

Managerial Overconfidence and Audit Fees[#]

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Abstract

We investigate the association between managerial overconfidence and audit fees, as well as the effect of a strong audit committee on this relation. Overconfident managers tend to overestimate their ability and the future payouts of projects but underestimate the likelihood and impact of adverse events. Auditors may therefore charge a fee premium to compensate for the additional audit effort due to the increased audit risk. Conversely, overconfident managers may demand less audit services due to either hubris in their companies' financial reporting or a desire to reduce auditor scrutiny over aggressive accounting. A strong audit committee can alleviate the audit risks associated with managerial overconfidence or prevent overconfident managers from reducing audit services thus mitigating the relation between audit fees and managerial overconfidence. We find robust evidence of a negative relation between managerial overconfidence and audit fees for companies lacking a strong audit committee. However, in the presence of a strong audit committee the negative relation is mitigated. In additional analysis, we also find that companies with overconfident managers have a lower likelihood of using a city-industry specialist auditor.

Keywords: Overconfidence, Audit Fees, Specialist Auditor, Audit Committee

JEL Classifications: G32; M41

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1. Introduction

Auditing standards require auditors to consider management attitude when making audit risk assessments. A proper assessment of the “tone at the top” is important as executive attitudes can impact the audit risk of the company through shaping the moral, ethical, and social cultures of the organization (COSO 2013). Consistent with auditors pricing executive characteristics, a spate of recent research has found that audit fees are related to executive equity incentives that can induce changes in risk taking (Chen et al. 2013; Billings et al. 2014; Fargher et al. 2014; Kannan et al. 2014; Kim et al. 2014). Furthermore, experimental research has linked managerial narcissism to increases in the auditors’ assessed risk of client fraud attitude (Johnson et al. 2013). We extend this line of literature by examining the link between managerial overconfidence, a personality trait that affects risk taking, and audit fees.

Managerial overconfidence could impact the financial reporting risk assessment of the auditor as overconfident managers tend to overestimate the projected future cash flows of projects but underestimate the likelihood and impact of adverse events (Heaton 2002; Malmendier and Tate 2005). Prior research has shown that overconfident managers are likely to use less conservative accounting (Ahmed and Duellman 2013), misstate earnings given an earlier optimistic bias in earnings (Schrand and Zechman 2012), issue a financial restatement (Presley and Abbott 2013), engage in real earnings management (Hsieh et al. 2014), and maintain ineffective internal controls (Chen et al. 2014).

Despite the increased financial misstatement risk associated with managerial overconfidence, there is little evidence on whether auditors recognize characteristics indicative of managerial overconfidence and associate observed management overconfidence with increased audit risk. If auditors recognize managerial overconfidence, we expect auditors to

incorporate this risk factor in their audit planning and charge a fee premium to compensate for the additional audit efforts to reduce detection risk. We refer to this effect as the financial reporting risk effect of managerial overconfidence.

Conversely, overconfident managers may not value audit services as much as non-overconfident managers and seek to lower audit fees due to hubris over their companies' financial reporting process. In addition, they may seek to reduce audit services to abate the need to respond to corrective feedback regarding the financial reporting of the company or to allow more earnings management opportunities. This hubris effect of managerial overconfidence is consistent with previous studies showing that managerial overconfidence is associated with an optimistic bias in earnings (Schrand and Zechman 2012), less conservative accounting (Ahmed and Duellman 2013), greater real earnings management (Hsieh et al. 2014), and higher likelihood of earnings restatements (Presley and Abbott 2013). If the financial reporting risk effect dominates the hubris effect, we expect a positive relation between managerial overconfidence and audit fees. Conversely, we expect a negative relation between managerial overconfidence and audit fees if the hubris effect dominates the financial reporting risk effect.

Although the Sarbanes-Oxley Act (Section 301) requires the audit committee to appoint, compensate, and oversee the auditor and the audit process, recent research suggests that management still wield significant influence over the audit process. For example, Cohen et al. (2010), based on interviews with 30 external auditors, conclude that management continues to be a driving force in the appointment and termination of auditors. Executives also have significant influence over the fees paid to auditors as Beck and Mauldin (2014) find larger audit fee reductions for influential CFOs during times of economic hardship.

Despite the ability of management to influence the audit process, previous research has demonstrated numerous benefits of a strong audit committee. For example, audit committee strength has been linked to higher audit quality (Abbott and Parker 2000), lower levels of abnormal accruals (Klein 2002), and better disclosure quality (Karamanou and Vafeas 2005). Thus, through the use of more frequent and stringent internal audits, a strong audit committee may effectively reduce auditors' assessed client risk, which could mitigate a positive relation between audit fees and managerial overconfidence.

Alternatively, a strong audit committee may prevent management from interfering with the audit process or purchase more audit services to offset the risks associated with managerial overconfidence. Consistent with a strong audit committee reducing influence of management, Dhaliwal et al. (2014) find that companies with a strong audit committee are less likely to hire an auditor affiliated with management. Therefore, a strong audit committee could mitigate a negative relation between managerial overconfidence and audit fees caused by the hubris effect.

To examine the relation between managerial overconfidence and audit fees, we use a sample of 7,661 company-years with necessary data between 2000 and 2010. We use three measures of managerial overconfidence with one measure based on executives' option exercising behavior and two measures based on companies' investment decisions. Across all three measures, we find a significantly negative relation between managerial overconfidence and audit fees in the presence of a weak audit committee, consistent with the hubris effect of managerial overconfidence dominating the financial reporting risk effect. We also find evidence consistent with a strong audit committee mitigating the negative association between managerial overconfidence and audit fees.

Given the influence of managerial overconfidence on audit fees, we examine whether managerial overconfidence plays a role in the selection of the auditor. Previous research finds that audit fees are one of the most important determinants affecting auditor selection decisions and that specialist auditors charge significantly higher audit fees compared to non-specialist auditors (Eichenseher and Shields 1983; Craswell et al. 1995; Ferguson and Stokes 2002; Ferguson et al. 2003; Fung et al. 2012). Therefore, overconfident managers may be less inclined to use specialist auditors in order to lower audit fees. In addition, previous research has demonstrated that industry specialist auditors are better able to detect errors within their industry specialization (Bedard and Biggs 1991; Wright and Wright 1997; Owghoso et al. 2002). Thus, overconfident managers may seek to avoid specialist auditors who are more likely to reject aggressive accounting treatments. Consistent with our main analysis, we find a negative relation between managerial overconfidence and the use of a city-industry specialist auditor. However, we find only limited evidence that a strong audit committee mitigates the negative relation between managerial overconfidence and the auditor's industry expertise.

To mitigate the concern that companies with overconfident CEOs may have company characteristics that are correlated with audit risk, we use propensity score matching to identify companies that are similar in characteristics but differ in the overconfidence of the CEO. Using a sample based on propensity score matching, we continue to find that absent a strong audit committee managerial overconfidence is negatively associated with audit fees. These results suggest that differences in observable company characteristics are unlikely to be driving our results. Additionally, our findings are robust to the use of a treatment effects model to control for endogeneity and selection bias.

Our study contributes to the literature in several ways. First, to our knowledge, this is the first study that documents a negative relation between managerial overconfidence, a managerial personality trait, and audit fees.¹ This investigation adds to our understanding of the influence of management attitude on audit fees. This study also complements earlier research documenting that companies with overconfident managers are more likely to misstate earnings (Schrand and Zechman 2012; Presley and Abbott 2013) as reduced audit services may allow these activities to go undetected. Second, our study extends previous research on the role of the audit committee by demonstrating that the presence of a strong audit committee mitigates the hubris effect of managerial overconfidence on audit fees. Third, to our knowledge, we are the first study to document a negative relation between managerial overconfidence and the use of an industry specialist auditor. Overall, these findings are relevant to auditors in assessing the risks associated with managerial overconfidence and to investors in assessing the quality of audited financial reports of companies with overconfident managers. Our findings also complement previous research demonstrating the benefits of a strong audit committee.

Nevertheless, our study has several limitations, such as the difficulty in measuring managerial overconfidence, the use of an index-based measure of audit committee strength, and selection bias due to correlated omitted variables. However, our findings are robust across multiple measures of overconfidence and model specifications.

¹ Hribar et al. (2012) examine how counterparties (i.e., auditors and credit rating agencies) respond to managerial overconfidence and find a positive relation between audit fees and managerial overconfidence. These two studies differ in several important ways. First, we use three measures of managerial overconfidence based on executives' option exercising behavior and companies' investment decisions, while they rely on a press based measure and a factor based measure that considers the press based measure, CEO option exercising, and management forecast bias. Second, we also examine whether the audit committee plays a role in the relation between managerial overconfidence and audit fees. Third, we use a broader sample of companies, propensity score matching and a treatment effects model to eliminate concerns that our results are driven by company characteristics.

The remainder of the paper is organized as follows. We develop the hypotheses in Section 2, describe the research design in Section 3, report the empirical results in Section 4, and conclude in Section 5.

2. Hypotheses Development

2.1. Audit Fees and Managerial Overconfidence

Audit fees are determined by auditors' assessed risk of clients, audit market competition, and negotiations between auditors and clients. When planning audit work and determining audit pricing, auditors perform risk assessments of the client, including management's competence, the "tone at the top" of an organization, and the susceptibility of accounts and disclosures to misstatements. These factors affect auditors' ability to detect material misstatements in financial statements that present a significant risk to the audit firm. To reduce detection risk, auditors usually increase the level of evidence collected, which increases the audit cost. This increased cost can be passed on to the client, subject to the constraint from the audit market competition and the balance of the bargaining power between the auditor and the client. Consistent with auditors passing on this cost to clients, Simunic (1980) demonstrates that auditors charge higher audit fees when the risk of performing the audit is high. In addition, the relation between client risk and audit fees has been well established in the empirical literature (O'Keefe et al. 1994; Bell et al. 2001; Seetharaman et al. 2002; Hogan and Wilkins 2008; Krishnan et al. 2012).

Financial reporting risk is one of the most important risk factors that affect audit pricing. Previous research finds that planned audit effort and billing rates increase with clients' earnings management risk (Gul et al. 2003; Bedard and Johnstone 2004). Similarly, Charles et al. (2010) report that the relation between audit fees and financial reporting risk more than doubled

surrounding the passage of SOX, consistent with the legislation increasing auditors' costs associated with clients' financial reporting risk. Additionally, as equity incentives affect a company's financial reporting risk (Armstrong et al. 2013), risk inducing (reducing) incentives of management compensation are positively (negatively) related to audit fees (Chen et al. 2013; Billings et al. 2014; Fargher et al. 2014; Kannan et al. 2014; Kim et al. 2014).

As overconfident managers tend to overestimate their companies' investment returns and underestimate both the likelihood and magnitude of adverse shocks, they may present an increased financial reporting risk to auditors. For example, Schrand and Zechman (2012) find that an initial optimistic bias in earnings, not necessarily intentional, could lead overconfident managers to misstate earnings in future periods. Consistent with auditors evaluating managerial personality traits, Johnson et al. (2013) find that managerial narcissism is positively related to auditor risk assessment in an experimental setting. Thus, if auditors recognize the personality traits of overconfident managers and the increased financial reporting risk associated with managerial overconfidence, they could demand higher audit fees to compensate for the additional audit efforts needed to reduce detection risk.

On the other hand, audits are a differentiated product where clients can, to some extent, select the auditor, audit scope, and even some dimensions of audit quality (Ball et al. 2012). Studies find that audit fees are positively associated with audit hours (Bell et al. 2001), and that managers often negotiate with auditors on the audit plan, including audit scope, to achieve lower audit fees (Emby and Davidson 1998). An overconfident manager could negotiate on audit scope to achieve lower audit fees, as they are confident in their companies' financial reporting, and do not value auditors' corrective feedback as much as non-overconfident managers.

In addition, by reducing the audit scope, and thereby audit fees, overconfident managers can effectively abate auditors' scrutiny over their aggressive accounting practices. Consistent with overconfident managers demanding less auditing services, recent research has linked managerial overconfidence to less conservative accounting (Ahmed and Duellman 2013), an increased likelihood of optimistic bias in earnings (Schrand and Zechman 2012), real earnings management (Hsieh et al. 2014), ineffective internal controls (Chen et al. 2014), and financial restatements (Presley and Abbott 2013). Additionally, Blankley et al. (2012) find that audit fees are abnormally low in the period prior to a financial restatement. These lower audit fees could indicate reduced audit effort or underestimated client risk by the auditor. Thus, the hubris effect of managerial overconfidence may cause management to demand lower audit fees.

Although SOX (Section 301) requires that the audit committee be solely responsible for the appointment, compensation, and oversight of the auditor, recent research indicates that management still plays a significant role in the audit hiring and negotiation process (Beasley et al. 2009; Cohen et al. 2010; Cohen et al. 2011; Fiolleau et al. 2013; Dhaliwal et al. 2014; Beck and Mauldin 2014). One possible explanation is that the CEO can appoint directors who support his/her financial reporting policies from personal networks. These social ties are also present in the audit committee, as Bruynseels and Cardinaels (2014) find strong social ties between the CEO and audit committee members in approximately 39% of the companies in their sample. Although audit committee members socially connected to the CEO can be fully independent according to SOX, Bruynseels and Cardinaels (2014) find that they may not offer sufficient oversight over the auditing process as their companies purchase fewer audit services and are more likely to engage in earnings management but less likely to receive a going concern opinion.

The financial reporting risk effect of managerial overconfidence predicts a positive relation between managerial overconfidence and audit fees, while the hubris effect of managerial overconfidence predicts a negative relation between managerial overconfidence and audit fees. As it is possible that auditors recognize the increased risks associated with managerial overconfidence and overconfident managers seek to reduce audit fees simultaneously, we have the following two alternative hypotheses:

H1a: Managerial overconfidence is positively related to audit fees as the financial reporting risk effect dominates the hubris effect.

H1b: Managerial overconfidence is negatively related to audit fees as hubris effect dominates the financial reporting risk effect.

2.2. Audit Fees, Managerial Overconfidence, and Audit Committee Monitoring

Schrand and Zechman (2012) and Ahmed and Duellman (2013) have investigated the role of governance mechanisms in constraining the negative effects of managerial overconfidence, but find no evidence that a strong board of directors mitigates the negative effects of managerial overconfidence on financial reporting characteristics. In this study, we examine the audit committee, a sub-committee of the board of directors, which is legally designated by SOX to directly oversee the auditor selection and audit process.² Previous research has found that a strong audit committee is related to higher audit fees (Abbott et al. 2003), the selection of higher-quality auditors (Abbott and Parker 2000), lower likelihood of dismissing an

² The audit committee may be successful in mitigating the effect of managerial overconfidence on the audit process or audit fees due to the specific legal mandate. However, the entire board of directors might not be able to mitigate the effect of managerial overconfidence on corporate investment as investment decisions are often suggested and made by management. Additionally, as the board of directors selects the audit committee, a strong audit committee may also be seen as an indication of a high quality board.

auditor following a going concern opinion (Carcello and Neal 2003), lower levels of abnormal accruals (Klein 2002), lower cost of debt (Anderson et al. 2004), better disclosure quality (Karamanou and Vafeas 2005), more effective internal control systems (Naiker and Sharma 2009), and improved financial reporting quality (Cohen et al. 2013).

The unique role of the audit committee in a company's audit process may enable it to play a meaningful role in curbing management influence on audit fees. Consistent with this expectation, Dhaliwal et al. (2014) find that a strong audit committee mitigates the relation between hiring an auditor affiliated with management and the lower propensity of receiving a going concern opinion. Similarly, Beck and Mauldin (2014) document smaller fee reductions for companies with a powerful audit committee during financial crises and economic recessions. As this previous research demonstrates that a strong audit committee can mitigate negative outcomes associated with managerial involvement in the audit process, we predict that a strong audit committee will mitigate the relation between audit fees and managerial overconfidence.

In the case of a positive relation between audit fees and managerial overconfidence, the auditors may associate a strong audit committee with lower audit risk resulting in a lower audit fees.³ In the case of a negative relation between audit fees and managerial overconfidence, a strong audit committee may demand greater audit coverage, leading to higher audit fees, and/or prevent overconfident managers from interfering with the audit scope. As we have no *a priori* expectation as to whether the financial reporting risk effect or the hubris effect of managerial overconfidence dominates the relation between audit fees and managerial overconfidence, we offer the following two alternative hypotheses:

³A strong audit committee may choose to purchase greater audit services to offset the known biases associated with managerial overconfidence. The design of our tests does not exclude this possibility.

H2a: A strong audit committee mitigates the positive relation between managerial overconfidence and audit fees.

H2b: A strong audit committee mitigates the negative relation between managerial overconfidence and audit fees.

Despite the positive roles of audit committees shown in prior research, some studies find audit committees to be symbolic. For example, Cohen et al. (2010) interviewed 30 external auditors and find that auditors often see management as the driving force behind auditor appointments and terminations. Similarly, Beasley et al. (2009) report that a sizeable portion of audit committee members view their role as largely ceremonial, and that a significant number of audit committee members are selected from the CEO's social network even after SOX explicitly requires that audit committees be composed solely of independent directors. Therefore, if managers still have significant influence over the audit committee, a strong audit committee may not be able to overcome the effect of managerial overconfidence on audit fees.

3. Research Design

3.1. Measures of Overconfidence

We use three measures of managerial overconfidence in our primary tests. The first measure is based on executives' option exercising behavior, and the other two measures are based on companies' investment decisions.

Our first measure of executive overconfidence follows Malmendier and Tate (2005) who identify overconfident managers by the timing of stock option exercises. As executives are frequently under-diversified, holding on to in-the-money stock options makes them vulnerable to the idiosyncratic risk of the company. Executives can alleviate their exposure to this risk by

exercising their stock options and diversifying their portfolios. Thus, following Campbell et al. (2011), we set *Holder67* equal to one if the average value per option divided by average exercise price per option exceeds 0.67 for the executive at least twice during the sample period, and zero otherwise. Consistent with Malmendier and Tate (2005) and Campbell et al. (2011), executives are classified as overconfident during the first year in which they exhibit this option exercising behavior and are classified as overconfident for the remainder of the sample period.⁴

Our second measure of managerial overconfidence relies on companies' investment decisions. Ben-David et al. (2013) find that companies with overconfident executives have larger capital expenditures than other companies. In addition, Malmendier and Tate (2005) demonstrate that overconfident managers are more likely to overinvest in capital projects. Thus, we set our first investment-based proxy of managerial overconfidence, *CAPEX*, equal to one if capital expenditure deflated by average total assets is greater than the median in the company's industry, and zero otherwise. Ahmed and Duellman (2013) use this measure to document a negative relation between managerial overconfidence and accounting conservatism.

Our third measure of managerial overconfidence, *Over-Invest*, is based on the deviation from expected investment that Biddle et al. (2009) use to identify over-investing companies. This measure is defined using the residual from the regression of investment on lagged sales growth, run by industry and year. Investment is defined as the sum of capital expenditures, research and development expense, and acquisitions less the cash received from the sale of property, plant and equipment, scaled by lagged total assets. We set *Over-Invest* equal to one if the residual of the regression is in the top quartile for the industry-year, and zero otherwise. This measure captures

⁴ Our results are robust to alternative definitions of *Holder67*, such as classifying executives as overconfident if they display the option exercising behavior only once during the sample period as in Hirshleifer et al. (2012), or classifying executives as overconfident starting with the second time that they demonstrate the option exercising behavior.

multiple aspects of managerial overconfidence that have been demonstrated in the previous literature as overconfident managers tend to engage in greater capital expenditures (Malmendier and Tate 2005), are more likely to engage in and pay higher prices for corporate acquisitions (Malmendier and Tate 2008), and invest more heavily in innovations (Hirschleifer et al. 2012).

3.2. Measurement of Audit Committee Monitoring

We consider three factors when measuring the strength of the audit committee: (i) the independence of the audit committee from management, (ii) the level of financial expertise of the audit committee members, and (iii) the stock ownership of the audit committee members. We consider these factors as Abbott et al. (2003) find that companies with an audit committee composed entirely of independent directors and having at least one member with financial expertise tend to pay higher audit fees. In addition, audit committee effectiveness has been associated with audit committee members' equity holdings (DeZoort et al. 2002; Bierstaker et al. 2012; MacGregor 2012).⁵

Measuring the quality of monitoring systems is difficult as different mechanisms can act as substitutes (Core et al. 1999). Thus, we use a broad definition of a strong audit committee to capture multiple aspects of monitoring. Our measure of audit committee strength, *Strong AC*, is a dichotomous variable equal to one (zero) if the company meets all three (two or less) of the following criteria: (i) the audit committee is comprised solely of independent non-affiliated

⁵ Although previous research has also found a negative relation between audit committee holdings and accounting quality (e.g., Archambault 2008); MacGregor (2012) finds that equity holdings effectively motivate audit committee members when the financial reporting risk is high. As previous research has linked managerial overconfidence to increased financial reporting risk via restatements and fraud, we expect the incentive alignment effect of equity holdings to dominate.

directors, (ii) the audit committee contains at least one financial expert as defined by SOX,⁶ and (iii) the percentage of shares held by the audit committee members is higher than the median value of the sample.⁷

The use of an index to measure audit committee strength is common in the literature but does have drawbacks. For example, the generation of an index is largely arbitrary due to the lack of an agreed upon theory to guide the construction (Brown et al. 2011). Furthermore, partitioning on a specific governance dimension might result in an indicator variable correlated with the specific governance variable which could indirectly drive results. Thus, the use of an index to assess audit committee strength is a limitation of the study.

3.3. Empirical Model

We employ the following OLS regression model to examine the association between audit fees and executive overconfidence:

$$\begin{aligned}
 \text{Audit Fees}_{i,t} = & \beta_0 + \beta_1 \text{Overcon}_{i,t} + \beta_2 \text{Strong AC}_{i,t} + \beta_3 \text{Overcon} * \text{Strong AC}_{i,t} + \beta_4 \text{Size}_{i,t} + \\
 & \beta_5 \text{Vega}_{i,t} + \beta_6 \text{Delta}_{i,t} + \beta_7 \text{CEO Own}_{i,t} + \beta_8 \text{City Leader}_{i,t} + \beta_9 \text{City Scale}_{i,t} + \\
 & \beta_{10} \text{City Leader} * \text{City Scale}_{i,t} + \beta_{11} \text{City Size}_{i,t} + \beta_{12} \text{ROA}_{i,t} + \beta_{13} \text{Segments}_{i,t} + \\
 & \beta_{14} \text{AR_INV}_{i,t} + \beta_{15} \text{MTB}_{i,t} + \beta_{16} \text{Leverage}_{i,t-1} + \beta_{17} \text{Loss}_{i,t} + \beta_{18} \text{Foreign}_{i,t} + \\
 & \beta_{19} \text{Special}_{i,t} + \beta_{20} \text{Cash}_{i,t} + \beta_{21} \text{Finance}_{i,t} + \beta_{22} \text{ABS-AA}_{i,t} + \beta_{23} \text{Beta}_{i,t} + \\
 & \beta_{24} \text{Going Concern}_{i,t} + \beta_{25} \text{New Auditors}_{i,t} + \beta_{26} \text{Other Fees}_{i,t} + \beta_y \text{Year} + \\
 & \beta_{\text{Ind}} \text{Industry} + \varepsilon_{i,t}
 \end{aligned} \tag{1}$$

⁶ The definition of financial expert includes both accounting (CPAs and CFAs) and non-accounting (CEOs and CFOs) financial experts and is based upon the classification provided by the firm in the proxy statement.

⁷ Stock ownership by the directors may be partially driven by the compensation of directors, but we have no *a priori* reason to believe shares gained through director compensation plans will cause directors to monitor differently than shares purchased on the open market.