

# The Role of Firm Status in Appointments of Accounting Financial Experts to Audit Committees

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**ABSTRACT:** Since 1999 regulators have attempted to improve the monitoring of financial reporting by exerting significant pressure on firms to appoint accounting financial experts (AFEs) to their audit committees. Yet, many firms have been reluctant to do so, which has made these firms more prone to financial reporting problems. We examine appointments of AFEs to the audit committees of S&P 1500 firms during the period 1999–2008 to explore whether concerns about the status of these experts discouraged firms from appointing them. We find that typical AFEs (CFOs and retired audit partners) have lower director status (board seats, trusteeships, social club memberships, and elite education) than other types of directors, and that this status gap is greater for higher status firms (larger, better connected, and more admired firms). Moreover, we find that higher status firms are less likely to appoint AFEs, suggesting that status-related concerns reduce the demand for accounting financial expertise on audit committees.

**Keywords:** *audit committees; accounting financial experts; firm status; director status.*

**Data Availability:** *All data are publicly available from sources identified in the text.*

## I. INTRODUCTION

Since 1999 Congress, the Securities and Exchange Commission (SEC), and the major stock exchanges have exerted significant pressure on firms to appoint financial experts to their audit committees in a bid to improve the oversight of corporate financial reporting. Consistent with this objective, prior literature suggests that the presence on audit committees of an accounting

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financial expert<sup>1</sup> (AFE) is associated with positive financial reporting outcomes such as a lower probability of having restatements (Abbott et al. 2004; Agrawal and Chadha 2005). Yet, many firms have been reluctant to appoint an AFE, which has made these firms more prone to having financial reporting problems. Indeed, reporting problems such as restatements have proliferated during the 2000s and have come at a significant cost to shareholders (Burks 2011).

The purpose of this study is to examine the effects of a factor that we believe has played a key role in some firms' reluctance to appoint AFEs—firm status.<sup>2</sup> A firm's status is its position in a hierarchy of a set of firms—a hierarchy that is based on various types of connections to other firms such as exchange relationships (Podolny 2005). Firms with more and better connections appear higher in the status hierarchy. Firm status can have economic consequences because it is used as a signal of firm quality when there is uncertainty about quality. Further, status can “leak” through connections. For example, a firm of higher status that engages in an exchange such as a joint venture with a firm of lower status can experience decreased status. Thus, high status firms are reluctant to enter into relationships with lower status partners, including relationships with corporate board members (Podolny 1994).

We propose that higher status firms have been reluctant to appoint AFEs to their audit committees and boards because these individuals would lack the requisite director status to serve on their boards. Like firm status, director status reflects a director's position in a hierarchy—one that is based on corporate and social connections that derive largely from an individual's personal network and elite institutional affiliations (Domhoff 2009). Drawing on theory from sociology and management about director status, and on our understanding of the education and career paths of the typical AFE who is a CFO or retired audit partner,<sup>3</sup> we hypothesize that AFEs have lower status than other individuals typically appointed to boards, e.g., retired or sitting CEOs. Further, because both economic and social factors generally enable higher status firms to attract higher status board members, we hypothesize that higher status firms generally are able to attract higher status directors, including higher status AFEs. However, while not all AFEs are “typical,” we propose that there is an insufficient supply of higher status AFEs to sit on the audit committees of higher status firms, because higher status directors such as CEOs tend not to rise through the accounting function (Spencer Stuart 2008). Consequently, we expect that some higher status firms were forced to consider a CFO or a retired audit partner for their audit committees. If, as we propose, higher status firms generally have higher status board members (e.g., Fahlenbrach et al. 2010), then we hypothesize that the mismatch in status between the typical AFE candidate and the average status of sitting directors is larger for higher status firms.

Most important, we expect this mismatch in status to be negatively related to the probability that an AFE is appointed to the audit committee. First, directors are primarily outsiders and, consequently, their status can “leak” to the firm as can the status of exchange partners (Davis and Robbins 2005; Shropshire 2010). Thus, we expect sitting directors of higher status firms to be more concerned than those of lower status firms that the appointment of an AFE would damage the firm's

<sup>1</sup> Accounting financial experts are individuals who have knowledge of GAAP that has been obtained through direct experience in accounting and/or auditing positions. These are the individuals the SEC originally proposed as “financial experts” (SEC 2002). However, the final SEC rule (SEC 2003) allowed for individuals who have obtained knowledge of GAAP by supervising or otherwise monitoring the performance of others who are directly engaged in accounting and/or auditing functions to qualify as well. These individuals are referred to as “supervisory financial experts.”

<sup>2</sup> We do not examine firms' decisions regarding the *designation* of particular individuals as “financial experts” for disclosure purposes. These are separate decisions that may be affected by other factors. Nevertheless, the majority of AFEs appointed to audit committees are also designated as financial experts.

<sup>3</sup> Consistent with our characterization of the typical AFE, 68 percent of the appointed experts are or have been a CFO, and 24 percent are retired audit partners.

status. Second, we expect sitting directors of higher status firms to have personal incentives to use their firm's status to appoint other high status directors. Specifically, other high status directors provide sitting directors with access to prestigious positions (Westphal and Khanna 2003). They also are more similar to sitting directors with respect to their social status, thereby reducing the uncertainty about what it is like to work with these individuals (Boone et al. 2004). Overall, we hypothesize that higher status firms are less likely to appoint AFEs to their audit committees than are lower status firms.

We test our hypotheses by examining the appointment of AFEs to the audit committees of S&P 1500 firms that did not previously have AFEs on their audit committees during the period 1999–2008. We use S&P 1500 firms because we expect status to be particularly salient to firms within this group, and start our sample period in 1999 because that is when regulators first exerted pressure on firms to appoint AFEs to their audit committees. Following DeFond et al. (2005), we classify directors as being AFEs if their background descriptions include terms reflecting direct accounting or auditing experience, including chief financial officer and certified public accountant. Drawing on the sociology and management literatures, we measure firm status using a factor score that includes a firm's market capitalization (e.g., Fombrun and Shanley 1990; Greve 2005), the number of firms the focal firm is connected to through common board members (e.g., Greve 2005), and a firm's overall rating in *Fortune's* annual survey of America's Most Admired Companies (e.g., Fombrun and Shanley 1990; Sullivan et al. 2007).<sup>4</sup> Following Belliveau et al. (1996), we measure director status using an index that includes the number of public boards on which a director serves, the number of trusteeships a director holds, the number of social clubs to which a director belongs, and a measure that captures the prestige of the undergraduate institution a director attended.

Our predictions are supported. We find that AFEs, on average, have lower director status than other audit committee appointees and board members more generally. Thus, firms that appoint AFEs to their audit committees tend to be confronted with a gap between the director status of these individuals and other board members. Consistent with higher status firms being better able to attract higher status board members, we find a positive association between firm status and director status, and also that higher status firms appoint higher status AFEs. Moreover, consistent with an insufficient supply of higher status AFEs, we find that higher status firms face the largest gap between the director status of AFEs and sitting directors. Most important, we find that higher status firms are less likely to appoint AFEs to their audit committees. Consistent with our assertion that higher status firms were concerned about the lack of high status AFEs, our estimates of the potential supply of qualified AFEs show a shortage of these individuals only when we require that they have a high level of director status. Finally, preliminary analyses indicate that the negative status-AFE appointment relationship appears to be driven more by sitting directors' personal incentives than by concerns about damaging firm status.

We conduct a number of analyses to rule out various alternative explanations for our findings regarding the effects of firm status. First, prior research has found that firms tend to appoint directors who are similar to sitting directors in personal social status, as reflected by demographics (e.g., Westphal and Zajac 1995). We find that AFEs do not differ from other directors with respect to personal social status. Second, both the inclusion of multiple control variables and further analyses suggest that our results are not driven by higher status firms: (1) benefiting less from appointing AFEs to their audit committees, (2) requiring directors with different types of expertise, and (3) generally being more resistant to making changes to the board. Inconsistent with higher

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<sup>4</sup> Further analyses discussed in Section V show that our results are robust to using each firm status component separately. They also are robust to replacing the market capitalization component with a measure that captures a firm's annual rank by sales within its industry and using the market capitalization measure as a control variable instead.

status firms benefiting less from the appointment of AFEs, market reactions to appointments are not associated with firm status. Next, inconsistent with higher status firms requiring directors with different types of expertise, most firms do not replace existing board members to make room for AFEs, but rather add AFEs to the board; further, the decision to add versus replace is not related to the status of the firm. Finally, inconsistent with higher status firms being more resistant to making changes, boards of higher status firms do not differ from those of lower status firms with respect to the proportion of newly appointed board members.

This study contributes to the accounting literature in several ways. First, our primary contribution is finding that firms' concerns about director status influenced the demand for accounting financial expertise on audit committees. Our results suggest that status-related concerns can prevent firms from appointing to their boards individuals who have expertise—accounting expertise—that their boards lack. This finding also has implications for regulators. Both the exchanges and the SEC allowed for individuals without direct experience-based knowledge of GAAP but with high status, e.g., CEOs who have supervised AFEs, to qualify for regulatory purposes as “financial experts” (Blue Ribbon Committee 1999; SEC 2003). In particular, in creating latitude in this area, the SEC moved away from the goal of the Sarbanes-Oxley Act (SOX), which was to swiftly improve financial reporting (U.S. Congress 2002). Overall, the time period from 1999 forward may have had a higher rate of major financial reporting problems than it would have had the SEC not permitted latitude in this definition. Our findings regarding the effects of firm status are particularly problematic since results from additional analyses show that status effects did not decrease even with the advent of SOX, which should have made firms more concerned about financial reporting quality and less concerned about status. Further, preliminary analyses also suggest that our findings are at least partially driven by sitting directors' personal incentives to appoint high status directors.

Second, this is the first study in accounting to examine the effects of firm status. In so doing, we introduce the concepts of firm and director status, concepts that may be useful for explaining variation in other accounting and corporate governance practices. For example, firms with similar status or firms that have directors of similar status may adopt similar accounting practices, much as managers with similar backgrounds choose similar disclosure practices (Bamber et al. 2010). Third, we also document other novel factors that are related to the appointment of AFEs. We find that audit fees, prior accounting difficulties, earnings quality, governance quality, growth opportunities, firm performance, firm age, and information provided by interlocked directors, local firms, and a firm's auditor all are related to the probability of appointing an AFE. The last finding is consistent with recent studies showing the spread of accounting practices through corporate connections (e.g., Reppenhagen 2010; Brown 2011).

Next, Section II provides background. Section III develops our hypotheses. Section IV describes how we measure our variables and select our sample, and Section V presents the results. Section VI concludes.

## II. ACCOUNTING FINANCIAL EXPERTS ON AUDIT COMMITTEES

### History of Financial Expert Regulation

The pressure on firms to add AFEs to their audit committees began to increase in the late 1990s with then SEC Chairman Levitt's speech “The Numbers Game” (Levitt 1998). Although his speech was related primarily to earnings management, Levitt also highlighted shortcomings of audit committees, particularly in the area of accounting expertise. The speech was followed by the formation of a Blue Ribbon Committee (BRC) to address Levitt's concerns.<sup>5</sup> Among the BRC's

<sup>5</sup> The New York Stock Exchange and the National Association of Securities Dealers sponsored this committee.

recommendations was that “at least one member of the audit committee have accounting or related financial management expertise” (BRC 1999). The exchanges quickly created rules to implement this recommendation, but the rules allowed persons with either accounting or financial management expertise to meet the requirement. Thus, while they did not create a clear mandate to add AFEs to audit committees, they did create some regulatory pressure to do so.

In 2002, the U.S. Congress passed SOX in response to a number of accounting scandals. Section 407 of SOX placed additional pressure on firms to add AFEs to their audit committees, with the intention that these experts’ presence would improve monitoring of financial reporting and prevent major accounting problems like those that occurred at Enron, Tyco, and other firms (Aoglia et al. 2011). Specifically, Section 407 required the SEC to “adopt rules (1) requiring a company to disclose whether its audit committee includes at least one member who is a financial expert, and (2) defining the term financial expert” (SEC 2002). In response, the SEC required that companies disclose the individual(s) on the audit committee who is (are) considered to be a “financial expert(s)” and discuss their qualifications or, if the firm did not have a “financial expert” on its audit committee, to disclose this fact and explain why.

Originally, the SEC proposed that a “financial expert” is an individual with knowledge of GAAP obtained from specific experience as an accountant or auditor (i.e., an AFE). However, this proposed definition turned out to be the “most controversial aspect of the proposal” (SEC 2003). Consequently, while the SEC left intact the requirement that financial experts have knowledge of GAAP, it substantially broadened the experiences through which an individual might obtain this knowledge to include experience supervising or assessing the performance of accountants and/or auditors (SEC 2003). This broadening allowed for a wide array of individuals to qualify as “financial experts,” in particular high status individuals such as CEOs. Overall, after Congress passed SOX and the SEC implemented the SOX provisions, although there still was no mandate to add AFEs to audit committees, the pressure to do so increased significantly.<sup>6</sup>

### Benefits and Costs of Accounting Financial Experts

The regulatory action and controversy surrounding the importance and definition of “financial expertise” spawned a great deal of research. This research shows that the presence on audit committees of AFEs is related to a lower probability of negative accounting outcomes and a higher probability of positive accounting outcomes. Firms with at least one such individual on their audit committees are less likely to have restatements and fraud (Abbott et al. 2004; Agrawal and Chadha 2005), and to have greater accruals quality (Bédard et al. 2004; Carcello et al. 2009; Dhaliwal et al. 2010) than firms with no AFEs. These firms also have greater accounting conservatism, but only in the presence of strong corporate governance practices (Krishnan and Visvanathan 2008). The market also reacts positively to the appointment of AFEs to the audit committee (Davidson et al. 2004; DeFond et al. 2005). Further, there is no significant market reaction to the appointment of individuals who have obtained knowledge of GAAP by supervising or otherwise monitoring the performance of others who are directly engaged in accounting and/or auditing functions (Davidson et al. 2004; DeFond et al. 2005), and the presence of these individuals is not related to accounting conservatism (Krishnan and Visvanathan 2008) or accruals quality (Carcello et al. 2009; Dhaliwal et al. 2010).

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<sup>6</sup> Although SOX and the SEC regulated *disclosure* regarding the presence of financial experts rather than mandating the *presence* of financial experts, there is evidence that firms felt compelled to comply because, for example, they were concerned about criticism from investors and the media (e.g., Fleetwood Enterprises 2002). In general, disclosure requirements can have a significant effect on the adoption of corporate governance practices (Roe 2005).

Based on the research above, the presence of AFEs on audit committees appears to be a beneficial practice for firms to adopt. Given these findings and the significant regulatory pressure arising from the stock exchange rules, the passage of SOX, and the disclosure requirements instituted by the SEC in response to SOX, one would expect firms to have adopted this practice. Instead, many firms have been reluctant to do so, as reflected by comment letters that provide complaints about the SEC's initial proposal for implementing SOX (SEC 2003).

First, firms argued that there would be an insufficient supply of individuals meeting both the knowledge and experience criteria (e.g., Mellon Financial 2002), with the supply gap being so large that firms might have to resort to appointing persons who are wholly unqualified for directorship such as junior auditors (e.g., Kellogg 2002). Second, firms protested that AFEs would lack other key director qualifications, including general management expertise, industry expertise, board experience, leadership skills, and communication skills, as well as key personal attributes such as integrity, a sense of accountability, and the independence that would allow them to ask difficult questions (e.g., Mellon Financial 2002). Apparently, firms perceived that audit committees' monitoring of financial reporting might suffer or at least not improve with the appointment of such individuals, contrary to the stated goal of SOX. Third, because of growing pressure to limit the size of boards (Yermack 1996), firms were concerned that appointment of an AFE would involve replacement of a sitting audit committee member (e.g., Fleetwood Enterprises 2002). While firms acknowledged that an AFE might possess greater knowledge of GAAP, they apparently were concerned that an AFE's other characteristics and total skill set would be inferior to those of the person replaced (e.g., Kellogg 2002). Again, this belief would lead firms to perceive that the board's overall effectiveness would decline.

We argue that the above complaints about AFEs' inferior qualifications, and the costs to firms that may result from these deficits, do not appear to be well founded. The typical AFE mentioned in comment letters is either a CFO or a retired audit partner (e.g., Golden West Financial 2002). Based on an understanding of these individuals' education and job requirements, the concerns appear to be overstated. First, if all CFOs were to sit on the board of only one other firm, there would be a sufficient supply of AFEs.<sup>7</sup> Second, many CFOs and retired audit partners possess the other attributes firms desire in directors. For example, they have reached high positions, led teams of individuals, and frequently communicated with various constituents (Taub 2008). Further, many CFOs have gained knowledge about organizations through their work with other corporate departments, e.g., during the budgeting process (O'Sullivan 2010). Retired audit partners and CFOs also possess knowledge related to specific industries.<sup>8</sup> Additionally, persons who have been trained in accounting and worked in public accounting certainly have been trained in ethics, have had to adhere to a code of ethics, and have a strong sense of accountability given the nature of the professional standards they must follow. Since many CFOs start their careers as auditors, CFOs likely would have these characteristics as well. Further, because of their training and job requirements, both retired audit partners and CFOs would have the ability to ask tough questions (Lindorff 2003). Third, the argument that the appointment of AFEs would involve replacement of an existing audit committee member is not empirically viable because 54 percent of the firms in our sample who appointed an AFE did so by adding a member to the board.

We believe that the preceding stated concerns about qualifications (and the possible resulting costs) served to mask firms' true concerns. We suggest that an important unstated concern was that the typical AFE, a retired audit partner or CFO, would not have sufficient status to serve on the board. In other

<sup>7</sup> We provide further analyses related to the supply issue later.

<sup>8</sup> Because some AFE candidates might lack some of these skills as well as expertise in general management or specific industries, we control for the demand for these skills in our analyses.

words, while some higher status AFEs, particularly CEOs who rose through the accounting function, would be available, there were unlikely to be enough of such individuals to serve on the audit committees of all higher status firms. Some higher status firms would then be forced to consider the typical AFE as a board member. Consequently, we propose that the gap in director status between the directors of a higher status firm and the typical AFE was greater than the gap in status between the directors of a lower status firm and the typical AFE, and that a larger gap in director status led to a lower probability that a higher status firm would appoint an AFE. The next sections explicate these predictions regarding the effects of firm status on the probability of appointing an AFE to the audit committee.

### III. HYPOTHESIS DEVELOPMENT

Our first hypothesis is that the typical AFE—a CFO or a retired audit partner—will have lower director status than other audit committee members and, more generally, other board members. This hypothesis is based first on the expectation that AFEs are less likely than other types of directors to have elite undergraduate educations. Because the typical AFE likely majored in accounting as an undergraduate (Baker and Phillips 1999) and most elite schools do not offer undergraduate accounting degrees, it is unlikely that these individuals obtained an elite undergraduate education. The lack of an elite undergraduate education is important not only because it is a determinant of status *per se*, but also because having this type of education is positively related to obtaining an executive position (Useem and Karabel 1986). Since top executives are the most desired board members (Spencer Stuart 2010), AFEs are at a further status disadvantage due to their undergraduate majors.<sup>9</sup> Overall, the typical educational background of AFEs, involving an undergraduate accounting degree, suggests a lower director status than that of other directors.

Second, CFOs and audit partners are less likely to be members of the upper social class, if only because an elite education is one indicator of social class. More important, CFOs and audit partners are paid less, on average, than other types of business executives (Bureau of Labor Statistics 2011). Because wealth is an important indicator of status among the corporate elite (Domhoff 2009), AFEs' typical earnings potential also suggests that they have lower director status than other directors. Finally, the general public appears to hold accountants in less esteem than other common types of directors such as business executives and lawyers (Brandon 2007). Thus, we hypothesize that the average AFE has lower director status than other directors:

**H1:** The average status of appointed AFEs is less than the average status of sitting directors.

#### Firm Status and Director Status

Our second prediction is that higher status firms are better able to attract higher status directors, including higher status AFEs. Recall that firm status is defined as a firm's position in a hierarchy, where that position is "directly tied to the pattern of relations and affiliations in which the actor (firm) does and does not choose to engage" (Podolny 2005, 13). In other words, a firm's status is determined by the quality of its connections.

Higher status firms are best able to attract higher status directors for a variety of reasons. First, they pay larger director fees than other firms (Ryan and Wiggins 2004). Second, higher status directors seek to affiliate with higher status firms in order to maintain or boost their own status (Benjamin and Podolny 1999), even when these firms currently do not have high status directors on their boards. However, once higher status firms have appointed higher status directors, other higher

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<sup>9</sup> While the percentage of top executives having elite undergraduate educations has decreased in recent years (Spencer Stuart 2008), the percentage still is nontrivial, particularly among the highest status firms, where it is approximately one-third (Burnsed 2011).

status directors have even stronger incentives to join the boards of those firms. Sitting high status directors provide potential board candidates with access to prestigious positions such as additional board seats (Westphal and Khanna 2003). Additionally, prior research suggests that people tend to be attracted to and gravitate toward interacting with others who are similar to them on salient dimensions (Schneider 1987), including factors related to director status such as social class (e.g., Byrne et al. 1966; Domhoff 2009). Indeed, Beasley et al. (2009) observe that many appointments of AFEs appear to be driven by personal ties between the AFEs and either sitting directors or the CEO. Such ties and the related appointments could reflect similar director status. Gravitation toward similar others may reflect greater certainty about what it is like to work with similar versus dissimilar others (Boone et al. 2004). Thus, for a variety of reasons, we expect higher status firms to be more likely to attract higher status directors. This yields the following hypothesis:

**H2:** Director status is positively related to firm status.

### Director-AFE Status Gap for Higher and Lower Status Firms

Our next prediction is that, while higher status firms generally are able to attract higher status directors, a limited supply of high status AFEs causes the gap in director status between AFEs and sitting directors to be the largest for these firms.

We propose that there is an inadequate supply of higher status director candidates who are AFEs because of the typical backgrounds and career paths of directors. For example, the most desired and prestigious board member is an active CEO, and the next most desired is a retired CEO (Spencer Stuart 2010). CEOs most commonly have a background in operations (Spencer Stuart 2008). Further, only about 30 percent of CEOs have experience in finance (Spencer Stuart 2008), and not all CEOs with experience in finance would have dealt directly with accounting issues. We expect that the career paths of chief operations officers (COOs) and presidents—the next most elite and desired types of directors—are similar to those of CEOs. Overall, the vast majority of higher status directors will not have experience-based knowledge of GAAP and, therefore, many higher status firms will be forced to consider the typical AFE, a retired audit partner or CFO, when thinking about appointing an AFE. Because we expect higher status firms to have a large proportion of their boards comprised of higher status directors, we expect the difference in status between AFEs and sitting directors to be greater for these firms.

**H3:** The difference in status of appointed AFEs and sitting directors is larger for higher status firms than it is for lower status firms.

### Firm Status and AFE Appointments

Given the larger expected gap in director status between AFEs and sitting directors for higher status firms, we predict that higher status firms will be less likely than lower status firms to appoint an AFE. As members of the nominating committee or as important sources of information regarding potential candidates, sitting directors have a significant impact on the appointment of a new director.<sup>10</sup>

<sup>10</sup> During the early part of our sample period, prior to changes in listing requirements that required firms to have nominating committees comprised completely of independent directors, CEOs often were involved in the selection of new directors (Carcello et al. 2011). Because Carcello et al. (2011) find that the benefits of AFEs with regard to preventing restatements are negated when the CEO is involved in their selection, we performed an analysis in which we control for the CEO's involvement in the nominating process. This analysis includes an indicator variable that equals 1 when the CEO served on the nominating committee or the firm did not have a nominating committee, and 0 otherwise. Untabulated results remain qualitatively similar, and show that the CEO's involvement in the nominating process is not associated with AFE appointments.



Thus, concerns that sitting directors have about potential director candidates likely have a major effect on the candidates who are considered. We expect sitting directors to have at least two specific status-related concerns about potential AFE candidates. First, because most directors and all AFEs are outsiders, their status can “leak” to firms that appoint them, as can the status of exchange partners (Shropshire 2010). Davis and Robbins (2005) provide evidence that director status “leaks” to firms in the sense that the reputation ratings of firms increase when they appoint directors whose status exceeds the firm’s status. If director status “leaks” to firms, we expect directors of higher status firms to be more concerned than those of lower status firms that the appointment of an AFE would reduce their firm’s status. Second, we expect sitting directors to be concerned about the personal ramifications of the status of possible AFE candidates. Specifically, we expect sitting directors of higher status firms to prefer having other higher status directors on the board because they provide better networking opportunities and because there is less uncertainty about interactions with these individuals in the boardroom. Given that sitting directors of higher status firms can use the status of their firms to appoint new directors whose status is commensurate with their own, we expect them to do so. For the preceding reasons, we expect higher status firms to be less likely to appoint AFEs, as follows:

**H4:** The probability that a firm will appoint an AFE to its audit committee in a given year is negatively related to the status of that firm.

#### IV. SAMPLE SELECTION AND VARIABLE DEFINITION

##### Sample Selection

The sample consists of 875 firms and 3,590 firm-year observations that are included in the S&P 1500 index from 1999 through 2008.<sup>11</sup> To be included in our sample, a firm has to satisfy the following criteria. First, a firm’s board members must have biographic information available in the BoardEx database. The data provided by BoardEx, a professional business network, are new in the literature and have been used, for example, by Erkens (2011). The BoardEx database contains biographic information on more than 400,000 executives and board members, as well as data on board composition and committee appointments of public and private firms from all major countries around the world. Second, because we are interested in initial appointments of AFEs to audit committees, we exclude all firms that previously appointed one or more of these experts to their audit committee.<sup>12</sup> In other words, firms are removed from the sample once they have an AFE on their audit committee. We classify directors as being AFEs if their biographic information in the BoardEx database includes terms reflecting accounting or auditing experience, including auditor, CFO, and certified public accountant. See Panel A of Table 1 for information about the backgrounds of the AFEs that our sample firms appointed.<sup>13</sup> Third, firms must have data on committee appointments and board composition available from either the RiskMetrics or BoardEx

<sup>11</sup> We use the constituents of the S&P 1500 index at the end of each calendar year.

<sup>12</sup> In cases in which an AFE joins a board within six months before the end of the fiscal year, and subsequently is appointed to the audit committee in the following fiscal year (19 director-year or 17 firm-year observations), we code firms as having appointed an AFE to the audit committee in the fiscal year that the AFE joined the board (i.e., the fiscal year before the AFE was appointed to the audit committee). In an untabulated analysis, we find that our results are qualitatively similar when we do not make this adjustment. Moreover, we find that our results are qualitatively similar when we drop firms or firm-year observations in which an AFE who served on the board in the prior fiscal year is then appointed to the audit committee.

<sup>13</sup> For the sake of consistency with subsequent analyses in which we contrast the director status of newly appointed AFEs with other board members, we exclude AFEs who served on the board for more than six months in the prior fiscal year from this panel and other tables where we specifically describe the characteristics of AFEs.

TABLE 1

## Firm Status and Accounting Financial Experts' Qualifications and Director Status

## Panel A: Qualifications of Accounting Financial Experts

	<u>n</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>Q1</u>	<u>Median</u>	<u>Q3</u>
Current chief financial officer	573	0.255	0.436	0.000	0.000	1.000
Past chief financial officer	573	0.426	0.495	0.000	0.000	1.000
Past audit partner	573	0.237	0.426	0.000	0.000	0.000
Current or past controller	573	0.195	0.397	0.000	0.000	0.000
Certified public accountant	573	0.545	0.498	0.000	1.000	1.000

## Panel B: Descriptive Statistics of Firm Status

	<u>n</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>Q1</u>	<u>Median</u>	<u>Q3</u>
<i>Market value of equity</i> (billions)	3,590	7.879	28.946	0.582	1.399	4.783
<i>Number of interlocked firms</i>	3,590	19.613	13.008	10.000	17.000	27.000
<i>Fortune's most-admired company rating</i>	3,590	1.717	2.846	0.000	0.000	4.860
<i>Firm status</i>	3,590	-0.015	1.064	-0.716	-0.391	0.452

## Panel C: Director Status of Accounting Financial Experts

	<u>n</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>Q1</u>	<u>Median</u>	<u>Q3</u>
<i>Number of board seats</i>	573	1.127	1.322	0.000	1.000	2.000
<i>Trusteeships</i>	573	0.733	1.274	0.000	0.000	1.000
<i>Social clubs</i>	573	0.168	0.626	0.000	0.000	0.000
<i>Elite education</i>	573	0.113	0.396	0.000	0.000	0.000
<i>Director status</i>	573	-0.915	1.935	-2.507	-1.446	-0.290

This table presents descriptive statistics that are based on a sample of 875 S&P 1500 firms from 1999–2008 that do not have an accounting financial expert on their audit committee at the end of the fiscal year (3,590 firm-year observations). Panel A provides descriptive statistics on qualifications of the accounting financial experts that these firms appointed in the subsequent year (42 of these experts were appointed to multiple audit committees). This panel excludes audit committee appointees who served on the board for more than six months in the prior fiscal year. Panel B provides descriptive statistics on our firm status measure and its components. Panel C provides descriptive statistics on the status of the accounting financial experts that our sample firms appointed. See Appendix A for variable definitions.

databases. We use both databases because data on board committees are not available from BoardEx for the majority of firms in 1999 and for some firms in later years. To ensure that we draw valid inferences, we drop firm-year observations that require RiskMetrics data when we cannot match all board members to the BoardEx database. We matched directors using information on their name, age, gender, and the dates when they served on a firm's board. Finally, we require firms to have non-missing data for the control variables used for the test of H4.

## Explanatory Variables

In this section, we first describe our proxies for firm status and director status, and then the control variables used to test H4.

### **Firm Status**

Given that there is no generally accepted empirical measure of firm status, we construct an aggregate firm status measure that consists of three common proxies for a firm's status. First, we include a firm's market capitalization (*Market value of equity*) because larger firms are better connected to other firms through partnerships such as strategic alliances and supply relationships (e.g., Fombrun and Shanley 1990; Greve 2005; Fahlenbrach et al. 2010).<sup>14</sup> Second, we include the number of firms to which a focal firm is connected through common board members (*Number of interlocked firms*); these types of connections are a key source of status (e.g., Greve 2005). Finally, we include a firm's overall score from *Fortune's* annual listing of the "Most Admired Companies" (*Fortune's most-admired company rating*), which ranks companies within industries according to various attributes, including quality of management and social responsibility. Consistent with other studies, we use these rankings to capture connections not captured by our other measures (Fombrun and Shanley 1990; Sullivan et al. 2007). Because only the most highly ranked firms appear in the survey, we set the score of this measure to 0 for firm-year observations that do not appear in the survey.

We construct our firm status measure (*Firm status*) using a principal components factor analysis that extracts the common variation among the three measures. Because the measures do not have the same scale, we first standardize them to have a mean of 0 and standard deviation of 1 using data on all firms that were included in the S&P 1500 index from 1999–2008. The factor analysis identified only one factor with an eigenvalue greater than 1 (1.74). Subsequently, we use the standardized scoring coefficients (all positive) for this factor to compute our measure of firm status (*Firm status*).

Panel B of Table 1 provides descriptive statistics on our firm status measure and its unstandardized components. The panel shows that there is significant variation in our firm status measure despite all of our sample firms being part of the S&P 1500 index and, therefore, relatively prestigious.

### **Director Status**

Following Belliveau et al. (1996), we measure director status using an index that is comprised of the following: (1) number of public boards a director serves on (*Number of board seats*), (2) number of trusteeships (*Trusteeships*), (3) number of social club memberships (*Social clubs*), and (4) the prestige of the undergraduate institution a director attended (*Elite education*). *Elite education* equals 2 when a director has an undergraduate degree from Harvard University, Princeton University, or Yale University, equals 1 when a director has an undergraduate degree from Columbia University, Cornell University, Dartmouth College, Johns Hopkins University, Massachusetts Institute of Technology, University of Pennsylvania, Stanford University, or Williams College, and equals 0 otherwise. We standardize the four measures to have a mean of 0 and standard deviation of 1 using data on all non-executive directors who served on boards of S&P 1500 index firms from 1999–2008. Finally, we use the sum of the four standardized measures as our measure of a director's status (*Director status*).

Panel C of Table 1 provides descriptive statistics on the director status of AFEs who were appointed to the audit committees of our sample firms. The low means for *Director status* and its unstandardized components show that the vast majority of AFEs rank low within this set of individuals.

<sup>14</sup> Appendix A provides details concerning data sources and computation of all variables.

### Control Variables

We include various control variables in our test of H4 to ensure that our results are not driven by higher status firms: (1) benefiting less from appointing AFEs to their audit committees, (2) requiring directors with types of expertise that AFEs lack (e.g., industry expertise), and (3) being more resistant to making changes to the board.

We expect the benefit of appointing an AFE to the audit committee to be higher when a firm's accounting is complex, firms have had past accounting difficulties such as restatements, firms' earnings quality is worse, firms have a higher probability of being sued for financial misrepresentations, and firms have weak corporate governance practices (Carcello et al. 2009). We include a logarithmic transformation of a firm's annual financial statement audit fee (*Log(audit fee)*) to control for accounting complexity (Johnson and Lys 1990).<sup>15</sup> To control for past accounting difficulties, we include an indicator that captures whether, during the preceding year, an SEC investigation or fraud caused a firm to restate its financials or the firm was sued for financial statement fraud in a class action lawsuit (*Past accounting difficulties*). We include the inverse percentile rank of absolute abnormal accruals (*Earnings quality*) to control for earnings quality (Carcello et al. 2009). We also include a measure of the probability that a firm will be sued for financial misrepresentation (*Litigation risk*) to control for a firm's legal environment (Rogers and Stocken 2005), and an indicator that captures whether the overall quality of a firm's corporate governance practices is above the median of the S&P 1500 (*Corporate governance*) to control for governance quality (DeFond et al. 2005).

In addition, we control for three sources that may provide information about the benefits of appointing an AFE to the audit committee (Reppenhagen 2010; Brown 2011). First, we include the number of non-executive directors who serve on boards of S&P 1500 firms that have AFEs on the audit committee (*Number of interlocks*) to control for the information that these directors may provide. Second, we include the percentage of S&P 1500 firms within a 50 mile radius of a firm's headquarters that have AFEs on the audit committee (*% Firms with AFE within a 50 mile radius*) to control for information that directors receive from persons employed at corporations in close proximity to the board members' firm. Third, we include the percentage of firms that a firm's auditor audits that have AFEs on their audit committees (*% Firms with AFE auditor*) to control for information provided by auditors.

Because higher status firms may require their directors to have particular types of expertise that AFEs may lack, we also control for firm characteristics that we expect to be associated with the demand for these types of expertise. We include an indicator that captures whether a firm has foreign sales (*Foreign sales*) because firms may vary with respect to the importance of having board members with expertise in foreign markets (Carpenter et al. 2003). We include a measure of how diversified a firm's sales are across industries (*Industrial diversification*) and a firm's market-to-book ratio (*Market-to-book*) to control for a firm's need for directors who have industry-specific expertise (Coles et al. 2008). We include leverage (*Leverage*) because firms with higher leverage depend on external resources to a greater extent and therefore may have greater advising requirements with respect to debt financing (Güner et al. 2008). We control for the demand for expertise in core operational areas (marketing, operations, and R&D) by including measures of advertising intensity (*Advertising intensity*), capital intensity (*Capital intensity*), and R&D intensity (*R&D intensity*) (Michel and Hambrick 1992). Further, we include industry indicators that are based on the Fama-French 48-industry group classification to control for industry effects, such as the demand for industry-specific expertise.<sup>16</sup>

<sup>15</sup> We discussed this issue with two senior managers at a Big 4 firm; they supported the use of this proxy.

<sup>16</sup> See Kenneth French's website [http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data\\_library.html](http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html) for a mapping between four-digit SIC codes and the Fama-French 48-industry group classification.

Finally, prior research suggests that better-performing firms and older firms are more resistant to changing existing practices (Boone et al. 2004). Therefore, we include a measure of a firm's performance relative to its peers (*Industry adjusted 5-year return*) and a logarithmic transformation of firm age ( $\text{Log}(\text{firm age})$ ) to ensure that our results are not driven by higher status firms being more resistant to changing corporate practices, in particular board practices.

Table 2 presents descriptive statistics for the measures used for testing H4.<sup>17</sup> The panel shows that approximately 18 percent of the firms in our sample appoint an AFE to the audit committee in a given year. Moreover, the panel shows that most firms have at least one director in common with firms that have AFEs on their audit committees (*Number of interlocks*). Also, a significant fraction of firms in the same geographic area (*% Firms with AFE within a 50 mile radius*) and firms a firm's auditor audits have AFEs (*% Firms with AFE auditor*) on their audit committees. Thus, directors from interlocked firms, other firms in the same geographic area, and a firm's auditor may be important sources of information and influence for appointing an AFE to the audit committee.<sup>18,19</sup> Panel B of Table 2 provides a breakdown of our sample firms by year and indicates, for each year, the number and percentage of firms in our sample that appointed an AFE in the subsequent year. The panel shows a spike in AFE appointments in 2003, which is the year in which the SEC first required firms to disclose the presence of financial experts, whether AFEs or supervisory financial experts, on the audit committee.

## V. HYPOTHESIS TESTS

### Hypotheses 1, 2, and 3

H1 predicts that the average status of appointed AFEs is less than the average status of sitting directors. The low mean for the *Director status* for AFEs, presented in Panel C of Table 1, is consistent with H1. However, because newly appointed board members who are assigned to the audit committee generally may have lower director status than other board members, we compare the *Director status* scores of newly appointed AFEs to those of other newly appointed board members who are assigned to the audit committee.<sup>20,21</sup> The results of this analysis are presented in Panel A of Table 3. Consistent with H1, the mean and median *Director status* are significantly lower for AFEs than for other newly appointed board members who are assigned to the audit committee ( $p < 0.01$ ). To ensure that our results are not driven by firms with lower status board members being more likely to appoint AFEs, we repeat the analysis in Panel A after subtracting the mean status score for sitting directors. This analysis effectively examines whether the gap in director status between audit committee appointees and sitting directors is larger for AFE appointees than for other audit committee appointees. The results of this analysis are presented in Panel B of Table 3. Consistent with the

<sup>17</sup> Only 39.7 percent of firms have above-median governance scores because the median governance score represents 32.24 percent of the sample. We find similar results when we do not dichotomize the governance index or use the median of our final sample instead of the S&P 1500 to dichotomize our governance measure. Because SOX may have encouraged firms to replace non-independent audit committee members with AFEs, we also examined whether our results are robust to dropping firm-year observations that do not have fully independent audit committees (23 firm-year observations). We find that our results remain qualitatively similar.

<sup>18</sup> We computed variance inflation factors for the independent measures in our regression and find that the largest variance inflation factor is below 3, which is well below the standard critical value of 10 (Larcker 2003). Thus, it is unlikely that our results are driven by multicollinearity.

<sup>19</sup> All dollar-denominated variables are CPI-adjusted to December 2008 dollars.

<sup>20</sup> The results tabulated in Table 3 indicate that members of the audit committee, on average, have lower status than other directors.

<sup>21</sup> We find similar results when we compare AFEs to non-AFE audit committee members who are *designated* by our sample firms as being financial experts in the post-SOX period.

**TABLE 2**  
**Descriptive Statistics of Measures Used for Testing H4**

**Panel A: Descriptive Statistics for Main Measures**

	<u>n</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>Q1</u>	<u>Median</u>	<u>Q3</u>
<i>Accounting financial expert</i>	3,590	0.179	0.384	0.000	0.000	0.000
<i>Firm status</i>	3,590	-0.015	1.064	-0.716	-0.391	0.452
<i>Audit fee (millions)</i>	3,590	1.542	2.781	0.310	0.646	1.586
<i>Log(audit fee)</i>	3,590	13.477	1.178	12.644	13.379	14.277
<i>Past accounting difficulties</i>	3,590	0.028	0.164	0.000	0.000	0.000
<i>Earnings quality</i>	3,590	0.510	0.287	0.264	0.516	0.758
<i>Litigation risk</i>	3,590	0.013	0.021	0.004	0.007	0.013
<i>Corporate governance</i>	3,590	0.397	0.489	0.000	0.000	1.000
<i>Number of interlocks</i>	3,590	1.712	1.883	0.000	1.000	3.000
<i>% Firms with AFE within a 50 mile radius</i>	3,590	0.534	0.227	0.423	0.511	0.702
<i>% Firms with AFE auditor</i>	3,590	0.467	0.236	0.333	0.500	0.667
<i>Foreign sales</i>	3,590	0.552	0.497	0.000	1.000	1.000
<i>Industrial diversification</i>	3,590	0.888	0.196	0.833	1.000	1.000
<i>Market-to-book</i>	3,590	3.169	8.290	1.520	2.246	3.614
<i>Leverage</i>	3,590	0.220	0.178	0.057	0.211	0.339
<i>Advertising intensity</i>	3,590	0.010	0.027	0.000	0.000	0.008
<i>Capital intensity</i>	3,590	0.484	0.385	0.175	0.405	0.708
<i>R&amp;D intensity</i>	3,590	0.043	0.164	0.000	0.000	0.028
<i>Industry adjusted 5-year return</i>	3,590	1.020	4.909	-0.379	0.206	1.126
<i>Firm age</i>	3,590	25.866	16.092	11.000	22.000	40.000
<i>Log(firm age)</i>	3,590	3.013	0.743	2.398	3.091	3.689

**Panel B: Breakdown of Firm-Year Observations and Accounting Financial Expert Appointments by Year**

	<u>Year</u>									
	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	
Number of observations	551	611	617	545	403	302	223	183	155	
Number of AFE appointments	53	68	94	151	108	70	39	37	24	
Percent firms appointing AFEs	0.096	0.111	0.152	0.277	0.268	0.232	0.175	0.202	0.155	

This table's descriptive statistics are based on a sample of 875 S&P 1500 firms from 1999–2008 that do not have an accounting financial expert on their audit committee at the end of the fiscal year (3,590 firm-year observations). *Accounting financial expert* is equal to 1 when a firm appoints an accounting financial expert to the audit committee in the subsequent year, and 0 otherwise. Panel A provides descriptive statistics on the measures that are used for estimating the logit model presented in Table 6. Panel B provides a breakdown of our sample firms by year and indicates for each year the number and percentage of firms in our sample that appointed an accounting financial expert in the subsequent year. See Appendix A for all remaining variable definitions.

previous analysis, the panel shows that the mean and median *Director status*, adjusted for the average status of sitting directors, are significantly lower for AFEs than for other audit committee appointees ( $p < 0.01$ ). Thus, overall, the results presented in Table 3 are consistent with AFEs having lower director status than other audit committee appointees and other board members.

H2 predicts that higher status firms appoint higher status directors to their boards. To examine this hypothesis, we first correlate firm status and director status. As shown in Panel A of Table 4,

**TABLE 3**  
**Director Status Gap**

**Panel A: Director Status Gap**

Status Measure	Accounting Financial Experts (n = 573)			Other (n = 906)			Difference	
	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.	Mean	Median
<i>Number of board seats</i>	1.127	1.000	1.322	1.435	1.000	1.921	-0.307***	0.000***
<i>Trusteeships</i>	0.733	0.000	1.274	1.131	0.000	2.411	-0.398***	0.000***
<i>Social clubs</i>	0.168	0.000	0.626	0.288	0.000	0.941	-0.121***	0.000**
<i>Elite education</i>	0.113	0.000	0.396	0.171	0.000	0.500	-0.058**	0.000**
<i>Director status</i>	-0.915	-1.446	1.935	-0.245	-0.992	2.869	-0.670***	-0.454***

**Panel B: Status Gap after Adjusting for the Average Status of Sitting Directors**

Status Measure	Accounting Financial Experts (n = 573)			Other (n = 906)			Difference	
	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.	Mean	Median
<i>Number of board seats</i>	-0.999	-1.167	1.367	-0.849	-1.031	1.894	-0.150	-0.135
<i>Trusteeships</i>	-0.323	-0.333	1.371	-0.036	-0.333	2.353	-0.287***	0.000
<i>Social clubs</i>	-0.073	0.000	0.677	0.022	0.000	0.966	-0.095**	0.000
<i>Elite education</i>	-0.112	-0.143	0.444	-0.059	-0.125	0.545	-0.053**	-0.018
<i>Director status</i>	-1.276	-1.490	2.042	-0.828	-1.250	2.885	-0.448***	-0.240***

\*\* , \*\*\* Indicate two-tailed statistical significance at the 5 percent and 1 percent levels, respectively.

Two-sample t-tests are used to test the differences in means, and Wilcoxon two-sample tests are used to test differences in medians.

This table presents the results of analyses that examine the gap in director status between accounting financial experts and other newly appointed board members who are assigned to the audit committee. Panel A presents the results of using unadjusted status measures. Panel B uses status measures adjusted for the average status of sitting non-executive directors to ensure that our results are not driven by firms with lower status board members appointing accounting financial experts.

See Appendix A for variable definitions.

higher status firms tend to appoint individuals to their board who have higher scores for *Director status*. Moreover, Panel B of Table 4 shows that this also is the case for AFEs. AFEs who are appointed to boards of firms with *Firm status* scores in the top quartile of the S&P 1500 index for the respective year have higher mean and median director status than those who are appointed to lower status firms.<sup>22</sup> Clearly, higher status firms have a preference for higher status board members and seek this quality in the AFEs they consider for their boards.

Our third hypothesis predicts that the gap in director status between AFEs and sitting directors is larger for higher status firms. We test this hypothesis by classifying firms with *Firm status* scores in the top quartile of the S&P 1500 for the respective year as being higher status firms and the

<sup>22</sup> Our results are similar when we define higher status firms as firms having a *Firm status* score above the median of the S&P 1500 in this and all other analyses in which we make a distinction between higher status firms and lower status firms.

TABLE 4

## Firm Status and the Director Status of Accounting Financial Experts

## Panel A: Correlation between Firm Status and Status of S&amp;P 1500 Directors

	<u>Firm status</u>	<u>Number of board seats</u>	<u>Trusteeships</u>	<u>Elite education</u>	<u>Social clubs</u>
<i>Number of board seats</i>	0.270				
<i>Trusteeships</i>	0.222	0.315			
<i>Social clubs</i>	0.132	0.119	0.186		
<i>Elite education</i>	0.078	0.059	0.116	0.077	
<i>Director status</i>	0.297	0.640	0.680	0.581	0.494

## Panel B: Adopters—Status of Accounting Financial Experts

Status Measure	Top Quartile <i>Firm status</i>			Quartile 1–3 <i>Firm status</i>			Difference	
	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.	Mean	Median
<i>Number of board seats</i>	1.341	1.000	1.293	1.060	1.000	1.325	0.281**	0.000***
<i>Trusteeships</i>	1.094	1.000	1.403	0.618	0.000	1.209	0.476***	1.000***
<i>Social clubs</i>	0.225	0.000	0.912	0.149	0.000	0.502	0.075	0.000
<i>Elite education</i>	0.174	0.000	0.482	0.094	0.000	0.363	0.080**	0.000**
<i>Director status</i>	−0.369	−1.040	2.222	−1.088	−1.768	1.804	0.719***	0.728***

\*\*, \*\*\* Indicate two-tailed statistical significance at the 5 percent and 1 percent levels, respectively.

All correlation coefficients are significant at  $p < 0.01$  (two-tailed). Two-sample t-tests are used to test the differences in means, and Wilcoxon two-sample tests are used to test differences in medians.

This table presents results of analyses that examine the relation between firm status and director status. Panel A provides correlation coefficients between firm status and measures of director status for non-executive directors of S&P 1500 firms from 1999–2008. Panel B examines whether the director status of accounting financial experts is higher for experts who are appointed to higher status firms ( $n = 138$ ) than for those appointed to lower status firms ( $n = 435$ ). Firms are classified as being higher status firms when their score for *Firm status* is in the top quartile of the S&P 1500 index for the respective year. See Appendix A for variable definitions.

remainder as lower status firms. Subsequently, we examine whether the gap in director status is larger for AFEs who are appointed to higher status firms. The results in Table 5 show that the gap in director status is significantly larger for AFEs appointed to higher status firms than for those appointed to lower status firms ( $p < 0.01$ ). Thus, even though higher status firms tend to appoint higher status AFEs, the gap in director status between these experts and other board members is the largest for these firms. These findings are consistent with H3 and our proposition that high status firms' true concerns relate to an insufficient supply of high status AFEs.

#### Hypothesis 4

We examine H4 by estimating a logit model in which we regress an indicator that captures whether a firm appoints an AFE in the subsequent fiscal year on *Firm status* and the control variables discussed above.<sup>23</sup> To ensure that outliers do not drive our results, we estimate our model after dropping the top 1 percent of absolute standardized residuals. In addition, to control for

<sup>23</sup> Our approach of removing firms from the sample once they appoint an AFE to the audit committee is referred to as a discrete time model specification. The discrete time model is directly analogous to the Cox proportional hazard model but is preferable to that model because it can handle tied events and makes no assumptions about the exact timing of an event (Yamaguchi 1991).



TABLE 5

## Status Gap of Accounting Financial Experts at Higher Status versus Lower Status Firms

Status Measure	Top Quartile Firm status			Quartile 1–3 Firm status			Difference	
	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.	Mean	Median
<i>Number of board seats</i>	-1.384	-1.536	1.387	-0.877	-1.125	1.339	-0.507***	-0.411***
<i>Trusteeships</i>	-0.599	-0.900	1.662	-0.235	-0.333	1.255	-0.363***	-0.567***
<i>Social clubs</i>	-0.191	-0.182	0.940	-0.036	0.000	0.564	-0.155**	-0.182***
<i>Elite education</i>	-0.108	-0.200	0.512	-0.114	-0.111	0.421	0.006	-0.089*
<i>Director status</i>	-1.869	-2.165	2.210	-1.088	-1.302	1.952	-0.781***	-0.863***

\*, \*\*, \*\*\* Indicate two-tailed statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively. Two-sample t-tests are used to test the differences in means, and Wilcoxon two-sample tests are used to test differences in medians.

This table presents the results of an analysis that examines whether the gap in director status between accounting financial experts and sitting directors is larger for higher status firms ( $n = 138$ ) than for lower status firms ( $n = 435$ ). Firms are classified as being higher status firms when their score for *Firm status* is in the top quartile of the S&P 1500 index for the respective year.

See Appendix A for variable definitions.

residual dependence in our pooled time-series cross-sectional regression, we include year indicators, which effectively allows the unconditional hazard rate to vary by year, and cluster standard errors at the firm level.<sup>24</sup>

Table 6 presents the results of this analysis. Consistent with H4, the results presented in column (1) of table 6 show that the coefficient on *Firm status* is negative and significant at  $p < 0.01$  (two-tailed). Moreover, average marginal effects presented in column (2) suggest that the hypothesized effect is not only statistically significant, but also economically significant. In particular, our results suggest that, compared to firms in the lowest quartile of *Firm status*, firms in the top quartile are approximately 4.6 percent less likely to appoint an AFE to the audit committee.<sup>25</sup> This represents more than a quarter of the 18 percent unconditional probability of appointing an AFE to the audit committee presented in Panel A of Table 2.

Table 6 also shows that many of our control variables are significantly associated with the probability of appointing an AFE to the audit committee. In particular, the table shows that firms are more likely to appoint AFEs to their audit committees when (1) firms benefit more from doing so (*Log(audit fee)*, *Past accounting difficulties*, *Earnings quality*, and *Corporate governance*), (2) firms are more exposed to information sources about the benefits of doing so (*Number of interlocks*, *% Firms with AFE within a 50 mile radius*, and *% Firms with AFE auditor*), (3) firms do not require

<sup>24</sup> Because we limit our analysis to S&P 1500 firms, our sample changes over time due to changes in the composition of the S&P 1500 index. Because inclusion in the S&P 1500 index is not based on a firm's decision to appoint an AFE to its audit committee, we do not expect our results to be biased due to firms exiting the sample as a result of being dropped from the S&P 1500 index. Moreover, Guo (1993) shows that estimates from conditional likelihood models are not biased by late entries as long as start times for these firms' risk of experiencing the event of interest are known. In our empirical setting, all firms are assumed to be at risk (of appointing an AFE) as of 1999 even when they are not included in the sample and all firms have the same year-specific unconditional hazard rate. Thus, we do not expect our results to be biased by firms that were added to the S&P 1500 index after 1999. Consistent with our expectation, we find that our results remain qualitatively similar when we limit our sample to firms that appeared in our sample in 1999 (results not tabulated).

<sup>25</sup> This percentage was computed by multiplying the coefficient on *Firm status* presented in Column (2) of Table 6 (-0.039) by the interquartile range of *Firm status* (0.452+0.716) presented in Panel B of Table 1.

**TABLE 6**  
**Firm Status and Accounting Financial Expert Audit Committee Appointments**

Explanatory Variable	Predicted Relation	(1) Coefficient [Z-statistic]	(2) Avg. Marginal Effect [Z-statistic]
Intercept		-6.186*** [-5.764]	
<i>Firm status</i>	-	-0.299*** [-3.798]	-0.039*** [-3.790]
<i>Log(audit fee)</i>	+	0.286*** [4.227]	0.037*** [4.238]
<i>Past accounting difficulties</i>	+	0.614** [2.258]	0.092** [1.981]
<i>Earnings quality</i>	-	-0.338* [-1.829]	-0.044* [-1.832]
<i>Litigation risk</i>	+	2.395 [1.191]	0.309 [1.192]
<i>Corporate governance</i>	-	-0.342*** [-3.255]	-0.043*** [-3.587]
<i>Number of interlocks</i>	+	0.094*** [2.716]	0.012*** [2.719]
<i>% Firms with AFE within a 50 mile radius</i>	+	0.583** [2.144]	0.075** [2.142]
<i>% Firms with AFE auditor</i>	+	0.952*** [3.194]	0.123*** [3.185]
<i>Foreign sales</i>	-	-0.024 [-0.175]	-0.003 [-0.176]
<i>Industrial diversification</i>	-	-0.016 [-0.053]	-0.002 [-0.053]
<i>Market-to-book</i>	-	-0.022*** [-2.829]	-0.003*** [-2.824]
<i>Leverage</i>	-	0.118 [0.316]	0.015 [0.316]
<i>Advertising intensity</i>	-	3.401 [1.438]	0.438 [1.436]
<i>Capital intensity</i>	-	0.025 [0.123]	0.003 [0.124]
<i>R&amp;D intensity</i>	-	0.285 [0.930]	0.037 [0.929]
<i>Industry adjusted 5-year return</i>	-	-0.072*** [-2.940]	-0.009*** [-2.938]
<i>Log(firm age)</i>	-	-0.220*** [-2.772]	-0.028*** [-2.778]
Industry indicators		Yes	Yes
Year indicators		Yes	Yes
Number of obs.		3,554	3,554
Pseudo-R <sup>2</sup>		0.099	0.099

(continued on next page)

TABLE 6 (continued)

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\*, \*\*, \*\*\* Indicate two-tailed statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively. This table presents the results of a logit regression that examines the influence of firm status on the appointment of accounting financial experts to audit committees. The model is estimated after dropping the top 1 percent of absolute standardized residuals. In addition, Z-statistics are computed using firm-level cluster robust standard errors, and marginal effects are computed using the average of discrete or partial changes over all observations (Bartus 2005). See Appendix A for variable definitions.

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expertise in areas that AFEs may lack (*Market-to-book*), and (4) firms are less resistant to change (*Industry adjusted 5-year return*, and *Log(firm age)*).

Taken together, our findings for H1–H4 are consistent with higher status firms being less likely to appoint AFEs to their audit committees due to concerns related to these individuals' status among S&P 1500 directors. Specifically, we suggest that the status-related concerns reflect sitting directors' anticipation that firm status may be damaged with AFEs' appointment and/or sitting directors' personal incentives related to the opportunity to secure other prestigious positions through connections with fellow directors. We examine these specific explanations below, after ruling out various alternative explanations for our findings for H1 and H4.

### Ruling Out Alternative Explanations

#### *H1: The Propensity to Appoint AFEs*

First, we ensure that our results regarding status differences between AFEs and other audit committee appointees are robust to controlling for a firm's propensity to appoint an AFE to its audit committee. The results of these analyses are presented in Table 7. Panel A presents an analysis in which we match AFEs to other audit committee appointees based on the appointing firm's propensity to appoint one or more AFEs to the audit committee. In particular, we derive propensity scores from the model presented in Table 6 and require matches to have a maximum caliper difference of 0.01. The results presented in Table 7, Panel A support the results presented in Panel A of Table 3, i.e., AFEs' director status is lower than that of other audit committee appointees. Panel B of Table 7 shows that we find similar results when we adjust audit committee appointees' status for the average status of sitting directors. Because a comparison of the covariates of matched firms showed that not all covariates were balanced, we also performed multivariate regressions in which we regressed the status characteristics of matched audit committee appointees on an indicator that captures whether the appointee was an AFE and on the other variables used in the model presented in Table 6. The coefficients, t-statistics, and p-values of coefficients on the AFE indicator are presented in Table 7, Panel C. Consistent with the results discussed above, the coefficients are all negative and significant at  $p < 0.05$ . Thus, our results for H1 are robust to controlling for factors that influence firms' decisions to appoint AFEs to their audit committees.

#### *H1: Personal Social Status of AFEs*

Prior research has found that firms tend to appoint directors who are similar in personal social status, as reflected by demographics, to sitting directors (e.g., Westphal and Zajac 1995). Thus, it is important to ensure that our findings are not driven by differences in demographics between AFEs and other directors. To examine this alternative explanation, we repeat the analyses presented in Table 7 using audit committee appointees' age, gender, and level of education (Fiske 2010). We find that AFEs do not differ from other audit committee appointees with respect to whether they are male or have a graduate degree (results not tabulated). We do find that AFEs are, on average, one

**TABLE 7**  
**Robustness Tests: The Propensity to Appoint AFEs**

**Panel A: Director Status Gap between Accounting Financial Experts and Other Audit Committee Appointees**

Status Measure	Accounting Financial Experts (n = 573)			Other (n = 573)			Difference	
	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.	Mean	Median
<i>Number of board seats</i>	1.127	1.000	1.322	1.375	1.000	1.575	-0.248***	0.000***
<i>Trusteeships</i>	0.733	0.000	1.274	1.136	0.000	2.792	-0.403***	0.000***
<i>Social clubs</i>	0.168	0.000	0.626	0.312	0.000	1.067	-0.145***	0.000**
<i>Elite education</i>	0.113	0.000	0.396	0.171	0.000	0.504	-0.058**	0.000*
<i>Director status</i>	-0.915	-1.446	1.935	-0.235	-1.029	3.063	-0.679***	-0.417***

**Panel B: Status Gap after Adjusting for the Average Status of Sitting Directors**

Status Measure	Accounting Financial Experts (n = 573)			Other (n = 573)			Difference	
	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.	Mean	Median
<i>Number of board seats</i>	-0.999	-1.167	1.367	-0.892	-1.100	1.612	-0.107	-0.067
<i>Trusteeships</i>	-0.323	-0.333	1.371	-0.040	-0.429	2.702	-0.283**	0.095
<i>Social clubs</i>	-0.073	0.000	0.677	0.025	-0.100	1.089	-0.098*	0.100
<i>Elite education</i>	-0.112	-0.143	0.444	-0.059	-0.143	0.547	-0.053*	0.000
<i>Director status</i>	-1.276	-1.490	2.042	-0.838	-1.281	3.071	-0.437***	-0.209**

**Panel C: Multivariate Regression Including the Determinants of Appointing Accounting Financial Experts**

	Unadjusted Status Measures (Panel A)				Adjusted Status Measures (Panel B)			
	Coeff.	t-stat.	p-value	Adj.-R <sup>2</sup>	Coeff.	t-stat.	p-value	Adj.-R <sup>2</sup>
<i>Number of board seats</i>	-0.174	-2.042	0.041	0.069	-0.123	-1.388	0.166	0.034
<i>Trusteeships</i>	-0.327	-2.391	0.017	0.035	-0.271	-1.880	0.061	0.013
<i>Social clubs</i>	-0.135	-2.376	0.018	0.013	-0.112	-1.897	0.058	0.007
<i>Elite education</i>	-0.060	-2.213	0.027	0.003	-0.055	-1.841	0.066	0.001
<i>Director status</i>	-0.589	-3.894	0.000	0.061	-0.481	-2.989	0.003	0.021

\*, \*\*, \*\*\* Indicate two-tailed statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively. Two-sample t-tests are used to test the differences in means, and Wilcoxon two-sample tests are used to test differences in medians. Multivariate regressions are estimated using firm-level cluster robust standard errors.

This table repeats the analyses presented in Table 3 after matching directors based on their firm's propensity to appoint accounting financial experts to the audit committee. The propensity scores are derived from the model presented in Table 6. Matching firms were allowed to have a maximum caliper difference of 0.01. Panel A compares the director status of accounting financial experts with the director status of other newly appointed board members who are assigned to the audit committee. Panel B repeats this analysis after adjusting the status measures for the average status of sitting non-executive directors. Panel C presents the results of multivariate regressions of each status measure on an indicator that captures whether the audit committee appointee is an accounting financial expert and the determinants of accounting financial experts on audit committees of the model presented in Table 6.

See Appendix A for variable definitions.

year younger than other audit committee appointees, but this effect vanishes once we adjust for the average age of sitting directors. Thus, it does not appear that AFEs' personal social status is driving our results.

#### ***H4: Measurement of Firm Status***

A concern regarding our main finding of a negative relation between firm status and the probability of appointing an AFE is that our *Firm status* measure is correlated with some firm characteristic that is not included in our model, but that has an important influence on a firm's decision to appoint an AFE. This may particularly be a concern for the firm size component of the measure as size has been shown to be associated with a large number of other factors. Thus, we perform several sensitivity tests to ensure that our results are not driven by the inclusion of firm size in the firm status measure. First, we examine the extent to which our results are driven by each component of the measure. Untabulated results show that the coefficient on each component is negative and marginally significant at  $p < 0.10$  (two-tailed) when we estimate the model in Table 6 after replacing the *Firm status* measure with the component. Thus, our results are not driven by any given component of our firm status measure. Second, we replace the market capitalization component with a measure of the firm's annual ranking by revenue in its Fama-French 48-industry group classification in the principal component factor analysis that we use to compute *Firm status*.<sup>26</sup> Then we estimate the model in Table 6 using this revised *Firm status* measure and including a logarithmic transformation of the firm's market capitalization to control for firm size. Untabulated results indicate that the coefficient on the revised *Firm status* measure is negative and significant at  $p < 0.05$ , consistent with our results not being driven by the inclusion of firm size in the firm status measure.

#### ***H4: Benefits, Demand for other Types of Expertise, and Resistance to Change***

Next, we perform several untabulated additional analyses to ensure that our results are not driven by higher status firms: (1) benefiting less from appointing AFEs to their audit committees, (2) requiring directors with different types of expertise, and (3) being more resistant to making changes to the board.

First, to ensure that our results are not driven by AFEs being less beneficial to higher status firms, we examine whether the three-day cumulative abnormal stock returns around the announcement of newly appointed AFEs are lower for higher status firms. In order to accomplish this, we follow DeFond et al. (2005) and use the Lexis/Nexis database to identify press release announcement dates for the appointment of financial experts in our sample. We were able to find dates for 505 of the 573 newly appointed AFEs in our sample. We then eliminate 22 announcements because of missing returns data and 244 because of confounding events (e.g., earnings announcements, appointment of multiple directors), leaving a sample of 239 AFE appointments. We compute cumulative abnormal returns by adjusting announcement returns for the corresponding size decile portfolio return from CRSP. Consistent with DeFond et al. (2005), we find that the average cumulative abnormal return is positive (0.7 percent) and significant at  $p < 0.05$ .<sup>27</sup> However, inconsistent with AFEs being less beneficial to higher status firms, we find that

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<sup>26</sup> We use the inverse of the rank measure to ensure that a larger value of this measure corresponds to a more prominent position within an industry. The factor analysis yields only one factor with an eigenvalue greater than 1 (1.82). Subsequently, we used the standardized scoring coefficients (all positive) for this factor to compute our revised measure of *Firm status*.

<sup>27</sup> We used the event-study methodology described in Brown and Warner (1985) to compute its significance. Following DeFond et al. (2005), we use an estimation period of 239 days (−244 through −6) and restrict the analysis to observations with at least 120 daily returns in the estimation period.

the coefficient on *Firm status* is insignificant when we regress cumulative abnormal stock returns on *Firm status* and the control variables that are included in the model in Table 6. Another indicator of differential benefits of AFEs to firms is whether firms filed a comment letter with the SEC related to AFEs. To investigate this possibility, we added an indicator variable to our regression to capture letter filing. Consistent with firms' complaints being overstated, we find that the coefficient on this indicator is insignificant.<sup>28</sup>

Second, with respect to firms' expertise requirements, it is only costly for firms to appoint AFEs to their boards when they have to replace a sitting director who has expertise in an area that the AFE lacks (e.g., R&D). Thus, to provide evidence that our results are not driven by higher status firms requiring their directors to have expertise that AFEs lack, we examined whether the size of a firm's board tends to increase after adding an AFE to the audit committee. We find that in approximately 54 percent of the cases, the size of a firm's board increased by at least one board seat after an AFE joined the audit committee. Moreover, we find that higher status and lower status firms are equally likely to increase the size of the board when they appoint AFEs to the audit committee. Thus, it is unlikely that our results are driven by higher status firms requiring directors with expertise that AFEs lack.

Finally, to provide additional evidence for our results not being driven by higher status firms being less likely to make changes to the board in general, we examine whether boards of higher status firms differ from those of lower status firms with respect to the proportion of non-executive directors that have tenures of less than one year. As in our previous analyses, we classify firms as being higher status firms when their score for *Firm status* is in the top quartile of the S&P 1500 for the respective year, and as lower status firms otherwise. We find that higher status firms do not differ from lower status firms with respect to the proportion of non-executive board members with tenures of less than one year. Thus, our results are inconsistent with higher status firms being more resistant to making changes to the board.

### Additional Analyses

In this section, we conduct three sets of additional analyses to shed further light on our main finding of a negative relation between firm status and the probability of appointing an AFE. First, we examine whether the status effect is reduced in the post-SOX period given greatly increased regulatory pressure to focus on the quality of financial reporting. Second, we examine whether an insufficient supply of high status AFEs was an unstated rationale for firms' complaints about the initially proposed SOX requirements and those firms' subsequent reluctance to appoint AFEs. Third, we examine whether sitting directors' concerns about firm status being damaged or, instead, their personal incentives appear to have played a larger role in the reluctance to appoint AFEs.

#### *Firm Status and Regulatory Pressure to Appoint AFEs*

Substantially increased regulatory pressure to improve financial reporting quality occurred as a result of SOX. Moreover, changes to U.S. listing requirements in late 2003 significantly reduced the influence of CEOs on director nominations (Carcello et al. 2011). If these regulatory changes were effective in causing higher status firms to be more concerned about financial reporting quality and less concerned about the status of AFEs, then the impact of firm status on AFE appointments would be reduced in the post-SOX (post-2003) period.

<sup>28</sup> Also consistent with there being no differences in benefits of having AFEs based on firm status, we find that the negative relation between the presence of AFEs on audit committees and the propensity to have restatements documented by prior literature (Abbott et al. 2004; Agrawal and Chadha 2005) holds in our sample, but does not vary with firm status (results not tabulated).

To investigate this, we make the following modifications to the model presented in Table 6. First, we replace the year indicators with an indicator that equals 1 for observations during 2003–2008, and 0 otherwise (*Post Sarbanes-Oxley Act*).<sup>29</sup> Second, we include the interaction of this indicator with *Firm status*. If regulatory changes in the post-SOX period caused firms to be more concerned about financial reporting quality and less concerned about the status of AFEs, then we expect the interactive effect to be positive. Untabulated analyses find that the interaction between *Post Sarbanes-Oxley Act* and *Firm status* is insignificant. However, because logit models are nonlinear, we also use the method described by [Ai and Norton \(2003\)](#) to examine the significance of the interactive effect between *Post Sarbanes-Oxley Act* and *Firm status*. We again find this effect is insignificant. Further, follow-up tests show that the effect of status is negative and significant at  $p < 0.05$  (two-tailed) during both time periods. Thus, regulatory changes during our sample period do not appear to have influenced the impact of firm status on AFE appointments.

### **Supply Shortage of Higher Status AFEs**

One stated rationale for firms' reluctance to appoint AFEs was a short supply of AFEs (e.g., [Mellon Financial 2002](#)), but an alternative explanation for their reluctance is a short supply of *high status AFEs*. To investigate this distinction, we first estimate the supply of all AFEs, and then estimate the supply of AFEs whose status is at least equal to the status of the average S&P 1500 director. In these analyses, we focus on AFEs who already serve not only on audit committees of public firms, but also on boards of S&P 1500 firms because these individuals obviously are willing and qualified to serve on audit committees of S&P 1500 firms. We focus on the supply of these individuals in the year 2002 because that is the year in which firms claimed that there was an insufficient supply. Using these restrictions, and the assumption that every AFE can serve on, at most, three public boards, we find in untabulated results that the supply of AFEs exceeded the potential demand by 36 percent. Next, to recognize that not all AFEs would have been willing to accept additional board seats due to time constraints, we exclude from our supply calculation all directors who served as CFOs during 2002; the supply of AFEs continues to exceed the potential demand by 25 percent. Finally, we examined whether our conclusion still holds after assuming that CFOs were not willing to accept additional board seats and that other types of AFEs were willing to accept, at most, one additional board seat. Although the excess demand of AFEs now largely vanishes (2 percent), our estimate of the total supply of AFEs still meets the potential demand.

To examine whether, instead, complaints reflected a shortage of *high status AFEs*, we further restrict the supply to those who have a *Status index* score that is equal to or larger than the average *Status index* score of non-executive directors serving on boards of S&P 1500 firms in the year 2002. We find that this restriction results in a significant supply shortage—of approximately 28 percent, consistent with our conjecture.<sup>30</sup>

### **Concerns about Damaging Firm Status versus Acting on Personal Incentives**

Finally, higher status firms' reluctance to appoint AFEs could reflect sitting directors' concerns about firm status being damaged and/or their personal incentives related to mingling with directors of lower status. We performed several preliminary analyses to examine these explanations (results not tabulated). Inconsistent with concerns about firm status driving our results, we find that firm status is not associated with whether the market reaction to AFE appointment announcements is

<sup>29</sup> We find similar results when we include the year indicators.

<sup>30</sup> Also consistent with these results and the increased pressure created by SOX to appoint AFEs causing the shortage of high status AFEs to be more acute, we find that the average and median director status of AFEs on audit committees declined post-SOX (results not tabulated).

negative, and that higher status firms do not experience a decline in their status scores after they appoint AFEs. However, consistent with concerns about mingling with directors of lower status driving our results, we find that firms' highest status outside directors were more likely to leave a board when an AFE, as opposed to a non-AFE, joined the audit committee. Overall, our findings provide preliminary evidence that sitting directors' personal incentives to appoint high status directors played a larger role than concerns about damaging firm status in the inverse relation between firm status and AFE appointments.

## VI. CONCLUSION

This study examines the influence of firm status on the demand for accounting financial experts on corporate audit committees during the period 1999–2008—a time period when firms were under significant regulatory pressure to appoint such individuals. Our results suggest that higher status firms were reluctant to appoint AFEs to their audit committees because typical AFEs are of lower director status than typical directors, and the gap between the status of AFEs and sitting directors was larger for higher status firms. The larger the gap, the higher were the status-related concerns for firms and their existing board members. Concerns about damaging firm status, as well as personal incentives to appoint high status directors who would offer better networking opportunities and more certain interactions in the boardroom, could potentially explain the negative effect of firm status on appointments of experts. Preliminary analyses indicate that directors' personal incentives related to appointing higher status directors appear to have played a larger role than concerns about damaging the firm's status.

We also document several other factors that have an effect on the probability of appointing an AFE to the audit committee. Firms that have directors who serve on other boards that have AFEs, have corporations nearby with AFEs, or that have an auditor with a significant fraction of clients that have AFEs are more likely to adopt this practice. Firms that have complex accounting or past accounting problems, as well as those that have weaker earnings quality or corporate governance practices, are more likely to appoint AFEs. Finally, firms that do not need board members who have extensive knowledge in areas that AFEs lack, have lower performance, and are younger are more likely to appoint AFEs.

Our primary contribution is finding that status-related concerns can prevent firms from appointing AFEs to their boards, a result with clear implications for regulators. Specifically, the SEC allowed many firms to avoid or delay appointing AFEs by changing its originally proposed definition of "financial expert" to include high status individuals without direct, experience-based knowledge of GAAP. In doing so, the SEC moved away from the rapid improvement of financial reporting that was intended by SOX ([U.S. Congress 2002](#)) and, thus, may have contributed to subsequent financial reporting problems. Our findings are consistent with the "regulated getting to the regulators" ([Roe 2005](#)), and perhaps doing so because of directors' concerns for their own welfare.

This study has several limitations that could be addressed by future research. First, we use proxies for firm and director status because of the inability to measure these constructs more directly, perhaps via a questionnaire. While we use multiple proxies, these proxies may capture factors in addition to status. Second, 39 percent of S&P 1500 firms had AFEs on their audit committees in 1999; as such, our findings are limited to the remaining S&P 1500 firms that faced significant regulatory pressure to add AFEs to their audit committees. It is possible that firm status has different effects on corporate governance practices when these practices occur voluntarily rather than due to regulatory pressure. Third, in order to focus on firms for which status should be particularly salient, we examine factors that affect the appointment of AFEs at large (S&P 1500) firms. Existing studies suggest that the appointment of AFEs to the boards of smaller firms may be



affected by different factors (e.g., Carcello et al. 2009). Finally, and most important, while we conduct analyses to explore why higher status firms, when faced with a larger gap in status between AFE board candidates and sitting directors, are less likely to appoint those experts, these analyses are preliminary. Further investigation of the extent to which directors' personal incentives drive not only this decision, but also other corporate governance decisions would be of interest.

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**APPENDIX A**  
**Variable Definitions**

<b>Variable</b>	<b>Definition</b>	<b>Source</b>
<i>Market value of equity</i>	Firm's market capitalization in billions.	Compustat
<i>Number of interlocked firms</i>	The number of firms a focal firm is tied to through shared board members.	BoardEx
<i>Fortune's most-admired company rating</i>	Overall score in <i>Fortune</i> magazine's annual survey of America's most-admired companies. Scores for firms that did not appear in the survey are equal to 0.	<i>Fortune</i> magazine
<i>Firm status</i>	Factor score derived from a principal-component factor analysis of standardized measures of <i>Market value of equity</i> , <i>Number of interlocked firms</i> , and <i>Fortune's most-admired company rating</i> . Measures were standardized using the mean and standard deviation of each measure for all firms in the S&P 1500 index.	Compustat, BoardEx, <i>Fortune</i> magazine
<i>Number of board seats</i>	The number of public boards a director serves on.	BoardEx
<i>Trusteeships</i>	The number of trusteeships.	BoardEx
<i>Social clubs</i>	The number of social club memberships.	BoardEx
<i>Elite education</i>	Equals 2 when a director has an undergraduate degree from Harvard University, Princeton University, or Yale University, equals 1 when a director has an undergraduate degree from Columbia University, Cornell University, Dartmouth College, Johns Hopkins University, Massachusetts Institute of Technology, University of Pennsylvania, Stanford University, or Williams College, and equals 0 otherwise.	BoardEx
<i>Director status</i>	The sum of normalized scores for <i>Number of board seats</i> , <i>Trusteeships</i> , <i>Social clubs</i> , and <i>Elite education</i> . Measures were normalized using the mean and standard deviation of these measures for all non-executive S&P 1500 directors (all measures are based on calendar year-end values).	BoardEx
<i>Audit fee</i>	Financial statement audit fees. Please note that we use data reported for the year 2000 for the year 1999.	Audit Analytics
<i>Log(audit fee)</i>	A logarithmic transformation of <i>Audit fee</i> .	Audit Analytics
<i>Past accounting difficulties</i>	Equals 1 when, during the fiscal year, an SEC investigation or fraud caused a firm to restate its financials or a firm was sued for financial statement fraud in a class action lawsuit, and 0 otherwise. We use data from the U.S. Government Accountability Office for the year 1999.	Audit Analytics
<i>Earnings quality</i>	Inverse percentile rank of absolute abnormal accruals from <a href="#">Carcello et al. (2009)</a> . The rank is computed by year and is based on the constituents of the S&P 1500 index at the end of each calendar year.	Compustat

*(continued on next page)*

## APPENDIX A (continued)

Variable	Definition	Source
<i>Litigation risk</i>	The probability of litigation from <a href="#">Rogers and Stocken (2005)</a> .	Compustat, CRSP
<i>Corporate governance</i>	Equals 1 when a firm's governance index score (computed every year) is above the median of the S&P 1500 for the respective year, and 0 otherwise. A firm's governance index score is equal to the sum of the following six dichotomized corporate governance measures: (1) <i>Board size</i> (equals 1 when the number of directors on a firm's board is less than the median, and 0 otherwise), (2) <i>Board independence</i> (equals 1 when the number of non-executive board members scaled by board size is greater than 60 percent, and 0 otherwise), (3) <i>Audit committee size</i> (equals 1 when the number of audit committee members scaled by board size is greater than the median, and 0 otherwise), (4) <i>Audit committee independence</i> (equals 1 when all audit committee members are non-executive directors, and 0 otherwise), (5) <i>Shareholders' rights</i> (equals 1 when the entrenchment index constructed by <a href="#">Bebchuk et al. (2009)</a> is below the median, and 0 otherwise), and (6) <i>Institutional ownership</i> (equals 1 when the fraction of outstanding shares owned by institutional investors is greater than the median, and 0 otherwise).	BoardEx, RiskMetrics, Thomson Financial
<i>Number of interlocks</i>	The number of non-executive directors a firm shares with other S&P 1500 firms that have at least one AFE on the audit committee.	BoardEx, RiskMetrics
<i>% Firms with AFE within a 50 mile radius</i>	The percentage of S&P 1500 firms within a 50-mile radius of a firm's headquarters that have at least one AFE on the audit committee.	BoardEx, Compustat, RiskMetrics
<i>% Firms with AFE auditor</i>	The percentage of firms that a firm's auditor audits that have at least one AFE on the audit committee.	Audit Analytics, BoardEx, RiskMetrics
<i>Foreign sales</i>	Equals 1 when a firm reports foreign sales, and 0 otherwise.	Compustat
<i>Industrial diversification</i>	Herfindahl-Hirschman index based on a firm's sales across industries.	Compustat
<i>Market-to-book</i>	Equals market value of equity divided by book value of equity.	Compustat
<i>Leverage</i>	The sum of long-term debt and the current portion of long-term debt scaled by total assets.	Compustat
<i>Advertising intensity</i>	Advertising expense scaled by sales.	Compustat
<i>Capital intensity</i>	Gross property, plant, and equipment scaled by total assets.	Compustat
<i>R&amp;D intensity</i>	Research and development expense scaled by sales.	Compustat

(continued on next page)

## APPENDIX A (continued)

Variable	Definition	Source
<i>Industry adjusted 5-year return</i>	A firm's five-year buy-and-hold return less the equal-weighted industry (Fama-French 48-industry group classification) compounded monthly return over the same period.	CRSP
<i>Firm age</i>	Firm age, which is based on the earliest date for which data in Compustat are available.	Compustat
<i>Log(firm age)</i>	Logarithmic transformation of <i>Firm age</i> .	Compustat