16.4% (odds ratio = 1.1642) for a high-risk auditor dismissal within one year of annual financial statements being filed in AS5 versus AS2 eras.

With respect to the control variables, results are consistent between both models with a lower likelihood of auditor dismissal in the AS5 era for firms with going concern opinions, positive ROA, Big 4 auditors and longer tenure. There was also a negative coefficient on the DISAGREEMENT variable which can be interpreted as it being less likely for an auditor to be dismissed when there is a client-auditor disagreement involving accounting, fraud or internal controls in the AS5 regime compared to the AS2 regime. This is an interesting finding that could spur further research into that niche area (although the DISAGREEMENT variable coefficient was not statistically significant in the discretionary accruals model).

(Table V about here)

Table V presents the results for the second hypothesis where the sample is limited to dismissals where the predecessor auditor (dismissed auditor) was Big 4 and the successor auditor was a non-Big 4 auditor. By focusing on this sub-sample of dismissals, the hope is to examine situations where the impact of AS5 may be more keenly felt. Therefore, it is expected that the coefficients should be in the same direction as in Table IV, but more statistically significant. The table show that the number of observations drops significantly from 2,040 in the main sample to 565 auditor dismissal observations in this sub-sample. However, the R-squared increases compared to the main sample model for H1. Looking at Model 1, the coefficient for $AS5*AUD_FEES$ is still positive (0.115) and statistically significant ($\chi^2=4.986$, p-value = 0.026), but it is not statistically different from the main sample results. However, in Model 2 where discretionary accruals is used to measure audit risk, the $AS5*DACC$ interaction variable has a coefficient that is both positive and statistically significant (coefficient = 0.191, $\chi^2=7.001$, p-value = 0.008). This estimated coefficient is statistically more powerful than the coefficient for $AS5*DACC$ in the main sample. Interpreting the coefficients using the odds ratio, the increase in likelihood of an auditor dismissal for high risk firms in AS5 versus AS2 was 12.52% higher in the main sample with audit fees measuring audit risk and only 12.19% higher in the smaller sub-sample. However, using discretionary accruals as the measure of audit risk, in this sub-sample the likelihood of auditor dismissal for riskier firms in AS5 versus AS2 is 21.05% higher compared to 16.42% in the main sample. Since only one measure of audit quality supports the second hypothesis that auditor size impacts the relationship between auditor dismissals and change in audit regime, H2 is only partially supported.

Conclusions and Areas for Future Research

AS2 was created from the Sarbanes-Oxley legislation in response to the massive attention paid to accounting frauds in the late 1990's and early 2000's. However, AS2 was criticized as being too prescriptive and too costly, especially for smaller firms where certain audit procedures were required by SOX, but not necessarily relevant for those companies. In response, the PCAOB created AS5, which was designed to be a risk-based audit standard whereby auditors required more judgment to scale and tailor the audit to focus on high-risk areas specific to the firm being audited. A secondary goal of AS5 was to reduce the audit costs imposed on clients where certain audit procedures were deemed unnecessary given the new focus on risk. The paper is based on the fact that audit risk directly impacts audit fees charged. The paper focuses on how the shift from AS2 to AS5 impacts the likelihood of

**Table IV: H1 – Logistic Regression Analysis of Auditor Dismissal and AS5
Panel A - (with Audit Fees as proxy for audit risk)**

Dependent Variable: Dis-missal	Model 1			Model 2		
	Coefficient	Wald x2	p-value	Coefficient	Wald x2	p-value
Intercept	-5.898***	11.627	<0.001	-5.982***	11.952	<0.001
AS5	-1.463	4.30	0.063	-0.199	0.345	0.557
AUD_FEES	0.352	1.826	0.177			
DACC				0.67***	9.944	0.002
AS5*AUD_FEES	0.118*	5.512	0.029			
AS5*DACC				0.152**	6.012	0.014
INVREC	1.303**	5.219	0.022	1.30**	5.187	0.023
LEV	-0.825	2.146	0.143	-0.83	2.18	0.139
BTM	0.087	1.118	0.29	0.123	1.208	0.247
ROA	-2.663***	15.044	<0.001	-2.72***	14.357	<0.001
LOSS	-0.062	0.044	0.834	-0.051	0.03	0.864
GOING_CONCERN	-0.127**	3.837	0.05	-1.40*	3.743	0.050
COUNT_WEAK	-0.127	0.148	0.7	-0.129	0.153	0.696
MATERIAL_Weakness	0.138	0.031	0.861	0.135	0.030	0.864
SIZE	-0.473***	17.46	<0.001	-0.472***	17.330	<0.001
BIG4	-0.089	0.128	0.721	-0.094	0.142	0.707
TENURE	0.008	1.263	0.261	0.007	1.30	0.254
DISAGREEMENT	0.363**	3.693	0.045	0.350	2.578	0.098
LITRISK	0.256	1.262	0.261	0.259	1.803	0.183
FISCALYR	0.293***	11.557	<0.001	0.296***	11.820	<0.001
SIC	-0.001	5.154	0.232	-0.001**	5.211	0.022
N	2,040			2,040		
R2	45.8%			56.8%		

*, **, *** significant at the 10%, 5%, and 1% levels based on one-tailed p-values. Standard errors are clustered by company. See Appendix for variable definitions.

**Table V: H2 - Logistic Regression Analysis of Auditor Dismissal and AS5
(limiting sample to Big 4 to Non-Big 4 auditor dismissals)**

Dependent Variable: Dis-missal	Model 1			Model 2		
	Coefficient	Wald x2	p-value	Coefficient	Wald x2	p-value
Intercept	-7.38*	2.71	0.099	-2.834***	8.013	0.005
AS5	-7.252	1.568	0.211	-0.208	1.031	0.11
AUD_FEES	1.251	1.970	0.160			
DACC				0.256***	8.874	0.002
AS5*AUD_FEES	0.115**	4.986	0.026			
AS5*DACC				0.191***	7.001	0.008
INVREC	1.733	2.110	0.146	1.71**	6.953	0.018
LEV	-0.378	0.055	0.815	-0.755	0.095	0.758
BTM	0.66**	4.99	0.025	1.082**	6.01	0.014
ROA	-1.6***	10.38	<0.001	-3.93***	8.99	<0.001
LOSS	-0.542	0.561	0.454	-0.188	0.025	0.874
GOING_CONCERN	-1.13***	8.216	<0.001	-1.09***	3.743	0.050
COUNT_WEAK	-0.451	2.962	0.078	-0.811	0.184	0.668
MATERIAL_ WEAKNESS	0.194	1.185	0.227	0.447	1.094	0.300
SIZE	-0.208***	11.881	<0.001	-0.992*	2.715	0.070
BIG4	0.094***	7.638	0.006	0.161***	9.194	0.002
TENURE	0.398*	2.97	0.064	2.687***	7.991	0.005
DISAGREEMENT	0.948*	2.922	0.087	2.80***	8.361	0.004
LITRISK	0.374*	2813	0.093	1.406***	7.984	0.005
FISCALYR	-0.001***	8.709	0.003	-0.003***	13.067	<.001
SIC						
N	595			595		
R2	49.8%			62.5%		

*, **, *** significant at the 10%, 5%, and 1% levels based on one-tailed p-values. Standard errors are clustered by company. See Appendix for variable definitions.

auditor dismissals given how increased audit risk typically leads to increased audit fees, and how dismissal decisions can often be cost-driven by firms looking to find a less expensive audit. Using multiple measures of audit risk (audit fees and discretionary accruals), the findings show that there is a higher likelihood of auditor dismissal for high-risk firms in the AS5 regime compared to the AS2 regime. In addition, the second test looks at a specific situation of dismissal where a company dismisses a Big 4 auditor and hires a non-Big 4 auditor. Since a company typically switches to a smaller auditor for cost reasons, the second hypothesis expected stronger results in the same direction as the main sample test. The results were varied with the model using audit fees as a proxy for audit risk having the same results as the main sample, but the model with discretionary accruals as a proxy for audit risk has significantly stronger results in the same direction as the main model.

Based on the findings of this paper, it could be that AS5's requirements did lead to more risk-based audits which typically require more hours on the audit planning and preparation front. These hours are typically billed at the higher billing rates of audit managers, senior managers and partners. Therefore, it can be argued that, relative to AS2, in the AS5 era, certain types of audits (riskier ones) are more likely to lead to auditor dismissals because of higher costs. This situation is exacerbated when firms move from a more expensive audit with a larger auditor to a smaller auditor. The findings in this paper have implications for the PCAOB as it is continually assessing current auditing standards because it seems like the move from AS2 to AS5 not only has an impact on auditing procedures, but on the likelihood of auditors being dismissed. In addition, while it is often assumed auditor dismissals are linked mostly to fees, the findings in this paper show that audit risk also affects dismissals and not just auditor resignations. This finding has implications for a free enterprise market because that market relies upon an efficient market theory that quantifies audit fees and client risk into market prices. In addition, the function of the external auditor is highly important to the free enterprise system because auditors provide oversight accountability which provides a level of confidence to the users of the financial statements for making their decisions about the company.

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Free Enterprise Demonstrated by College President in the 1800s-1900s

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ABSTRACT

When people think of free enterprise, they think of private businesses operating for profit in a competitive environment. In June 1876, Dr. John Massey decided to take a free enterprise approach, as he became president of the Alabama Conference Female College (ACFC). Review of the literature shows that some believe free enterprise can work in educational settings, while others think state funded institutions work best. The tenants of free enterprise provide managers with an incentive to ensure the financial success of an entity. Massey showed through his autobiography and personal accounting records from 1912-1917 his keen awareness of financial and other matters necessary to sustain an entity. Could Massey have been a pioneer in the management of colleges by utilizing his free enterprise approach, as early as the late 1800s? This microhistory study shows that, indeed, Massey succeeded in educating students while at the same time profiting himself.

Keywords: Free enterprise, accounting, higher education, management, college, president

Introduction

According to Investopedia, “In principle and practice, free markets are defined by private property rights, voluntary contracts and competitive bidding for goods and services in the marketplace” (Free enterprise, Investopedia). Merriam Webster defines free enterprise as, “freedom of private businesses to organize and operate for a profit in a competitive system without interference by government beyond regulation necessary to protect public interest and keep the national economy in balance” (Free enterprise, Merriam-Webster). Thus, when most people think of free enterprise, they think of private businesses operating for profit in a competitive environment. In June 1876, however, Dr. John Massey (Exhibit I) decided to take a free enterprise management approach, when he became president of the Alabama Conference Female College (ACFC). The Alabama Conference of the Methodist Episcopal Church took over the previously named Tuskegee Female College, as it teetered on the verge of collapse, and renamed it ACFC (Exhibit II) while hiring Massey a few years later to be its president. Beginning his tenure with limited endowments and enrollment, Massey grew the college into a successful institution of higher learning while serving for thirty-three years. When market conditions indicated greater success in Montgomery, Massey saw the need for change and coordinated the move of the campus to Montgomery in 1909.

Massey began his tenure at the college negotiating a contract that allowed him to run the college in a business-like manner. He took responsibility for the college’s financial affairs with any losses made up by him personally. Likewise, any excess income of the college would go to him personally. With a fire in 1910, the college’s records from its time in Tuskegee were destroyed (Ellison 2004). Massey’s records related to his personal funds were believed to be comingled with the College’s records, especially due to the manner in which he ran the college. However, Massey’s personal accounting records for the years 1912 through 1917 are in Huntingdon College’s library. In his book titled, *Reminiscences*, Massey provides information on the details of his ACFC contract, in which he proposed to use a free enterprise approach to run the college. The book also contains other pertinent facts related to his business philosophy and his desire for the college to be self-sustaining. These records display his respect for the free enterprise system as a viable means to provide education, and the best way he saw to save a struggling college on the verge of collapse.

Along with his book, *Reminiscences*, John Massey’s financial affairs are documented in a Cash Book, a Notes and Mortgages Due Ledger, and Notes Receivable documents. A secondary source of information in matters related to his running of the college are in the book titled, *History of Huntingdon College 1854 – 1954*. This book has a chapter devoted to Massey, and it describes his tenure as a time of financial security and recovery.

Free Enterprise in a College Setting

While some see a place for a free enterprise system in higher education, others find the traditional structure of governmental involvement and support the best mechanism for managing a college. Stossel (2010) mentions when an individual or private company operates a public facility under contract, there is pressure to perform so that the contract may be renewed or the individual not fired. When John Massey negotiated his first contract at ACFC, he knew renewal of his contract was contingent upon his performance at the college. John Stossel states, "Contracting out to private enterprise isn't the same thing as letting fully competitive free markets operate, but it still works better than government." (Stossel 2010). He discusses how a toll road in Indiana was losing money, but the governor decided to lease it to private developers to run. Utilizing private developers, Stossel stated that the toll road now turns a profit. Stossel further states, "Free enterprise does everything better. Why? Because if private companies don't do things efficiently, they lose money and die" (Stossel 2010). Massey knew if he did not increase enrollment at the college and decrease debt, the college would not survive.

Garen (2016) explores the literature on using an entrepreneurial perspective for reforming schools. He states that schools have local knowledge and utilizing principal-agent theory in the governance of schools can produce the types of reforms needed. His focus is on how schools can use their knowledge to take action and become more entrepreneurial. Parents find the local specific knowledge important, while schools find it helpful in evaluating teachers. Merrifield (2002) highlights the importance of competition in prompting improvement in schools, and Garen (2016) builds that into his framework. Garen (2016) looks at the school administrator's payoff function as it relates to the school's net income. He states this functional relationship can occur with the administrator being the owner of the school, such as the case with John Massey. Garen (2016) proposes schools compete for students and teachers in the framework.

Garen (2016) further highlights the distinctions between private and public institutions. Since public agencies receive tax revenue, there is less pressure to provide value. He also notes that in public institutions, managers are not residual income claimants. By the nature of Massey's contract, he received the residual income, if any, or kicked in money to cover the loss. Dixit (1997, 2002) and Acemoglu et al. (2008) find that for public sector managers, payoff is affected by value creation, but in a weak way. Public sector managers do not get to keep residual income, such as the case with

free enterprise companies, thus they may not have as big an incentive to generate an operating surplus.

Finally, Garen (2016) notes that the nonprofit organization is common in education. The nonprofit status limits the distribution of any residual income. He proposes that a private nonprofit entity in a competitive environment is closer to an entrepreneurial entity than a public entity. He states there should be an incentive to act on specific local knowledge. Garen (2016) notes that the parameters for school reform, from an entrepreneurial perspective, involve a stake in residual income, school revenue linked to value, discretionary decision-making, the importance of public symbols, and the political strength of the employees. In Massey's management of ACFC, most of these parameters are addressed. He received the residual income, value was driven by student revenue, he had the power to make the decisions, and he involved the teachers and the public in moving the college forward.

Hall (2006) points out the importance of local officials in the determination of solutions to improve education. Similar to Garen (2016), he states that the local knowledge is key to governing and financing education. Hall (2006) notes that in 1919 state governments provided only 16% of the funding for education in the United States. The amount of funding has risen over time as states spend more on education, but Hall (2006) notes student performance has not increased with the degree of funding. He proposes that officials at the local level have superior knowledge to use finances to improve performance. He finds that those officials closest to the classroom have the greatest knowledge on the best use of the resources. John Massey was very involved in all facets of governing ACFC, while being aware of economic and political factors that affected the college and its market. Massey (1916) discusses economic considerations in Tuskegee and the south as he formulated his management plan for the college.

Holmstrom and Milgrom (1991) look at the principal-agent component of free enterprise. Their concern is that the standard principal-agent models may not include aspects of performance that are necessary for a firm to achieve its goals. They propose that the principal-agent problem derives from the potential responses of the agent and the incomplete performance measures that may not motivate the agent to act in the social interest. They propose a model that connects instruments and activities, while considering the various activities connected to agent performance. John Massey conducted varied activities for ACFC that he felt aligned the goals of the college with societal needs. In addition, for Tuskegee and the college's survival, he had to compete to get students coming to his school. Early in his career as president, he traveled around visiting with prospective students. In some cases, he had to

convince young women and their parents about choosing ACFC above another college they were considering (Massey 1916).

Fish, Miller, and Pernsteiner (2017) discuss organizational culture as it impacts the adoption of Customer Profitability Analysis (CPA). Control and flexibility are discussed as competing values and attributes of organizational culture. Whereas control refers to rigor and predictability, flexibility refers to reaction and adaptability. Fish, et al. (2017) show that organizations with a culture of control are less likely to adopt CPA. CPA as a customer analysis tool might not have been around in Massey's time, but Massey knew the importance of securing and retaining the customers (students) that would bring the most value to the college. Increasing the worth of the entity for the stakeholders is an important aspect of free enterprise that Massey was keenly aware of. Massey built an organizational culture of flexibility and responsiveness to economic conditions, as he analyzed his customer base and fine-tuned his free enterprise approach.

Kasperkevic (2014) reports on an interview with Andrew Ross, as she discusses her concern over increasing student debt. Kasperkevic states it is a harsh truth that colleges are businesses, and that students pay more in tuition than in years past. She interviews Andrew Ross, who has produced a documentary on the increasing use of capital management discipline at universities. Ross postulates that as universities lose governmental funding, higher education begins to look more like a private good that benefits students. The cultural shift he said began in the 1970s and 1980s. Interestingly, John Massey was president of ACFC a century earlier when he employed capital management concepts. Could Massey have been a pioneer in management of colleges by utilizing his free enterprise approach?

History of ACFC Leading to a Free Enterprise Approach

Massey (1916) reported Tuskegee Female College was chartered by the Alabama Legislature in 1854, where the title to the property and the administration were vested in a Board of Trustees and their successors. Ten acres of land were purchased for \$25,000, with the building completed for \$60,000. The college opened on 2/11/1856. Upon the retirement of its first president, Andrew Lipscomb (1856-1859), Massey noted the college had great debt. The Board borrowed \$5,000 from the Alabama Conference to sustain the college. Massey (1916) said the second president, George Price (1859-1863), reduced the debt in his first few years. However, due to the war, the Board sold the property in 1863 to Jesse Wood (1863-1864), who became the third president. Wood sold it one year later

to C D Elliot (1864-1865), who became the fourth president. Elliott had run a girls' school in Nashville, and arrived in Alabama as a refuge of the war. Between the war and declining purchasing power, Massey (1916) noted the college did not thrive financially under Elliot, thus Elliott left it with most of the prior debts still owed. The Board put former President Price (1865-1872) in as president again, as he had been the guiding spirit in the college even throughout the administrations of Wood and Elliott. Massey (1916) stated that the Board was becoming weary of their financial responsibility. Threatened by lawsuits for debt collection, the Board talked the conference into foreclosing on the property, settling with claimants for \$8,000, and running it as a church college instead. The 1872-1873 Legislature renewed the charter, changed the name to Alabama Conference Female College, and appointed seven Board Trustees. Massey (1916) noted the mortgage was \$5,000 and building repairs cost \$1,000. Henry Moore (1872-1875) became the president of the newly named college, but then the financial panic of 1873 occurred. Students and collections were down, and Moore had no reserve capital to cover expenses. Thus, he retired owing debt. Massey (1916) said Moore repaid those debts in a year or two from his next appointment. With Moore's retirement, E. L. Loveless (1875-1876) filled in as president during the middle of the school year, even though he did not desire to run a female college. With his departure, John Massey (1876-1909) assumed the presidency in June with the college at a low point and locals thinking it was dead.

As Massey assumed the presidency of ACFC, he contracted to lease the college for five years. As Massey stated the contract specified, "...the Board was to assume no responsibility in the management, either financial or disciplinary, and that I was to be responsible for employment of teachers, for the discipline of the school, for keeping the buildings in repair, and for the entire current expenses. If the school could not pay expenses, the loss was to be mine. If there should be anything left after meeting all expenses, the surplus should be mine" (Massey 1916, 277).

Free Enterprise in Action at ACFC

Massey (1916) stated that upon his assumption of the presidency, even the Board did not provide much encouragement. Operating within his five-year contract, Massey had to start immediately soliciting for students, as he was down to two girls in boarding. Massey stated he was bound to the college and could not afford to be bound to a dead body for five years. He felt obligated to bring life back to the college and make it a force in higher education. Massey knew that with the free enterprise approach he was taking to run the college, he had to increase revenues and would encounter

competition to obtain much-needed students. By the end of his first summer, Massey had visited over twenty-one cities, along with meeting with numerous private families. Massey made a rule to collect tuition fees in advance, but he would accept payment-in-kind by service or substance if the college could utilize it. At the completion of his first contract, Massey's five-year contract was renewed on the same terms. In describing his situation, Massey states, "While I had made a living, I had been obliged to spend most of the income of the school on current expenses and better equipment for the boarding and music departments. Some years passed before I laid away any money that inured to my own benefit" (Massey 1916, 294).

As Massey attempted to run the college, more space was needed, but the Board had no money, and Massey had little himself to spend on property. The Conference spent \$4,000 on enlarging the space in 1886, while Massey made a few small collections to supplement it. In 1887, Massey spent \$2,000 more than the money given by the Conference, which he paid out of the school's proceeds rather than taking the residual funds for himself. Massey (1916) notes that between the initial \$14,000 and the extra \$4,000, it had cost the Conference \$18,000, but he could now accommodate 25 more students. Property next door consisting of a two-story residence and 15 acres was purchased for \$2,500, which was raised by the Conference during the subsequent two years. Massey (1916) used the proceeds of the school to pay expenses of repairing the building and preparing premises, thus he could board 30 more students. Massey notes on staying at ACFC, "The Board of Trustees put no restrictions upon me. I had the most free and independent position in the State" (Massey 2016, 301). He had so much success that Wesleyan Female College, Agricultural and Mechanical College at Auburn, the University of Alabama, Southern University, and the Girls' Industrial School at Montevallo all recruited him for presidential positions during his tenure at ACFC (Massey 1916).

Massey (1916) noted on his financial success, "It is true that I made a little more than a living in the thirty-three years I was in charge of the college, but I take no credit to myself for good financiering. My success was due to a combination of good providence and propitious circumstances" (Massey 1916, 304). In addition, he stated that he came through a period of over 20 years with low cost of living, had patrons that paid bills timely, and no real epidemics or catastrophes. He also gave credit to the support of the Conference, the Board of Trustees, the people of Tuskegee, and his students.

While Massey spent his years committed to running the college and keeping it financially sound, he also watched

economic factors around him. On the move to Montgomery, Massey (1916) states, "The war completely changed the status of plantation life. Railroads brought about new and rapid modes of travel built upon new centers of population, and concentrated business in points favorable to trade. The whole commercial condition of the State had undergone a marvelous transformation; and the educational conditions had also changed, if possible, more than the material" (Massey 1916, 311). Massey noted that money and land in Montgomery existed, and it was one of the railroad centers of the state, thus the college should move there. He noted the old college cost the Conference \$20,000. The endowment of the old college, which was turned over in 1909, was slightly over \$16,000, which came from the sale of property for more than it had cost the conference. In addition, \$5,000 in cash was turned over, and furniture plus fixtures donated by Massey himself. He noted the Conference had use of the property for close to 40 years, during which time preachers' daughters paid half-price tuition. The former Tuskegee Female College, which later was renamed ACFC, cost the original trustees \$6,300, and brought close to a million dollars to the town during its 53 years in Tuskegee. The new college in Montgomery was funded by \$50,000 from the Flowers family, \$50,000 from the city of Montgomery, \$50,000 from the Alabama Conference, and 58 acres of land that were donated. The Trustees offered the presidency of the college in its new location in Montgomery to Massey, who turned it down due to his advanced age (Massey 1916).

Massey's Beginning to Financial Awareness

Born in 1834, Massey grew up on a farm, and lost his father in 1848. Losing his father at a young age, Massey learned how to manage the farm with limited resources. In his book, *Reminiscences*, he called himself a "penniless plow-boy" (Massey 1916, 54). Massey worked on the roads to keep the family farm running, as he pursued his education and eventually attended The University of Alabama (UA).

During the time Massey attended UA it became a military school. He was in charge of the Quartermaster's store, furthering his business knowledge. He was appointed as Lieutenant in Charge of Company C with the Alabama Corps of Cadets. Upon graduation, he became Adjutant of the First Battalion of Hilliard's Legion, where he served the Confederacy until 1864, becoming distinguished in gallantry in the Battle of Chickamauga. He was released by the War Department to return to UA to teach. Keeping his frugal ways, Massey wore his confederate uniform until he could buy better. He continued to teach at multiple institutions, where he struggled with a meager income. With the effects of the Panic of 1873 hurting the credit system, he learned some

valuable fiscal lessons. His motto became, “to collect as I went and to pay as I went” (Massey 1916, 272). This motto can be seen in the manner in which he managed the college, kept his Cash Book, and handled his Notes Due.

Demonstrating Free Enterprise as President

Massey left the position in Mobile to assume the Presidency of ACFC in 1876. During his time as President of ACFC, he continued his thrifty ways by building up a herd of cows to serve un-skimmed milk to the students and ensuring the college was self-sustaining. Massey continually gave money towards the tuition for girls that could not afford it, and personally donated funds to the College. He doubled the enrollment from his beginnings with the college in 1876, such that 178 students attended in 1884. Massey (1916) notes that he was criticized from time-to-time for spending most of the income of the school on current expenses and better equipment, to which he responded, “There is such a thing as killing the hen to get the golden egg” (Massey 1916, 294). During the Economic Depression in 1890, enrollment dropped to 119 students, but Massey kept the college self-sustaining during this difficult period.

In 1907, Massey announced the move of the college to Montgomery because of better service by the railroads and to put the college in the center of future commerce. Massey knew the importance of embracing change as an ongoing state of nature. In his words, “Nothing is in a state of fixity. Everything is in a stage of growth. Whatever promotes growth is a good thing, whether it is our liking or not. Of course there is danger in the change which growth produces unless directed by intelligence, but there is more danger in a state of stagnation” (Massey 1916, 141). He resigned at the age of 74 on May 15, 1908, but upon request agreed to stay one more year to see the college move successfully to Montgomery.

Accounting Records of Massey

In reviewing Massey’s accounting records, one can see the financial awareness that enabled him to run ACFC in a free enterprise manner. Financial records during the early 1900s were manual, with journals, ledgers and notes documented by pen and paper. The economic events of that time include the establishment of the Income Tax, the Federal Reserve Act, and the beginnings of World War I. Customs of the day were very cognizant of family genealogy and position in society, which often dictated the opportunities available to certain persons. Even though John Massey was born a poor farm boy, he had achieved a measure of financial success through his management of the college for so many years. However, in a letter from W. H. Thomas, Associate Judge of the Supreme Court of Alabama, to M. B. Houghton in solicitation of funds

from Mr. Houghton for ACFC in 1918, Thomas referred to Dr. John Massey as “a poor man” (Thomas 1918, 1). Massey’s poor beginnings kept him placed in that category by his birth, which was the custom of that day.

John Massey’s accounting records include documentation of income, expenses, and real estate holdings during his late seventies and eighties. However, he documents income earned during his twenties and thirties in his book, *Reminiscences*. From his forties through his seventies, he was the President of ACFC, and his finances were, effectively, the college’s finances. Those records of the college’s finances were burned in a fire in 1910.

Massey’s Cash Book, Notes and Mortgages Due Ledger, and various Notes Receivable documents are in the archives of the college, which is now named Huntingdon College. The time of these documents, 1912 – 1917, relate to his retirement years. His Notes and Mortgages Due ledger is dated January 1, 1915. One of the first pages from the ledger stated the insurance he carried for his loans and when it expired, with a subsequent page including a list of insurance that he carried on his houses in Birmingham. In addition, his ledger includes a page listing his rental property in Birmingham, which is shown in Exhibit III. Written across the pages in red is the statement, “All turned over to the Birmingham Trust & Savings Company July 8, 1915” (Massey Notes and Mortgages Due, 1915, 2-3). No notation in any other file or other documentation could be located to identify why properties were turned over. Economic conditions during that time included the Sixteenth Amendment ratifying the Income Tax in 1913 and World War I beginning in Europe in 1914 (Timeline of U. S. History, 1900-1929). These events could have caused John Massey to turn the properties over to the bank to be sold, thus eliminating any future income tax on the rental income or property appreciation. Davis and Moore (2017) discuss tax incentives in the manufacturing sector and the impact of tax uncertainty on economic factors impacting free enterprise. Faced with such uncertainty, Massey may have chosen to cease some of his business operations. Also, it could be that he desired to become more liquid due to the prospect of war and his advancing age. His motives are not documented, so only speculation is possible, but it is clear that he no longer personally managed the properties after 1915. In addition, on the listing of property in Birmingham, a note in blue appears stating, “These rents have been very much reduced during the last year or two, 1914-15” (Massey Notes and Mortgages Due, 1915, 2-3). The reduction in rent may have been due to economic conditions also. Details regarding Notes Payable and Notes Receivable are as follows:

	1915 Dollars	2017 Dollars
Notes Payable Ledger		
Total Rental Properties	\$52,500.00	\$1,256,554
Rents Received Monthly	\$379.50	
Rents Received Annually	4,554.00	\$108,997
Notes Receivable Ledger		
Amounts Due	\$568.93	\$14,048

Recall that upon his death he was referred to as a “poor man” (Thomas 1918, 1). In today’s dollars he appears to have had a net worth over \$1.2 million in properties alone. In addition, Massey included in his Notes Ledger a listing of Notes Secured by Mortgages in Exhibit IV. On the list of Notes Secured by Mortgages, he had marked paid on every line. Stanley (1958), in an article reporting on female alumnae preparing to honor Dr. Massey, he reported that near the end of Massey’s life he marked all unpaid balances in his ledger as paid. Stanley (1958) stated that Massey did not want to have a record of owing any man as he approached the end of his life. On loans made to his children, he wrote a note in green across them that stated, “All interest on these notes to be cancelled” (Massey Notes and Mortgages Due, 1915, 4-5). There is no notation as to the principal balance. Since he considered all the unpaid mortgages from others as paid (Stanley 1958), it can be speculated that he also considered the loans to his children as paid.

Besides the Notes and Mortgages Due Ledger, accounting documentation includes a listing of Notes Receivable due to John Massey sketched on a sheet of paper with the actual Notes Receivable documents in the file. An example of the Notes Receivable documents is found in Exhibit V. It appears there were eight notes due to him during the period from 1900 – 1917, with the total shown in the above table. While the sum owed to him of a personal nature is small, it shows his service as a lender to others. One note document in the archives states the money was borrowed to pay his wife’s funeral expenses (Hoffman 1914). A letter from one borrower states he could not pay the amount he owed back yet, but that he borrowed the funds to go to college to become a teacher (Chappelle 1917). The other documents are more generic, but it appears that John Massey lent money to those in need, whether he had a formal note document for them to sign or whether they scratched down their intent on a plain sheet of paper. In his Cash Book, one will see where he did receive some interest on these notes during the time period covered. He was a borrower and a lender, and conducted his

personal affairs in the similar free enterprise approach he used as a college president.

John Massey’s Cash Book covers the periods from 1912 to 1917, and utilized debits and credits to show Massey’s accounting knowledge. The Cash Book consists primarily of pages noting receipts or income from rent and interest (left side or debits), and disbursements for expenses (right side or credits). The book starts in 1912 and continues until 1917. Exhibits VI through VIII show the detailed pages in his Cash Book. Disbursements consist of items related to his personal needs, such as food, clothing, medicine and shelter, expenses related to his rental properties, and gifts to the church or mission work. Overall, one can see that Massey was meticulous in keeping up with all matters of receipts and disbursements. His poor beginnings, capitalized by his subsequent achievement of some monetary wealth, kept him true to his beliefs. His Cash Book reveals how he intertwined his life’s work with fiscal accountability, along with revealing his superior cash management skills that enabled him to operate successfully under a free enterprise system.

Massey’s financial records discontinued after 1917, even though he lived until April 1918. The Montgomery Advertiser reported in April 1918 that Massey was being honored at the annual commencement of the college. In the article, it was discussed that as Massey aged, he handled his physical sufferings with patience and grace, including blindness and loss of physical strength. The article noted he would fold his hands on his books, and not complain, even as his world became dark (Beautiful tribute 1918). It could be the records discontinued and debts were settled, as Massey could no longer see.

Conclusion

Reading his book, *Reminiscences*, reviewing his accounting records, and looking at supplementary items written about Massey, one can see the pattern of a man that believed in self-sustaining endeavors and was not afraid to compete to secure financial solvency for ACFC. Since he experienced hard times throughout the first part of his life, he seemed to be aware of how important it was to account for inflows and outflows. Business leaders could learn a lot by following John Massey and adhering to his personal motto of “to collect as I went and to pay as I went” (Massey 1916, 272).

John Massey is a perfect candidate for microhistory study. Microhistorians examine the lives of individuals who are often neglected by macrohistorical studies and who rarely fit the existing model. Microhistory focuses on the fundamental experiences and mentalities of ordinary people (Lepore 2001). Indeed, Massey was a marginalized individual

who did not fit the normal mold of educators of his time. As evidenced by his accounting records, Massey's use of the free enterprise system to operate a college illustrates an example of educational history that could not be explained by traditional macrohistory. Such individuals as Massey should not be lost in anonymous crowds of similar school leaders.

While the subject of free enterprise in a college setting is still debated, Massey provides an example from over a hundred years ago of an institution that was managed as a free enterprise with John Massey as its CEO. While it might have received some backing from the church conference, Massey managed the income and expenses, and made up for any deficits or received any surplus. His compensation or lack thereof, was dependent upon the revenue source he generated and the expenses he controlled. He also had to compete with other girls' colleges at that time to recruit and retain female students. Since prior to his employment at ACFC, he had worked primarily educating male students. Some questioned his move to educating women. Upon that issue, Massey stated, "...but during the next thirty-three years I learned that girls cannot be managed by 'anybody.' It requires as much to hold their respect and loyalty as it take to hold the respect and loyalty of boys; and without commanding their respect and good will, one can do nothing with them" (Massey 1916, 287-288). John Massey proved through the institution's success that free enterprise could work in higher learning, especially when management is incentivized by the entity's financial success or lack thereof.

Exhibit I



John Massey at the age he became President of ACFC

Exhibit II



ACFC was organized on February 11, 1856 and remained in existence in its Tuskegee location for 53 years

Exhibit III



Notes and Mortgages Due Ledger of John Massey showing List of Property in Birmingham.

Exhibit IV

A handwritten ledger with multiple columns. The top row is headed "Notes Secured by Mortgages Due". The columns contain names of individuals, dates, and monetary amounts. The entries are organized in a structured list format.

Notes and Mortgages Due Ledger showing list of Notes Secured by Mortgages Due

Exhibit VI

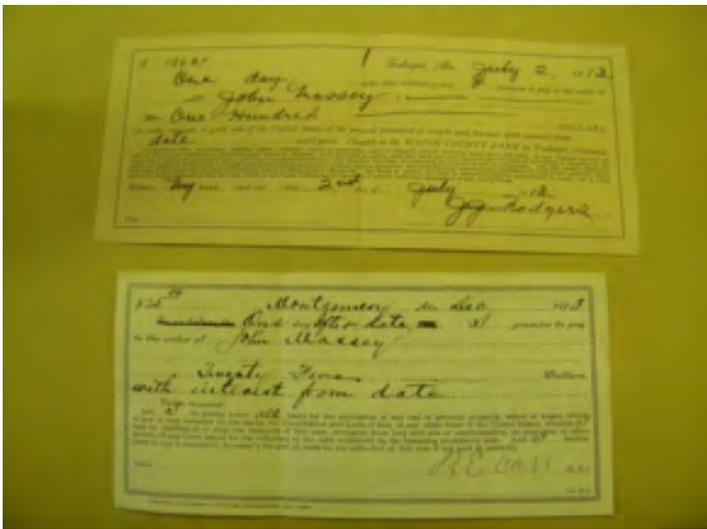
A handwritten cash book page titled "Cash". The left side shows debits for January 1912. The entries include:

Jan 1	from Louis Petro (old a/c)	\$500
1	J. Redman (old)	\$500
4	rents for Peapack	360.00
11	Int from attached note	64.00
	J. Higgins	20.00
	Mr. Redman (old)	50.00
17	W. E. Reynolds (old)	210.00
20	J. M. Haver (old)	50.00
	Total	1592.00

At the bottom, it says "To page 2".

The left side of page 1 of the Cash Book of John Massey, which shows, debits to Cash consisting of rent, interest, and something termed "old a/c" (abbreviation for old account). The entries are dated in January 1912.

Exhibit V



Two examples of actual Notes Receivable documents payable to John Massey.

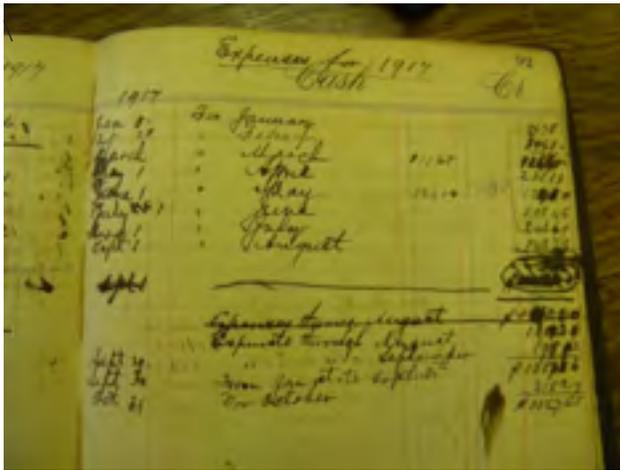
Exhibit VII

A handwritten cash book page titled "Cash". The right side shows credits for January 1912. The entries include:

Jan 1	from Louis Petro (old a/c)	\$500
1	J. Redman (old)	\$500
4	rents for Peapack	360.00
11	Int from attached note	64.00
	J. Higgins	20.00
	Mr. Redman (old)	50.00
17	W. E. Reynolds (old)	210.00
20	J. M. Haver (old)	50.00
	Total	1592.00

Right side of page 1, which shows credits to Cash during the same period of January 1912. His payments consist of amounts to a drug company, a mercantile company, and others.

Exhibit VIII



Page 92 shows his expenses for 1917 by month. His expenses for 1917 through October total \$1,569.65, which was approx. \$22 less than income and reflects meticulous cash management.

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