Audit Partner Effort and Misvaluation of Fair Value Estimates

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Abstract

The Public Company Accounting Oversight Board frequently raises concerns about managerial biases in fair value measurements and auditors' inability to identify such biases. Indeed, a prevalent issue in auditing is that auditors often accept management's estimates in areas highly susceptible to management bias, which remains a significant regulatory concern. This study focuses on the measurement of Level 3 fair value assets, which involves significant assumptions and subjectivity, and examines misvaluation at various auditor ranks. Using audit hour data from South Korean firms, we confirm that increased effort from audit partners reduces the misvaluation of Level 3 fair value assets, whereas the effort exerted by lower-ranking auditors does not. The positive impact of audit partner effort on Level 3 fair value measurement is predominantly observed among partners with a lighter workload and substantial experience in auditing Level 3 fair value assets as well as in firms with long-standing relationships with their audit firms. These findings emphasize the critical role of oversight mechanisms in improving the quality of fair value measurement and highlight the crucial function of audit partners in examining complex audit areas.

Keywords: Audit partner; audit effort; fair value misvaluation

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1. INTRODUCTION

The assessment of fair value estimates frequently receives attention in Public Company Accounting Oversight Board (PCAOB) inspection reports (Cannon & Bedard, 2017) and critical audit matters highlighted in auditors' reports (Murphy, 2019). PCAOB Standard *AS 2501: Auditing Accounting Estimates*, which was revised in December 2020 and that includes "Fair Value Measurements," underscores the importance of auditors applying a degree of skepticism when assessing client-provided measurements. This revised standard emphasizes the need to fully understand fair value pricing information, especially regarding unobservable inputs (SEC, 2019). Auditing procedures related to the measurement of fair value assets demand considerable effort and expertise on the part of auditors, particularly when adopting instruments comprising unobservable inputs and intricate assumptions (Ahn et al., 2020; Ettredge et al., 2014). In this study, we explore how the audit effort exerted by various ranks of auditors within the engagement team affects the quality of a client's fair value measurement.

In 2006, the Statement of Financial Accounting Standards No. 157 and Fair Value Measurements (FAS No. 157) introduced a fair value hierarchy mandating firms to categorize their fair value assets and liabilities into three levels. These classifications hinge on the observability of the inputs used to determine fair values and mandate that their measurements are disclosed for each category. While Levels 1 and 2 rely on observable inputs for measurements, Level 3 fair value estimates require highly subjective and unobservable inputs that afford management a degree of discretion. Hence, the information asymmetry between management and investors renders Level 3 fair value assets less dependable than those levels of fair value derived from more objectively verifiable information. Previous research corroborates this assertion, demonstrating a weaker relationship between a firm's share price and Level 3 fair value estimates, in contrast to the value relevance observed in Level 1 or 2 estimates (Goh et al., 2015; Song et al., 2010).

Previous research has demonstrated that internal corporate governance and audit quality tend to influence the accuracy of fair value measurement. Given that fair value assets and liabilities involve subjective managerial judgment and unobservable inputs, as noted above, they are susceptible to errors and manipulation. Consequently, firms characterized by weaker corporate governance structures and increased information asymmetry are prone to fair value misvaluation. Song et al. (2010) find a positive association between corporate governance quality and the value relevance of Level 2 and 3 fair value measurement. Song et al. (2010) also find that audit office size influences the value relevance of fair value disclosure. In addition, Ahn et al. (2020) investigate the link between auditors' experience in measuring fair value and fair value-related restatements. Their findings suggest that auditors with substantial experience in auditing Level 3 fair value instruments tend to provide higher-quality fair value reports.

The studies discussed above align with the consensus that increased audit effort generally enhances the probability of detecting misstatements (Caramanis & Lennox, 2008). However, there is a notable lack of substantial evidence on how the effort exerted by auditors at different levels within the firm influences the quality of fair value measurement. Audit partners possess superior knowledge and experience than lower-ranking auditors and carry greater responsibility and authority in audit engagements. Among the few studies on this topic, Gul et al. (2013) find that an auditor's ranking in the firm (partner vs. non-partner) is a significant factor in explaining audit outcomes. Similarly, Contessotto et al. (2019) show that audit partner effort, as opposed to the effort of lower-ranking auditors, is positively associated with the likelihood of the audit engagement team investing more effort in risky areas.

Considering the high uncertainty and complexity of fair value measurements, which require the substantial involvement of audit partners, this study investigates whether the association between Level 3 fair value assets and firm misvaluation is mitigated by audit partner effort. Using a Korean database that includes the audit hours allocated to different rankings of auditors for each engagement,[2] we investigate the relationship between audit partner hours and fair value misvaluation.[3] Our initial findings reveal that while an increase in fair value assets is positively linked to firm misvaluation, total audit hours and fees mitigate this positive association. This outcome suggests that higher audit effort enhances the quality of fair value measurement. However, on examining each of the three levels of fair value measurement separately, we find no significant effect of overall audit effort on the relationship between Level 2 and 3 fair value assets and misvaluations.

Given the varied outcomes on the association between total audit effort and fair value measurement, we examine whether an auditor's rank demonstrates distinct relationships with the quality of fair value measurements. In our primary analysis, we use audit hours for each auditor rank to investigate the impact of audit effort by partners, senior auditors, and junior auditors on the quality of each level of fair value measurement.[4] We find that only audit partner effort demonstrates a negative association with the valuation errors of Level 2 and 3 fair value assets, with the strongest association found for Level 3 assets. These results align with Gul et al.'s

[2] According to the Korean Institute of Certified Public Accountants (kicpa.org), auditing standards in Korea are based on the International Standards on Auditing issued by the International Auditing and Assurance Standards Board. Additionally, the Big 4 audit firms in Korea are affiliates of global Big 4 firms and use audit methodologies that adhere to global application standards (Heo et al., 2021). Considering these factors, using Korean audit data to examine the allocation of audit resources for our research question is appropriate.

[3] We use the measure of valuation errors developed by Rhodes-Kropf et al. (2005) to calculate the overall misvaluation of each firm (*ABSFSE*). We then regress the firm misvaluation on the sum of the firm's fair value assets (*FVA*). Section 3 provides a more detailed discussion of the misvaluation measure.

[4] In Korean data, senior auditors are classified as audit seniors and managers with more than three years of auditing experience, whereas junior auditors are staff auditors (Heo et al., 2021).

(2013) findings, emphasizing the greater contribution of partners to audit quality than lower-ranking auditors. The heightened association identified for Level 3 fair value estimates offers evidence supporting two conclusions. First, auditing areas characterized by high uncertainty, such as fair value measurement, benefit from increased effort by auditors with extensive experience and authority. Second, partners have a more pronounced influence in areas in which audit procedures demand significant professional judgment and extensive communication with clients.

Subsequently, we conduct several cross-sectional tests to investigate whether the association between audit partner effort and fair value misvaluation varies based on audit partner characteristics. We first examine whether an audit partner's workload affects their influence on Level 3 fair value misvaluation. Previous studies support the theory that high workload pressure leads to stress and burnout, thereby diminishing employee performance. Empirical evidence demonstrates the negative impact of workload imbalance on audit quality (Gul et al., 2017; Heo et al., 2021; Lopez & Peters, 2012). We find that the effect of audit partner effort on valuation errors is significant only when partners are relatively not busy. This finding suggests that when partners manage more clients, work longer, or have many large clients, their contributed audit hours are less likely to be associated with audit quality.

In further analyses, we explore whether the expertise of auditors' fair value measurement affects the relationship between audit effort and the quality of fair value measurement. Our findings indicate that the negative relationship between audit partner effort and fair value misvaluation is more pronounced among audit partners with expertise in measuring fair value assets. Ahn et al. (2020) show that auditors' experience and knowledge in measuring fair value assets significantly reduce material misstatements and the likelihood of receiving an SEC comment letter related to the quality of fair value measurement. Consistent with their results, our study demonstrates that auditors' fair value expertise is vital for enhancing the quality of fair value measurement.

We then explore the influence of audit firm characteristics on the relationship between audit partner effort and fair value misvaluation. Given that audit firms provide resources and monitoring for each engagement, we posit that not only audit partner characteristics but also audit firm characteristics significantly affect a partner's influence on a client's financial reporting outcomes. Similar to the results at the partner level, we find that expertise in auditing Level 3 fair value assets at the audit firm level also significantly influences the quality of fair value measurement.

We also investigate whether audit firm tenure affects this relationship. While previous studies present mixed findings on the effect of audit firm tenure on audit/accounting quality (Lennox & Wu, 2018), an extended relationship between an audit firm and the client is often advantageous when auditing for complex organizations (Bratten et al., 2019). Our empirical analysis reveals that the negative association between audit partner effort and Level 2 and 3 fair value misvaluation is stronger when the audit firm maintains a longer-than-average relationship with the client. These findings underscore the significance of accumulated knowledge and experience for measuring fair value.

This study contributes to the literature in several important ways. First, it highlights the importance of analyzing audit effort across auditor ranks. Given the unique roles of each auditor in an audit engagement, the link between audit effort and audit quality may differ based on the assignment of auditors. Our research provides evidence that in areas of high complexity, which require technical expertise and nuanced judgment, the efforts of partners are more closely associated with measurement quality than those of lower-ranking auditors. Additionally, we show that audit quality is particularly enhanced when the partner possesses substantial knowledge and experience pertaining to the audit area and is not excessively burdened. These findings indicate that the relationship between audit effort and audit quality is influenced not only by the auditor's rank but also by their expertise and working conditions.

Second, our findings align with those of prior studies emphasizing the crucial role of monitoring mechanisms such as internal corporate governance and external auditors in enhancing the quality of fair value measurement and disclosure (Ahn et al., 2020; Song et al., 2010). We provide evidence suggesting that a firm's measurement of its Level 3 fair value assets is more likely to improve when an audit partner with fair value expertise, particularly one in an industry specialist audit firm, actively participates in the audit. These results offer valuable insights for firms holding a substantial amount of Level 3 assets and liabilities and their stakeholders aiming to mitigate the information asymmetry inherent in fair value accounting.

The remainder of this paper is organized as follows. Section 2 provides a literature review and develops the hypotheses. Section 3 describes the research design, sample selection, and descriptive statistics. Section 4 presents the empirical results and Section 5 concludes the study.

2. THEORETICAL BACKGROUND AND HYPOTHESIS DEVELOPMENT

2.1. Fair value reporting and disclosure

Under U.S. Generally Accepted Accounting Principles, firms are mandated to disclose a spectrum of assets and liabilities using fair value reporting. FASB Accounting Standards Codification 820, previously known as FAS 157, establishes a framework for fair value measurement in financial reporting and delineates a three-level hierarchy for such measurements. This hierarchy categorizes fair value measurements based on the degree of observability and reliability of the inputs employed. Firms are obliged to disclose the fair value amounts of their assets and liabilities for each level.

The highest tier, Level 1, pertains to assets and liabilities traded regularly in markets with quoted prices. Level 2 measurements encompass assets and liabilities lacking quoted market prices but possessing observable data (e.g., comparable instruments) for determining the fair value. The lowest tier, Level 3, involves fair value measurements derived from inputs unobservable to the market. The higher reliance on unobservable inputs and subjective assumptions in Level 3 fair value measurements increase both the uncertainty and the information asymmetry between management and investors, thereby raising the potential for misvaluation.

Previous research underscores that Level 3 fair value measurement is perceived as less reliable by the market than the measurement of Level 1 and 2 fair value assets and is less informative about firm value. For instance, Song et al. (2010) evaluate the value relevance of fair value measurements by examining the association between a firm's fair value instrument balance and stock price, revealing that Level 3 assets and liabilities show lower value relevance than other fair value levels. In a similar vein, Magnan et al. (2015) examine the relationship between each level of fair value assets and liabilities and analyst forecasts, finding that a higher proportion of Level 3 fair value assets increases forecast dispersion, while a higher proportion of Level 2 improves forecast accuracy.

2.2. Auditing fair value estimates

Fair value measurement stands out among the most common audit deficiencies highlighted in PCAOB inspection reports (Church & Shefchik, 2012). The PCAOB's observations underscore a prevalent issue in auditing: auditors often accept management's estimates in areas highly susceptible to management bias (Norris, 2013). Certain types of fair value measurement involve determining values using valuation models and private information-based assumptions, requiring auditors to assess the reasonableness of the estimates. As existing auditing standards lack a specified approach for auditors to assess management estimates, auditors can choose between testing the client's process for developing those estimates and establishing an independent expectation and comparing it with the client's estimates (Louwers et al., 2020). While the latter approach proves more effective at measuring fair value than the former, auditors often opt to test the management process, especially when they are dealing with complex audit tasks or lack expertise (Bratten et al., 2013). Hence, a pervasive issue in measuring fair value is inadequate investigation into management's estimate generation process, leading to the oversight of biases in assumptions or valuation models (Griffith et al., 2015). This problem is notably more prevalent in auditing Level 3 financial instruments than those at Level 1 or 2, as the fair value of Level 3 assets and liabilities hinges on future-based assumptions within valuation models.

2.3. Audit effort by an auditor's rank and audit quality

Increased audit effort generally enhances auditors' ability to detect misstatements, correlating positively with overall audit quality (Caramanis & Lennox, 2008). However, the relationship between audit effort and audit quality can vary based on individual auditor characteristics within an engagement. Gul et al. (2013) establish that auditor attributes such as the education, professional experience, political affiliation, and auditor rank of the signing auditor partly explain disparities in audit quality.[5] For instance, signing auditors affiliated with Big N audit firms and audit partners are associated with higher audit quality than those lacking Big N experience and lower-ranking counterparts. This study links the higher audit quality observed among audit partners to their greater responsibilities and authority within the firm and engagement. As owners of audit firm equity, partners bear more significant consequences in the case of audit failure and possess the authority to make final audit decisions. Thus, their increased involvement enhances audit quality. Similarly, Trotman et al. (2009) contrast partners and managers in inventory write-down judgments, noting that partners often adopt a stricter stance, demanding higher write-downs. Additionally, Contessotto et al. (2019), analyzing data from the audit files of two Australian audit firms, reveal that while audit partner effort positively affects the likelihood of the audit engagement team intensifying efforts in risky areas, this association is absent for senior or junior auditors. These findings are consistent with the PCAOB's Concept Release on Audit Quality Indicators (PCAOB, 2015), which highlights "audit hours charged by high-ranking auditors when the client was identified as high risk" as an indicator of audit quality.

Conversely, a few studies propose that lower-ranking auditors exert a more substantial influence on audit quality than partners. These studies contend that partners, who are primarily

[5] According to Gul et al. (2013), in China, an audit report can be signed by not only an audit partner but also an audit manager with a CPA license.

engaged in strategic decisions, delegate hands-on audit procedures requiring technical expertise to lower-ranking auditors, diminishing their direct impact on audit quality. Aobdia et al. (2024) suggest that the attributes of mid-ranking auditors are more closely aligned with audit effectiveness than those of audit partners. Similarly, Heo et al. (2021), using Korean audit hour data, illustrate that audit quality during the busiest season is contingent on the proportion of junior and senior audit hours within the audit engagement rather than partner hours. Notably, the individual audit effort of team members displays no significant association with audit quality during the non-busy season.

While prior studies offer mixed results on the impact of audit effort on audit quality, several studies highlight that partners tend to contribute more to risky audit areas demanding high levels of professional judgment. Consequently, we anticipate a stronger association between the quality of Level 3 fair value measurements and audit partner effort than the effort of lower-ranking auditors.

HYPOTHESIS 1: Audit partner effort is negatively associated with the misvaluation of Level 3 fair value assets.

2.4. Audit partner characteristics and the impact of audit partner effort on audit quality

We explore several audit partner characteristics that could moderate the influence of audit partner effort on fair value misvaluation. Leveraging the inclusion of audit partner names in audit reports, mandated since 2018, we specifically investigate how partners' workload and expertise in measuring fair value assets moderate the relationship between their effort and fair value misvaluation.

First, we examine whether partners' workloads impact the effectiveness of their audit effort on the quality of fair value measurement. Partner workload may influence the effectiveness of audit effort because high workload pressures can lead to stress and burnout, thereby diminishing employee performance (Lopez & Peters, 2012). Studies offer conflicting evidence for whether auditor workload influences audit quality. Goodwin and Wu (2016) assert that partner workload does not compromise audit quality, as partners manage to optimize their workload effectively. By contrast, Gul et al. (2017) examine Chinese firms and find a negative relationship between the number of clients a partner handles and audit quality, which is particularly pronounced for partners with shorter tenures. Heo et al. (2021), extending the focus beyond audit partners to entire audit firms, reveal that audits conducted during busy seasons tend to show lower quality. Therefore, despite mixed evidence, partner workload may influence fair value misvaluation due to the intricacies of fair value auditing. This task is challenging to delegate to less experienced lower-ranking auditors and delegation could lead to significant variations in the audit outcomes (Gul et al., 2017).

HYPOTHESIS 2: The association between audit partner effort and the misvaluation of Level 3 fair value assets is stronger for firms audited by less busy partners.

We then explore whether auditors' specialization in fair value assessments affects the relationship between audit effort and fair value misvaluation. Ahn et al. (2020) find that auditors' expertise in measuring fair value assets, which is gained from their greater experience in the area, leads to higher quality in clients' fair value accounting. While we can expect that auditors' experience generally enhances audit quality, we hypothesize that the effect is particularly strong in more intricate audit areas that require specialized knowledge (Ahn et al., 2020).

HYPOTHESIS 3: The association between audit partner effort and the misvaluation of Level 3 fair value assets is stronger for firms audited by a fair value specialist.

3. RESEARCH DESIGN AND SAMPLE SELECTION

3.1. Measure of misvaluation (*ABSFSE*)

To measure fair value misvaluation, we use the valuation error measure developed by Rhodes-Kropf et al. (2005). This measure considers that the market-to-book ratio reflects both misvaluation and growth possibilities.

First, the market-to-book ratio can be transformed as below:

$$M/B = M/V \times V/B \qquad (1)$$

where M = market value; V = intrinsic value; B = book value

If we take the log transformation of the variables on each side, we obtain Equation (2). The values are written in lowercase letters to denote they are expressed in logs:

$$m - b = (m - v) + (v - b) \qquad (2)$$

If there is no misvaluation of the firm, $(m - v)$ will take zero, and the natural log of the market-to-book ratio should be always $(v - b)$. However, if a firm's fair value cannot be perfectly estimated, m - v will have a positive or negative value for the valuation error.

To calculate the valuation error, Rhodes-Kropf et al. (2005) split the logarithm of the market-to-book ratio into three components: the firm-specific error (FSE), time-series sector error (i.e., those errors that all firms in the same industry share) (TSE), and difference between the long-run market value and book value (future growth) (LTMTB):

$$m_{it} - b_{it} = \underbrace{m_{it} - v(\theta_{it};\alpha_{jt})}_{[FSE]} + \underbrace{v(\theta_{it};\alpha_{jt}) - v(\theta_{it};\alpha_{j})}_{[TSE]} + \underbrace{v(\theta_{it};\alpha_{j}) - b_{it}}_{[LTMTB]} \quad (3)$$

This decomposition relies on a firm having a long-run target market-to-book ratio that equals that of its industry. Under that assumption, Rhodes-Kropf et al. (2005) define the intrinsic value (v) of firm *i* in industry *j* at time *t* as a linear function [$v(\theta_{it};\alpha_{it})$] of the firm-specific accounting information at time *t* (θ_{it}) and the influence of accounting information on firm value (α). The accounting multiple (α) is also classified into its effects at a point in time (α_{jt}) and long-run effects (α_j).

Based on Equation (3), the valuation error consists of FSE and TSE. FSE, $m_{it} - v\ (\theta_{it};\alpha_{jt})$, is calculated as the difference between the firm's market value (m_{it}) and its intrinsic value estimated using the accounting multiples of each industry in the same period. TSE, $v\ (\theta_{it};\alpha_{j}) - v\ (\theta_{it};\alpha_{j})$, is calculated as the difference between the intrinsic value ($v\ (\theta_{it};\alpha_{j})$) estimated using the accounting multiples of each industry in the same period and the intrinsic value estimated using the accounting multiples calculated over a long period ($v\ (\theta_{it};\alpha_{j})$).

Following Borochin and Yang (2017), we use the absolute value of firm-specific errors (*ABSFSE*) as our measure of misvaluation. To estimate FSE, we must estimate $m_{it} - v\ (\theta_{it};\alpha_{jt})$. Rhodes-Kropf et al. (2005) use a model that regresses the market value on the book value and net income:

$$m_{it} = \alpha_{0jt} + \alpha_{1}b_{jt} + \alpha_{2jt}ln(NI^{+})_{it} + \alpha_{3jt}I_{(<0)}ln(NI^{+})_{it} + \alpha_{4jt}LEV_{it} + \varepsilon_{it} \quad (4)$$

m = Natural log of the market value of equity

b = Natural log of the book value of equity

$ln(NI+)$ = Natural log of the absolute value of net income

$I<0$ = An indicator function for negative income and negative net income coded 1, and 0 otherwise

LEV = Leverage ratio

In this model, Rhodes-Kropf et al. (2005) include net income, which is an important factor that can explain cross-sectional variation in market value (Feltham & Ohlson, 1995; Ohlson, 1995). However, as positive net income and negative net income can have different relationships with market value (Collins et al., 1999; Hayn, 1995), the model also includes an indicator for negative net income. In addition, to control for the decrease in net income's explanatory power for highly leveraged firms (Barth et al., 1998), the model includes the leverage ratio (*LEV*).

As $v(\theta_{it};\alpha_{jt})$ is a firm's intrinsic value estimated using the accounting multiples in each industry at a point in time, we obtain coefficient estimates ($\widehat{\alpha_{Jt}}$) by estimating this model by year, firm, and industry. Therefore, the intrinsic value of each firm is calculated using Equation (5):

$$\mathrm{V}(\theta_{it};\alpha_{jt}) = \widehat{\alpha_{0Jt}} + \widehat{\alpha_{1Jt}} b_{it} + \widehat{\alpha_{2Jt}} \ln(NI)^{+}_{it} + \widehat{\alpha_{3Jt}} I_{(<0)} \ln(NI)^{+}_{it} + \widehat{\alpha_{4Jt}} LEV_{it} \tag{5}$$

ABSFSE, our measure of misvaluation, is the absolute value of the difference between the market value (m_{it}) and intrinsic value ($v(\theta_{it};\alpha_{jt})$). We regress *ABSFSE* on the sum of fair value assets to examine the contribution of fair value assets to firm misvaluation:

$$ABSFSE_{it} = \beta_0 + \beta_1 FVA1_{it} + \beta_2 FVA2_t + \beta_3 FVA3_t + controls + \varepsilon \tag{6}$$

When the coefficient estimates (β_1, β_2, β_3) are positive, we consider that as evidence that fair value assets are misvalued. To analyze our three hypotheses, we interact the fair value variables in Equation (6) with audit hours to examine whether audit effort reduces fair value misvaluation.

3.2. **Research design for the hypotheses testing**

We first estimate the following multivariate regression models to test our hypotheses on the relationship between audit partner effort and the misvaluation of Level 3 fair value assets:

$$\begin{aligned} ABSFSE_{it} = {} & \beta_0 + \beta_1 FVA1_{it} + \beta_2 FVA2_{it} + \beta_3 FVA3_{it} + \beta_4 HLNPH_{it} + \beta_5 HLNSH_{it} + \beta_6 HLNJH_{it} + \\ & \beta_7 FVA2_{it} \times HLNPH_{it} + \beta_8 FVA2_{it} \times HLNSH_{it} + \beta_9 FVA2_{it} \times HLNJH_{it} + \boldsymbol{\beta_{10} FVA3_{it} \times} \\ & \boldsymbol{HLNPH_{it}} + \beta_{11} FVA3_{it} \times HLNSH_{it} + \beta_{12} FVA3_{it} \times HLNJH_{it} + \beta_{13} BIG4 + \beta_{14} IAS + \beta_{15} SIZE_{it} \\ & + \beta_{16} LEV_{it} + \beta_{17} ROA_{it} + \beta_{18} MTB_{it} + \beta_{19} LOSS_{it} + \beta_{20} RET_{it} + \beta_{21} STDRET_{it} + \beta_{22} DTURN_{it} + \\ & \beta_{23} FOR_{it} + \beta_{24} BOD_{it} + \text{Year FE} + \text{Industry FE} + \text{Auditor FE} + \varepsilon \end{aligned} \tag{7}$$

Our analyses center on the three levels of fair value assets (i.e., *FVA1, FVA2, FVA3*) because, as the descriptive evidence discussed later in this section indicates, our sample firms show significantly larger economic exposures in the fair value categories for financial assets than those related to financial liabilities. *HLNPH* (*HLNSH, HLNJH*) is a binary variable coded one when the natural logarithm of partner (senior, junior) audit hours is above the median value of audit hours for all the partners (seniors, juniors) in the sample. If increased audit partner effort leads to reduced valuation errors in fair value assets, the coefficient estimate (β_{10}) of the interaction variable $FVA3_{it} \times HLNPH_{it}$ is expected to be negative.

We also include Level 1 and 2 fair value assets in our model to assess their impact on firm misvaluation, extending our analysis beyond Level 3 fair value assets. Additionally, we investigate the influence of senior and junior auditor hours on Level 2 and 3 fair value assets, where an objective quoted price is absent, to compare their effect with audit partner effort. While we refrain from predicting the specific direction or statistical significance of the coefficient estimates for other fair value levels and non-partner auditors, we anticipate these estimates to be lower than β_{10}.

Equation (7) includes control variables that can influence firm valuation. We include two controls of auditor characteristics, namely, whether the auditor is a Big 4 audit firm (*BIG4*) and an industry specialist auditor (*ISA*). The natural log of total assets (*SIZE*) is included because larger firms tend to draw more attention from the market and therefore more information is available (Arbel & Strebel, 1983) and circulated faster (Hong et al., 2000). The leverage ratio (*LEV*) is included to control for the capital structure, which can affect investors' impression of the firm. As profitability affects valuation, we also include return on total assets (*ROA*) and an indicator for negative net income (*LOSS*). The market-to-book ratio (*MTB*) is included to control for growth opportunities, as growth firms are associated with more earnings management, which increases the information asymmetry between management and investors (Klein, 2002). We also include average weekly stock returns (*RET*) to control for the possibility of overvaluation and the standard deviation of weekly stock returns (*STDRET*) to control for the uncertainties that lead to stock price fluctuations. Stock ownership turnover (*DTURN*) is included because high turnover can be attributable to a high level of disagreement among investors on firm value due to information asymmetry. We also control for foreign investor ownership (*FOR*), which may affect valuation. As corporate governance can affect firms' valuation of fair value assets and liabilities (Song et al., 2010), the model finally includes the ratio of independent directors on the firm's board of directors (*BOD*). Lastly, we control for industry-fixed effects using two-digit Standard Industrial Classification (SIC) codes, along with year-specific and auditor-specific fixed effects. The Appendix summarizes the variables and measures used in this study.

3.3. Sample selection and descriptive statistics

The sample comprises companies listed on the Korean Stock Exchange between 2018 and 2021. Financial data are sourced from the Korea Investor Service's KIS-Value database, which is akin to Compustat in the United States. The KIS-Value database provides financial information for listed firms on the Korean Stock Exchange. Total audit fees and hours are obtained from the TS-2000 database. Stock price information is retrieved from the FN-GUIDE database, similar to I/B/E/S in the United States. Hours per level and audit partner names are hand-collected from each firm's audit report using the Data Analysis, Retrieval, and Transfer (DART) System, an electronic disclosure system enabling companies to submit disclosures online, making such information instantly accessible to investors and other users. After excluding observations with incomplete or missing information as well as firms in financial industries or with non-December year-ends,[6] our final sample consists of 2,105 firm-year observations spanning 2018 to 2021.[7]

Table 1 displays the descriptive statistics of all the variables added into the regression models employed for our analyses. Fair value assets constitute 6.3% of total assets. The average proportions of fair value assets at Levels 1, 2, and 3 are 1.8%, 2.5%, and 1.7%, respectively.[8] While our empirical model employs binary variables for audit hours, this table reports the natural log values of audit hours at each auditor rank *(LNPH, LNSH, LNJH*). Senior auditors register the highest average hours per auditor rank, while junior auditors record the lowest. The average

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[6] We exclude firms with a non-December year-end because the allocation of auditors can be affected by their availability in the audit firm. As Heo et al. (2021) document, audit engagements for December-end clients are associated with fewer senior auditor hours compared with clients with a non-December year-end.

[7] Audit hour data became available in 2014 when the Act on External Audit of Stock Companies became effective, mandating audit firms to report audit hours by rank for each audit engagement (Heo et al., 2021). However, our sample begins in 2018 because of the requirement for audit firms to report audit partners' names from that year, which is necessary for our additional tests.

[8] Aligning with our prior emphasis on assets in this study, fair value-measured liabilities exhibit relatively low economic significance, comprising 0.0%, 0.2%, and 0.3% of total assets for Level 1, 2, and 3 liabilities, respectively.

hours of junior auditors appear low because at least 25% of firms do not use junior auditors (the first quartile value for *LNJH* is 0). Considering the median and third quartile values of *LNJH* and *LNPH*, the average hours of junior auditors exceed those of partner hours in engagements employing more junior auditors.

[Insert Table 1 here]

Table 2 shows the Pearson correlation coefficients of the variables employed in our empirical model. As anticipated, the balance of fair value assets (*FVA*) shows a significant correlation with firm misvaluation (*ABSFSE*). When examining these correlations separately for Level 1, 2, and 3 fair values (*FVA1, FVA2, FVA3*), we observe significant associations between Level 2 and 3 fair value assets and firm misvaluation only, indicating a higher likelihood of misvaluing fair value assets in more uncertain and subjective situations. The results also support our expectations of a positive correlation between high audit fees (*HLNAF*) and increased audit hours both overall and across all auditor ranks (i.e., partner, senior, and junior). Furthermore, the results demonstrate no significant correlation between fair value assets and audit hours, suggesting that higher fair value assets do not, on average, prompt increased audit effort. However, the correlation coefficient between Level 3 fair value assets and high audit fees suggests that auditors tend to charge higher audit fees to clients with more Level 3 assets, likely compensating for the increased audit risk. Lastly, Table 2 shows that audit fees and hours are negatively correlated with firm misvaluation, implying that greater audit effort is associated with fewer instances of firm misvaluation.[9]

[9] We further investigate multicollinearity concerns by analyzing the variance inflation factors, the highest of which is 3.61 for our variables of interest. Given that typical multicollinearity concerns occur when variance inflation factors reach 10 (Aobdia et al., 2024), multicollinearity does not appear to be a concern.

[Insert Table 2 here]

4. EMPIRICAL ANALYSES

4.1. Baseline tests: Fair value assets, audit hours, and firm misvaluation

Before examining the relationship between audit partner effort and the misvaluation of fair value assets, we initially investigate the impact of overall audit effort (i.e., total audit fees and audit hours) on fair value misvaluation. As shown in Table 3, fair value assets *(FVA)* have a positive and significant association with misvaluation. Moreover, when interacting *FVA* with the binary variables denoting firms with audit fees and hours above the median values in the sample (*HLNAF* and *HLNAH*), we find that above-median audit hours and fees mitigate the association between fair value assets and firm misvaluation. These outcomes support the findings of previous research highlighting the positive impact of audit effort on accounting quality (Caramanis & Lennox, 2008).

[Insert Table 3 here]

However, upon examining the impact of audit effort on fair value misvaluation separately for the different levels of fair value assets, the mitigating influence of audit hours diminishes for Level 2 and 3 fair value assets (Table 4). These outcomes suggest that the anticipated positive effect of audit effort on financial reporting is more complex than initially presumed for measuring fair value. Given these varied outcomes on the association between total audit effort and the quality of fair value measurement, we examine whether distinct auditor ranks display varying relationships with fair value measurement.

[Insert Table 4 here]

4.2. Hypothesis 1: Effect of audit partner effort on the misvaluation of fair value assets

Table 5 presents the outcomes of testing Hypothesis 1, derived from estimating Equation (7). The interaction between Level 3 fair value measurements (*FVA3*) and high audit partner effort (*HLNPH*) has a negative and significant coefficient in contrast to the positive association between fair value assets and firm misvaluation. This result suggests that audit partner effort mitigates the firm misvaluation linked to Level 3 fair value measurements. By contrasting the efforts of lower-ranking auditors, we find that only audit partner effort exhibits a negative association with valuation errors for Level 2 and 3 fair value assets, with a more pronounced relationship for Level 3 assets. These outcomes support Hypothesis 1 and align closely with the findings of Gul et al. (2013), emphasizing that partners contribute significantly more to audit quality than their lower-ranking counterparts. The strength of this association, particularly that with Level 3 fair value assets, provides compelling evidence that auditing high-uncertainty areas proves more effective when auditors with extensive experience and greater authority dedicate heightened effort. This underscores the importance of expertise and experience, signifying that an increase in audit effort may not inherently enhance accounting quality if the individuals tasked lack the requisite knowledge and experience.

[Insert Table 5 here]

4.3. Hypotheses 2 and 3: Cross-sectional analyses: Partners' workload and fair value expertise

To test Hypothesis 2, we subdivide the sample into two groups based on partner workload to compare the impact of audit partner effort on the quality of fair value measurement. We use three definitions of busy partners based on the measures used in prior studies (Goodwin et al., 2016; Gul et al., 2017): (i) partners with an above-median client count (*PWL1*), (ii) partners with an above-median sum of total assets for clients in their portfolios (*PWL2*), and (iii) partners with above-median audit fees (*PWL3*). The result in Table 6 shows that the mitigating effect of audit partner effort on valuation errors is significant only for partners that are less busy than average partners. This result suggests that when partners handle a large number of clients, the audit hours they allocate may be less associated with the quality of their work. This aligns with the argument that a partner's heavy workload may distract them, resulting in them paying inadequate attention to each client (Burke et al., 2019).

[Insert Table 6 here]

We also examine the distinction between firms audited by partners with fair value expertise and other firms. Using the measure developed by Ahn et al. (2020), we categorize the sample into two subgroups: (i) firms audited by partners that hold a market share above 20% in auditing Level 3 fair value assets and liabilities within each industry and (ii) firms audited by partners without specialized fair value expertise. The findings indicate that while the impact of audit partner effort is statistically significant for both groups, as presented in columns (1) and (2) in Table 7, the negative impact of audit partner hours (*HLNPH*) on Level 3 fair value misvaluation is economically more significant for the subgroup of firms audited by auditors with fair value expertise (*PSPEC*=1).[10] This finding underscores the importance of auditors' experience and expertise for enhancing the quality of clients' fair value measurement.

[Insert Table 7 here]

4.4. Additional analyses

4.4.1. Audit firm's fair value expertise

[10] Comparing the regression coefficients for *HLNPH×FVA3* across the two groups, the coefficient in column (1) is significantly larger than the coefficient in column (3) (t-value: 2.59; p<0.01). Similarly, the coefficient in column (2) is significantly larger than the coefficient in column (4) (t-value: 2.67; p<0.01).

In the first additional analysis, we examine whether the effect of audit partner effort on fair value misvaluation varies based on audit firm characteristics, building on the findings for audit partner characteristics above. Audit firms, especially large ones, typically have quality control systems to ensure their audit quality is consistent (Aobdia, 2020). Therefore, the characteristics of an audit firm could significantly impact how an audit partner influences client outcomes. In line with the partner-level expertise tests in the previous section, Table 8 shows that the impact of audit partner effort on fair value misvaluation is significant only for firms audited by fair value specialist audit firms with a market share above 20% in auditing Level 3 fair value assets and liabilities (*ASPEC*=1). This holds true even after controlling for partner-level fair value expertise. This finding indicates that not only the partner's expertise in measuring fair value assets but also that of the audit firm influences the effectiveness of audit effort.

[Insert Table 8 here]

4.4.2. Audit firm tenure

Additionally, we assess whether the duration of the auditor–client relationship amplifies or diminishes this effect.[11] Previous studies have presented mixed findings on the impact of audit firm tenure on audit quality, particularly partner tenure (Lennox & Wu, 2018). Conversely, most studies at the audit firm level find a positive association between audit firm tenure and audit quality indicators (Lennox & Wu, 2018).[12] Bratten et al. (2019), one of the few studies

[11] We anticipate that audit firm tenure positively correlates with audit partner tenure with the client. However, owing to the mandatory audit partner rotation rule in South Korea, audit firm tenure does not directly reflect the length of the relationship between a client and an audit partner. We cannot directly examine the relationship between audit partner tenure and fair value misvaluation because the public disclosure of audit partner names only became mandatory in 2018.

[12] Lennox and Wu (2018) explain that the risk of low audit quality may be less critical in the early years of partner tenure than in the early years of audit firm tenure because knowledge and expertise are retained within the audit firm when partners are rotated without changing the firm itself.

examining auditor tenure in a specific industry (i.e., banking), conclude that a long-standing auditor–client relationship enhances audit quality in complex organizations. Drawing on their conclusions, we anticipate the accumulation of client-specific knowledge and experience in the audit firm bolster the impact of audit partner effort on the quality of fair value measurement.

Table 9 compares the outcomes for firms with an auditor tenure above the sample median with those for other firms. The results indicate that audit partner effort is negatively associated with Level 2 and 3 fair value misvaluation only in cases where the audit firm has an above-median relationship with the client. Hence, the accumulation of client-specific knowledge and experience within the audit firm is crucial for audit partners to enhance the quality of fair value measurement.

[Insert Table 9 here]

4.4.3. Industry specialization

In addition to partners' fair value expertise, we explore whether audit partner effort can significantly improve the quality of fair value measurement when the partner or firm specializes in the client's industry. While industry specialization does not necessarily imply expertise in fair value measurement, extensive knowledge and experience with the data used for valuation often lead to more precise fair value assessment. Stein (2019) investigates asset impairment decisions and finds that industry specialist auditors are associated with more timely and significant recognition of impairment losses. Similarly, Bratten et al. (2020) assess firms' "fair value exposure" using the proportion of assets and liabilities reported at fair value, finding that industry specialist auditors reduce the link between a firm's fair value exposure and the use of financial instruments to manage earnings. Conversely, Ahn et al. (2020) report that while auditors' fair value expertise positively impacts the quality of Level 3 fair value disclosures, auditors with broad industry knowledge do not necessarily provide higher fair value audit quality. This finding suggests that a more specialized type of expertise is crucial for improving the quality of fair value-specific financial reporting. Consistent with Ahn et al. (2020), we find that neither the industry expertise of the audit partner nor that of the audit firm significantly enhances the impact of audit partner effort on the quality of fair value measurement (untabulated).

4.5. Robustness test

4.5.1. Alternative measure of misvaluation

To ensure the robustness of our findings, we replicate our analysis for the primary hypothesis using an alternative measure of misvaluation. This measure, used by Badertscher et al. (2019), calculates the price-to-value (P/V) ratio by incorporating the stock price (P) and residual income value (V) of each firm. The P/V ratio derives the residual income value from the book value of equity, adjusted by the discounted stream of abnormal earnings forecasted by analysts (Badertscher et al., 2019). Like our primary measure of misvaluation, this measure also aims to quantify the difference between a firm's market value and its intrinsic value. However, while the Rhodes-Kropf et al. (2005) misvaluation measure is presented as the absolute value of valuation errors, a positive (negative) P/V ratio indicates overvaluation (undervaluation).

Table 10 presents the results of testing Hypothesis 1 using the P/V ratio as the dependent variable. The comparison of the coefficients of *FVA2* and *FVA3* reveals that, for firms with low audit partner effort, Level 3 fair value assets are linked to undervaluation. This aligns with prior studies (e.g., Song et al., 2010), which suggest that Level 3 fair value instruments are discounted by investors because of the lower reliability of their reported fair value estimates. The significant and positive coefficients of *HLNPH×FVA3* in columns (1) and (2) suggest that the undervaluation of Level 3 fair value assets is mitigated in firms in which audit partners exert greater effort. With these results, we conclude that the findings obtained using the P/V ratio are consistent with those obtained using the misvaluation measure of Rhodes-Kropf et al. (2005).

[Insert Table 10 here]

4.5.2. Auditor changes

There is some concern that the observed significant impact of audit partner effort on fair value misvaluation may be attributable to the omitted characteristics of partner–client relationships developed over time rather than audit partner effort alone. To address this concern, we leverage instances of auditor changes. In our sample, we identify 685 instances in which firms changed their audit partners, which allows us to analyze the relationship between audit partner hours and fair value misvaluation within this subgroup.[13] Columns (1) and (2) of Table 11 show that the significantly negative relationship between audit partner hours and fair value misvaluation for Level 3 fair value assets (previously reported in Table 5) persists in this subsample, yet at a reduced statistical significance ($p<0.10$ vs. $p<0.001$).

[Insert Table 11 here]

4.5.3. Control variables in the interaction models

The estimation of moderating effects can be biased if the moderating term in regression models is endogenous to the control variables, which account for other factors influencing the dependent variable. deHaan et al. (2023) emphasize the importance of including the interaction

[13] As our full sample comprises 2,105 firm-years, the 685 changes indicate that 32% of the observations are audited by a lead audit partner newly appointed to the client. This finding is consistent with that of Choi et al,. (2020), who document that the average partner tenure in their sample is just under three years owing to the mandatory three-year partner rotation policy for public companies in Korea.

terms between the main variable of interest and control variables in the model. This approach allows for the observation of the moderating effect after adjusting for the influence of control variables correlated with both the moderating variable and the relationship between the variable of interest and moderating variable. Following the methodology proposed by deHaan et al. (2023), we address the concern that audit partner hours may be correlated with other client firm characteristics. As shown in columns (3) and (4) of Table 11, we find that while adding the interaction terms between each control variable and Level 3 fair value assets (*FVA3*) into the model weakens the statistical significance of the relationship, it does not lead to a material deviation from the results in Table 5.

5. CONCLUSION

The PCAOB identifies managerial biases in fair value measurement and auditors' inability to detect these biases as significant regulatory concerns (Boone et al., 2023). We focus on the measurement of Level 3 fair value assets, which is characterized by high uncertainty and subjectivity, and investigate whether a firm's fair value measurement is affected by the effort of the firm's audit partner. We find a negative association between audit partner effort and the misvaluation of Level 3 fair value assets in contrast to the effect observed with lower-ranking auditors. When we classify the sample based on audit partner characteristics, we find that the level of positive effect from audit partner effort on Level 3 fair value measurement is particularly prominent for partners with a low workload. Moreover, the effect of audit partner hours on fair value misvaluation is stronger for firms audited by partners with fair value expertise. When we explore the moderating impact of audit firm characteristics, the relationship between audit partner effort and fair value misvaluation is significant only for those firms that are fair value specialist auditors and firms with an above-average length of client relationship.

We emphasize the pivotal role of audit partners in navigating complex audit areas and specifically examine the impact of partner involvement, in contrast to previous research that often overlooks the distinctions in effort among auditors at various levels within a firm. With their extensive knowledge and expertise in auditing and their greater authority and responsibility in engagements, audit partners are uniquely positioned to make decisive choices that lower-ranking auditors may hesitate to make. The client's awareness of the partner's authority further amplifies the impact, making clients more receptive to requests for audit adjustments (Gul et al., 2013). These distinct qualities of audit partners contribute to the positive effect of audit partner effort on auditing fair value measurements, especially in situations in which substantial professional judgment and close client interactions are needed.

Furthermore, our findings underscore the significance of monitoring mechanisms in enhancing fair value accounting quality. Studies such as those by Song et al. (2010) and Stein (2019) highlight that internal corporate governance and auditor industry specialization can help mitigate biases in this area. Our contribution lies in demonstrating that an increase in audit partner effort, rather than reliance on lower-ranking auditors, can also substantially improve fair value measurement under certain conditions. These insights offer valuable guidance for firms holding a considerable amount of Level 3 assets and their stakeholders seeking to mitigate information asymmetry in fair value accounting.

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Appendix
Variable definitions

$ABSFSE_t$	Absolute value of the firm-specific valuation error (Borochin & Yang, 2017);
P/V	Price-to-value ratio. The numerator (P) is the stock price as of the end of June in year t. The denominator (V) is calculated as the firm's residual income value, where abnormal earnings are estimated using analyst forecasts (Badertscher et al., 2019);
FVA_t	Assets measured at fair value divided by total assets;
$FVA1_t$	Level 1 fair value assets divided by total assets;
$FVA2_t$	Level 2 fair value assets divided by total assets;
$FVA3_t$	Level 3 fair value assets divided by total assets;
$HLNAF_t$	Indicator variable equal to one if the natural logarithm of audit fees are higher than the median value, and zero otherwise;
$HLNAH_t$	Indicator variable equal to one if the natural logarithm of audit hours are higher than the median value, and zero otherwise;
$HLNPH_t$	Indicator variable equal to one if the natural logarithm of partner audit hours are higher than the median value, and zero otherwise;
$HLNSH_t$	Indicator variable equal to one if the natural logarithm of senior audit hours are higher than the median value, and zero otherwise;
$HLNJH_t$	Indicator variable equal to one if the natural logarithm of junior audit hours are higher than the median value, and zero otherwise;
$PWL1_t$	Partner workload measured as the natural logarithm of the number of clients for each partner in a year;
$PWL2_t$	Partner workload measured as the natural logarithm of the sum of the client's assets for each partner in a year;
$PWL3_t$	Partner workload measured as the natural logarithm of the sum of the client's audit fees for each partner in a year;
PSPEC	Indicator variable equal to one if the partner auditor holds a market share of 20% or more, where market share is defined based on the amount of Level 3 fair value assets and liabilities audited within a given two-digit industry in a year, and zero otherwise (Ahn et al., 2020);
ASPEC	Indicator variable equal to one if the audit firm holds a market share of 20% or more, where market share is defined based on the amount of Level 3 fair value assets and liabilities audited within a given two-digit industry in a year, and zero otherwise (Ahn et al., 2020);
$BIG4_t$	Indicator variable equal to one if the firm is audited by one of the Big 4 audit firms, and zero otherwise;
IAS_t	Indicator variable equal to one if the audit firm has a market share (where market share is based on the amount of total client assets in a given two-digit industry year) of 20% or more, and zero otherwise (Bae et al., 2016; Mayhew & Wilkins, 2003);
$SIZE_t$	Natural logarithm of total assets;

LEV_t	Total liabilities divided by total assets;
ROA_t	Net income divided by total assets;
MTB_t	Market value of equity divided by book value of equity;
$LOSS_t$	Indicator variable equal to one for loss-reporting firms, and zero otherwise;
RET_t	Average weekly stock return times 100;
$STDRET_t$	Standard deviation of weekly stock return;
$DTURN_t$	Average monthly turnover in fiscal year t minus the average monthly turnover in fiscal year t-1;
FOR_t	Foreign investors' shareholding ratio;
BOD_t	The number of independent board members divided by the number of total board members;
$TENURE_t$	The number of years since the year the auditor first audited the client.

TABLE 1 Descriptive statistics.

Variables	**N**	**Mean**	**SD**	**Q1**	**Median**	**Q3**
ABSFSE	2,105	0.356	0.326	0.093	0.271	0.540
FVA	2,105	0.063	0.099	0.003	0.020	0.077
FVA1	2,105	0.018	0.051	0.000	0.000	0.009
FVA2	2,105	0.025	0.056	0.000	0.000	0.017
FVA3	2,105	0.017	0.038	0.000	0.003	0.015
LNAF	2,105	19.185	0.976	18.421	19.104	19.807
LNAH	2,105	7.856	0.890	7.166	7.743	8.401
LNPH	2,105	5.230	0.773	4.635	5.252	5.790
LNSH	2,105	7.389	0.862	6.739	7.254	7.907
LNJH	2,105	4.777	3.072	0.000	6.127	7.011
PWL1	2,105	1.168	0.622	0.693	1.099	1.609
PWL2	2,105	28.407	1.461	27.362	28.425	29.507
PWL3	2,105	20.277	1.003	19.596	20.428	21.054
PSPEC	2,105	0.070	0.256	0.000	0.000	0.000
BIG4	2,105	0.630	0.483	0.000	1.000	1.000
IAS	2,105	0.374	0.484	0.000	0.000	1.000
SIZE	2,105	27.273	1.462	26.301	27.052	28.117
LEV	2,105	0.382	0.206	0.207	0.387	0.528
ROA	2,105	0.018	0.072	0.001	0.023	0.051
MTB	2,105	1.470	1.517	0.604	0.937	1.661
LOSS	2,105	0.240	0.427	0.000	0.000	0.000
RET	2,105	0.102	0.453	-0.180	0.000	0.219
STDRET	2,105	0.028	0.012	0.020	0.027	0.033
DTURN	2,105	0.002	0.017	-0.001	0.000	0.004
FOR	2,105	0.112	0.125	0.024	0.065	0.152
BOD	2,105	0.417	0.143	0.286	0.400	0.556
TENURE	2,105	5.706	4.601	2.000	4.000	9.000

Note: This table reports the descriptive statistics. The sample consists of 2,105 firm-year observations over 2018-2021. All continuous variables are winsorized at the 1st and 99th percentiles. See the Appendix for the variable definitions.

TABLE 2 Pearson correlation matrix.

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(1)	*ABSFSE*	1.00												
(2)	*FVA*	0.070*	1.00											
(3)	*FVA1*	-0.004	0.642*	1.000										
(4)	*FVA2*	0.091*	0.625*	0.052*	1.000									
(5)	*FVA3*	0.051*	0.487*	0.086*	-0.013	1.000								
(6)	*LNAF*	-0.066*	0.017	-0.006	0.014	0.054*	1.000							
(7)	*LNAH*	-0.072*	0.010	-0.006	0.026	0.020	0.950*	1.000						
(8)	*LNPH*	-0.055*	0.046*	0.021	0.038*	0.041*	0.571*	0.562*	1.000					
(9)	*LNSH*	-0.081*	0.009	-0.008	0.024	0.021	0.928*	0.965*	0.561*	1.000				
(10)	*LNJH*	-0.017	-0.013	-0.013	0.016	-0.008	0.605*	0.658*	0.014	0.533*	1.000			
(11)	*PWL1*	0.035	-0.007	-0.005	0.027	-0.043*	0.004	0.045*	-0.295*	0.008	0.272*	1.000		
(12)	*PWL2*	-0.027	0.018	0.007	0.063*	-0.038	0.621*	0.674*	0.148*	0.614*	0.650*	0.468*	1.000	
(13)	*PWL3*	-0.016	0.021	-0.001	0.047*	0.007	0.675*	0.672*	0.106*	0.608*	0.689*	0.591*	0.887*	1.000
(14)	*PSPEC*	-0.125*	0.200*	0.018	0.318*	-0.014	0.145*	0.181*	0.161*	0.167*	0.105*	-0.060*	0.151*	0.085*
(15)	*BIG4*	-0.004	-0.006	-0.019	0.036	-0.015	0.500*	0.550*	-0.158*	0.437*	0.855*	0.349*	0.662*	0.697*
(16)	*IAS*	0.023	0.023	0.016	0.019	0.006	0.394*	0.423*	0.008	0.358*	0.519*	0.204*	0.468*	0.468*
(17)	*SIZE*	-0.061*	0.034	0.007	0.075*	-0.018	0.851*	0.898*	0.537*	0.877*	0.562*	0.051*	0.710*	0.593*
(18)	*LEV*	-0.168*	-0.237*	-0.112*	-0.230*	-0.073*	0.244*	0.240*	0.184*	0.245*	0.076*	-0.030	0.068*	0.099*
(19)	*ROA*	0.072*	0.077*	0.051*	0.081*	0.018	0.068*	0.080*	-0.027	0.069*	0.116*	0.062*	0.168*	0.112*
(20)	*MTB*	0.274*	0.015	-0.006	-0.013	0.061*	0.007	-0.033	0.003	-0.033	-0.021	0.031	-0.047*	0.021
(21)	*LOSS*	-0.054*	-0.071*	-0.047*	-0.072*	-0.004	-0.061*	-0.068*	0.041	-0.051*	-0.116*	-0.089*	-0.171*	-0.135*
(22)	*RET*	0.002	0.005	0.010	-0.010	0.017	0.041	0.006	0.018	0.019	-0.010	-0.021	-0.033	0.032
(23)	*STDRET*	-0.011	-0.056*	-0.035	-0.097*	0.058*	-0.094*	-0.146*	-0.037	-0.133*	-0.140*	-0.065*	-0.206*	-0.114*
(24)	*DTURN*	-0.035	-0.010	-0.003	-0.014	0.012	-0.028	-0.035	-0.047*	-0.034	-0.012	0.004	-0.017	0.002
(25)	*FOR*	0.092*	0.061*	0.007	0.108*	0.013	0.451*	0.476*	0.279*	0.453*	0.328*	-0.004	0.372*	0.297*
(26)	*BOD*	-0.035	0.046*	-0.006	0.053*	0.045*	0.557*	0.578*	0.361*	0.564*	0.374*	-0.003	0.397*	0.352*
(27)	*TENURE*	-0.004	-0.058*	-0.015	-0.037	-0.050*	-0.019	0.020	-0.127*	-0.004	0.131*	0.087*	0.112*	0.067*

		(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
(14)	*PSPEC*	1.000													
(15)	*BIG4*	0.088*	1.000												
(16)	*IAS*	0.056*	0.576*	1.000											
(17)	*SIZE*	0.226*	0.470*	0.397*	1.000										
(18)	*LEV*	0.001	0.034	0.008	0.146*	1.000									
(19)	*ROA*	0.002	0.118*	0.063*	0.188*	-0.275*	1.000								
(20)	*MTB*	-0.051*	-0.016	0.010	-0.110*	0.106*	-0.052*	1.000							
(21)	*LOSS*	-0.002	-0.129*	-0.092*	-0.153*	0.238*	-0.685*	0.078*	1.000						
(22)	*RET*	-0.026	-0.041	-0.038	-0.029	0.011	0.166*	0.092*	-0.119*	1.000					
(23)	*STDRET*	-0.108*	-0.157*	-0.107*	-0.238*	0.189*	-0.192*	0.237*	0.211*	0.435*	1.000				
(24)	*DTURN*	-0.023	-0.009	-0.009	-0.047*	0.017	-0.005	-0.029	-0.003	0.477*	0.424*	1.000			
(25)	*FOR*	0.181*	0.300*	0.240*	0.525*	-0.123*	0.243*	0.114*	-0.188*	-0.050*	-0.217*	-0.053*	1.000		
(26)	*BOD*	0.154*	0.303*	0.212*	0.598*	0.106*	0.070*	0.002	-0.034	-0.030	-0.123*	-0.037	0.297*	1.000	
(27)	*TENURE*	0.016	0.212*	0.077*	0.070*	-0.079*	0.048*	-0.082*	-0.050*	-0.019	-0.089*	0.005	0.153*	0.024	1.000

Note: This table presents the Pearson correlation coefficients. See the Appendix A for the variable definitions.
* indicates significance at the 0.05 levels (based on two-tailed tests).

TABLE 3 Preliminary analysis 1: Total audit hours/fees and total fair value assets.

Variable	Dependent: $ABSFSE_t$		
	(1)	(2)	(3)
Intercept	0.058 (0.16)	-0.066 (-0.18)	-0.062 (-0.17)
HLNAH		-0.008 (-0.37)	
HLNAF			0.003 (0.15)
FVA	0.318*** (4.60)	0.439*** (4.76)	0.538*** (5.73)
HLNAH×FVA		-0.263** (-2.02)	
HLNAF×FVA			-0.423*** (-3.43)
BIG4	0.016 (0.06)	0.015 (0.05)	0.008 (0.03)
IAS	-0.038** (-2.16)	-0.039** (-2.16)	-0.039** (-2.16)
SIZE	-0.013* (-1.84)	-0.009 (-1.07)	-0.009 (-1.12)
LEV	-0.207*** (-5.27)	-0.204*** (-5.17)	-0.198*** (-5.00)
ROA	0.013 (0.11)	0.005 (0.04)	0.028 (0.22)
MTB	0.081*** (16.33)	0.082*** (16.37)	0.082*** (16.19)
LOSS	0.014 (0.67)	0.013 (0.64)	0.014 (0.69)
RET	0.014 (0.78)	0.014 (0.79)	0.014 (0.82)
STDRET	-3.432*** (-4.52)	-3.420*** (-4.51)	-3.349*** (-4.38)
DTURN	0.281 (0.64)	0.259 (0.59)	0.269 (0.61)
FOR	0.177*** (2.59)	0.179*** (2.63)	0.187*** (2.70)
BOD	-0.012 (-0.22)	-0.012 (-0.21)	-0.025 (-0.44)
Industry FE	Included	Included	Included
Year FE	Included	Included	Included
Auditor FE	Included	Included	Included
Adj.R^2	0.3591	0.3609	0.3604
Obs.	2,105	2,105	2,105

Note: All continuous variables are winsorized at the 1st and 99th percentiles. The t-statistics are presented in parentheses. The t-values are based on standard errors clustered by firm. See the Appendix for the variable definitions.
***, **, and * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively (based on two-tailed tests).

TABLE 4 Preliminary analysis 2: Total audit hours and Level 3 fair value assets.

Variable	*Dependent: $ABSFSE_t$*	
	(1)	(2)
Intercept	-0.093 (-0.25)	-0.095 (-0.26)
HLNAH	-0.026 (-1.36)	-0.027 (-1.31)
FVA1	-0.010 (-0.08)	-0.019 (-0.15)
FVA2	0.426*** (4.10)	0.469*** (3.47)
FVA3	0.653*** (3.65)	0.534** (2.12)
HLNAH×FVA2		-0.097 (-0.49)
HLNAH×FVA3		0.194 (0.68)
BIG4	0.020 (0.07)	0.022 (0.08)
IAS	-0.039** (-2.19)	-0.039** (-2.20)
SIZE	-0.007 (-0.83)	-0.007 (-0.81)
LEV	-0.199*** (-5.02)	-0.200*** (-5.05)
ROA	-0.016 (-0.13)	-0.020 (-0.16)
MTB	0.081*** (16.23)	0.081*** (16.20)
LOSS	0.011 (0.53)	0.011 (0.52)
RET	0.016 (0.91)	0.016 (0.89)
STDRET	-3.521*** (-4.63)	-3.482*** (-4.57)
DTURN	0.247 (0.56)	0.244 (0.55)
FOR	0.163** (2.39)	0.161** (2.36)
BOD	-0.017 (-0.29)	-0.018 (-0.32)
Industry FE	Included	Included
Year FE	Included	Included
Auditor FE	Included	Included
Adj.R^2	0.3621	0.3623
Obs.	2,105	2,105

Note: All continuous variables are winsorized at the 1st and 99th percentiles. The t-statistics are presented in parentheses. The t-values are based on standard errors clustered by firm. See the Appendix for the variable definitions.
***, **, and * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively (based on two-tailed tests).

TABLE 5 Hypothesis 1: Audit partner hours and Level 3 fair value assets.

Variable	*Dependent: ABSFSE$_t$*	
	(1)	(2)
Intercept	0.032 (0.09)	0.396 (1.11)
FVA1	0.013 (0.10)	-0.041 (-0.31)
FVA2	0.750*** (4.74)	0.538*** (3.25)
FVA3	1.298*** (5.31)	1.047*** (3.21)
HLNPH	0.024 (1.32)	0.029 (1.56)
HLNSH		-0.017 (-0.79)
HLNJH		-0.025 (-1.09)
HLNPH×FVA2	-0.358* (-1.81)	-0.387* (-1.91)
HLNSH×FVA2		-0.092 (-0.33)
HLNJH×FVA2		0.004 (0.01)
HLNPH×FVA3	-1.126*** (-3.93)	-1.177*** (-4.07)
HLNSH×FVA3		-0.488 (-1.14)
HLNJH×FVA3		0.873 (1.08)
BIG4	-0.002 (-0.01)	0.018 (0.06)
IAS	-0.037** (-2.10)	-0.015 (-0.82)
SIZE	-0.012 (-1.60)	-0.005 (-0.56)
LEV	-0.194*** (-4.93)	-0.185*** (-4.64)
ROA	-0.008 (-0.06)	-0.003 (-0.02)
MTB	0.081*** (16.33)	0.076*** (15.02)
LOSS	0.012 (0.62)	0.002 (0.11)
RET	0.015 (0.89)	0.015 (0.83)
STDRET	-3.453*** (-4.56)	-3.803*** (-4.92)
DTURN	0.278 (0.63)	0.270 (0.60)
FOR	0.173** (2.54)	0.126* (1.90)
BOD	-0.024 (-0.43)	-0.071 (-1.23)
Industry FE	Included	Included

Year FE	Included	Included
Auditor FE	Included	Included
Adj.R^2	0.3692	0.3694
Obs.	2,105	2,105

Note: All continuous variables are winsorized at the 1st and 99th percentiles. The t-statistics are presented in parentheses. The t-values are based on standard errors clustered by firm. See the Appendix for the variable definitions.

***, **, and * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively (based on two-tailed tests).

TABLE 6 Hypothesis 2: Audit partner hours and Level 3 fair value assets depending on partner workload.

Variable	Dependent: *ABSFSE$_t$*											
	(1) *PWL1<=MEDIAN*		(2) *PWL1>MEDIAN*		(3) *PWL2<=MEDIAN*		(4) *PWL2>MEDIAN*		(5) *PWL3<=MEDIAN*		(6) *PWL3>MEDIAN*	
Intercept	-0.389	-0.453	0.740**	0.732	-1.038	-0.955*	0.524	0.465	-0.223	-0.163	0.848**	0.482
	(-0.88)	(-1.02)	(2.01)	(1.97)	(-1.97)	(-1.81)	(1.67)	(1.47)	(-0.46)	(-0.33)	(2.01)	(1.16)
FVA1	-0.095	-0.064	0.045	0.008	0.292	0.299	-0.314	-0.303*	0.145	0.159	-0.130	-0.198
	(-0.52)	(-0.35)	(0.23)	(0.04)	(1.51)	(1.55)	(-1.78)	(-1.72)	(0.78)	(0.85)	(-0.69)	(-1.07)
FVA2	1.066***	1.873***	0.282	0.406*	0.842***	0.918***	0.374	0.328	0.606***	0.661***	0.317	0.272
	(4.30)	(4.94)	(1.59)	(1.94)	(3.81)	(2.97)	(2.16)	(1.45)	(3.21)	(2.81)	(1.52)	(0.96)
FVA3	1.744***	1.454***	0.844**	0.602	1.764***	1.008**	0.938	1.288**	1.744***	1.379***	1.000***	0.463
	(4.62)	(2.61)	(2.37)	(1.31)	(4.90)	(2.06)	(2.79)	(2.38)	(4.63)	(2.86)	(2.81)	(0.87)
HLNPH	0.011	0.013	0.030	0.028	0.025	0.017	0.026	0.026	0.024	0.017	0.032	0.035
	(0.43)	(0.50)	(1.00)	(0.93)	(1.04)	(0.70)	(0.91)	(0.90)	(1.02)	(0.70)	(1.06)	(1.18)
HLNSH	-0.036	-0.015	-0.018	-0.011	-0.026	-0.011	-0.046	-0.052	-0.039	-0.019	-0.013	-0.057*
	(-1.32)	(-0.51)	(-0.64)	(-0.34)	(-1.03)	(-0.40)	(-1.66)	(-1.64)	(-1.50)	(-0.67)	(-0.45)	(-1.71)
HLNJH	-0.033	-0.050	0.001	0.006	-0.037	-0.065*	-0.014	-0.010	-0.019	-0.041	-0.010	-0.022
	(-0.92)	(-1.30)	(0.04)	(0.20)	(-1.16)	(-1.90)	(-0.51)	(-0.32)	(-0.58)	(-1.17)	(-0.34)	(-0.65)
HLNPH×FVA2	-0.796**	-1.174***	0.068	0.047	-0.721**	-0.737**	0.127	-0.132	-0.494*	-0.497*	-0.156	-0.232
	(-2.57)	(-3.41)	(0.23)	(0.14)	(-2.45)	(-2.17)	(0.44)	(-0.36)	(-1.84)	(-1.71)	(-0.48)	(-0.61)
HLNSH×FVA2		-0.207		0.293		-0.390		0.757		-0.353		0.537
		(-0.48)		(0.72)		(-1.06)		(1.59)		(-0.97)		(1.13)
HLNJH×FVA2		-0.252		-0.553		0.299		-0.505		0.155		-0.152
		(-0.53)		(-1.40)		(0.66)		(-1.20)		(0.35)		(-0.35)
HLNPH×FVA3	-1.351***	-1.074**	-0.724	-0.784	-1.527***	-0.964**	-0.666	-0.486	-1.453***	-1.093**	-0.765	-1.112
	(-3.22)	(-2.32)	(-1.56)	(-1.60)	(-3.91)	(-2.17)	(-1.52)	(-0.96)	(-3.60)	(-2.47)	(-1.61)	(-1.36)
HLNSH×FVA3		-0.795		-0.494		-0.540		-0.875		-0.785		0.116
		(-1.64)		(-0.45)		(-1.06)		(-1.08)		(-1.55)		(0.13)
HLNJH×FVA3		0.975		0.846		1.403		0.394		1.199		0.633
		(1.18)		(0.78)		(0.57)		(0.52)		(0.27)		(0.71)
BIG4	0.035	0.024	-0.156*	-0.176*	0.017	0.021	-0.248	-0.233**	0.041	0.040	-0.434	-0.221
	(0.13)	(0.09)	(-1.75)	(-1.95)	(0.06)	(0.08)	(-2.75)	(-2.48)	(0.15)	(0.15)	(-1.44)	(-0.78)
IAS	-0.088***	-0.083***	0.058**	0.065***	-0.081**	-0.078**	-0.010	-0.013	-0.083***	-0.077**	0.056***	-0.012
	(-2.97)	(-2.80)	(2.47)	(2.77)	(-2.44)	(-2.38)	(-0.47)	(-0.60)	(-2.59)	(-2.38)	(2.59)	(-0.52)
SIZE	0.006	0.005	-0.005	-0.005	0.032*	0.030*	-0.004	-0.003	0.005	0.003	-0.001	-0.003
	(0.53)	(0.41)	(-0.38)	(-0.33)	(1.93)	(1.79)	(-0.37)	(-0.26)	(0.31)	(0.22)	(-0.11)	(-0.28)
LEV	-0.156***	-0.145**	-0.334***	-0.338***	-0.367***	-0.362***	-0.089	-0.091	-0.291***	-0.287***	-0.279***	-0.161***
	(-2.72)	(-2.52)	(-5.86)	(-5.88)	(-6.25)	(-6.15)	(-1.58)	(-1.62)	(-5.07)	(-5.00)	(-5.09)	(-2.76)
ROA	-0.027	-0.062	0.011	-0.013	-0.043	-0.037	-0.140	-0.158	0.081	0.081	-0.234	-0.256
	(-0.16)	(-0.35)	(0.06)	(-0.06)	(-0.26)	(-0.22)	(-0.69)	(-0.77)	(0.50)	(0.50)	(-1.07)	(-1.22)
MTB	0.086***	0.087***	0.062***	0.062***	0.079***	0.080***	0.093	0.093***	0.074***	0.074***	0.081***	0.0921***
	(11.13)	(11.27)	(9.14)	(9.13)	(9.98)	(10.08)	(13.87)	(13.77	(9.07)	(9.11)	(12.32)	(13.57)

LOSS	0.015	0.010	-0.002	-0.006	0.018	0.020	0.003	0.003	0.024	0.023	-0.030	-0.004
	(0.52)	(0.34)	(-0.05)	(-0.20)	(0.63)	(0.72)	(0.10)	(0.09)	(0.86)	(0.83)	(-0.94)	(-0.12)
RET	0.026	0.027	0.017	0.020	0.023	0.025	-0.004	-0.003	0.023	0.025	-0.002	0.006
	(1.00)	(1.03)	(0.63)	(0.72)	(0.91)	(0.99)	(-0.16)	(-0.11)	(0.91)	(0.98)	(-0.09)	(0.24)
STDRET	-4.136***	-4.003***	-1.965	-2.035*	-3.334***	-3.427***	-1.455	-1.395	-3.589***	-3.685***	-1.370	-2.6081**
	(-3.93)	(-3.80)	(-1.61)	(-1.65)	(-3.37)	(-3.46)	(-1.18)	(-1.13)	(-3.74)	(-3.82)	(-1.04)	(-2.04)
DTURN	-0.088	-0.138	0.437	0.509	0.406	0.367	-0.386	-0.430	0.685	0.645	-0.788	-0.468
	(-0.15)	(-0.23)	(0.59)	(0.68)	(0.75)	(0.68)	(-0.47)	(-0.52)	(1.25)	(1.18)	(-0.94)	(-0.59)
FOR	0.194**	0.196**	-0.042	-0.027	0.143	0.160	0.124	0.137	0.207**	0.221**	-0.049	0.074
	(2.09)	(2.11)	(-0.41)	(-0.26)	(1.36)	(1.51)	(1.43)	(1.55)	(2.00)	(2.12)	(-0.53)	(0.83)
BOD	0.025	0.026	-0.123	-0.128	0.086	0.082	-0.161	-0.152*	0.054	0.057	-0.131	-0.068
	(0.30)	(0.31)	(-1.46)	(-1.52)	(1.01)	(0.96)	(-1.99)	(-1.87)	(0.66)	(0.71)	(-1.51)	(-0.81)
Industry FE	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
Year FE	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
Auditor FE	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
Adj.R^2	0.4147	0.4243	0.2608	0.2476	0.4289	0.4341	0.3859	0.3883	0.4157	0.4197	0.2590	0.3862
Obs.	1,080	1,080	1,025	1,025	1,054	1,054	1,051	1,051	1,053	1,053	1,052	1,052

Note: All continuous variables are winsorized at the 1st and 99th percentiles. The t-statistics are presented in parentheses. The t-values are based on standard errors clustered by firm. See the Appendix for the variable definitions.

***, **, and * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively (based on two-tailed tests).

TABLE 7 Hypothesis 3: Audit partner hours and Level 3 fair value assets depending on partner-level fair value specialist.

Variable	Dependent: *ABSFSE$_t$*			
	partner-level FV specialist		partner-level non- FV specialist	
	(1) *PSPEC*=1	(2) *PSPEC=1*	(3) *PSPEC*=0	(4) *PSPEC*=0
Intercept	1.109 (1.41)	0.785 (0.87)	-0.010 (-0.03)	0.294 (0.80)
FVA1	0.797* (1.90)	0.976* (1.90)	-0.015 (-0.11)	-0.081 (-0.59)
FVA2	-0.118 (-0.48)	-0.388 (-0.75)	0.505*** (3.21)	0.606*** (3.37)
FVA3	2.904** (2.04)	8.432* (1.85)	1.315*** (5.15)	1.048*** (3.13)
HLNPH	-0.079 (-0.95)	-0.061 (-0.61)	0.018 (0.93)	0.015 (0.77)
HLNSH		0.074 (0.61)		-0.017 (-0.80)
HLNJH		-0.116 (-0.96)		-0.026 (-1.10)
HLNPH×FVA2	-0.353 (-1.02)	-0.147 (-0.30)	0.097 (0.37)	0.338 (1.21)
HLNSH×FVA2		0.384 (0.63)		-0.419 (-1.14)
HLNJH×FVA2		0.181 (0.26)		-0.029 (-0.08)
HLNPH×FVA3	-4.061** (-2.05)	-4.822** (-2.01)	-1.137*** (-3.77)	-1.047*** (-3.54)
HLNSH×FVA3		-3.895 (-0.42)		-0.528 (-1.22)
HLNJH×FVA3		-2.348 (-0.26)		0.917 (1.15)
BIG4	-0.878*** (-4.18)	-0.371* (-1.72)	-0.003 (-0.01)	0.013 (0.05)
IAS	-0.089 (-1.17)	0.027 (0.35)	-0.038** (-2.02)	-0.026 (-1.41)
SIZE	-0.015 (-0.46)	-0.010 (-0.26)	-0.011 (-1.32)	0.001 (0.03)
LEV	-0.018 (-0.12)	0.183 (1.07)	-0.202*** (-4.89)	-0.198*** (-4.78)
ROA	0.522 (1.29)	0.128 (0.27)	-0.012 (-0.09)	-0.023 (-0.17)
MTB	0.116*** (4.13)	0.067** (2.18)	0.082*** (15.85)	0.078*** (14.98)
LOSS	0.009 (0.15)	-0.089 (-1.28)	0.018 (0.83)	0.015 (0.67)
RET	0.018 (0.28)	0.055 (0.74)	0.012 (0.68)	0.014 (0.74)
STDRET	-6.786** (-2.27)	-5.982* (-1.69)	-3.387*** (-4.26)	-3.748*** (-4.68)
DTURN	5.283 (1.47)	5.619 (1.37)	0.317 (0.70)	0.280 (0.61)
FOR	0.136 (0.46)	0.493* (1.91)	0.189*** (2.61)	0.144** (2.04)

BOD	0.306	-0.119	-0.031	-0.075
	(1.19)	(-0.40)	(-0.52)	(-1.25)
Industry FE	Included	Included	Included	Included
Year FE	Included	Included	Included	Included
Auditor FE	Included	Included	Included	Included
Adj.R^2	0.8322	0.7298	0.3502	0.3303
Obs.	148	148	1,957	1,957

Note: All continuous variables are winsorized at the 1st and 99th percentiles. The t-statistics are presented in parentheses. The t-values are based on standard errors clustered by firm. See the Appendix for the variable definitions.

***, **, and * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively (based on two-tailed tests).

TABLE 8 Additional test 1: Audit-firm-level fair value specialist.

Variable	*Dependent: ABSFSE$_t$*			
	Audit-firm level FV specialist		Audit-firm level non-FV specialist	
	(1) *ASPEC* =1	(2) *ASPEC=1*	(3) *ASPEC*=0	(4) *ASPEC*=0
Intercept	-0.051 (-0.09)	-0.224 (-0.40)	0.708 (1.84)	0.587 (1.43)
FVA1	-0.276 (-1.11)	-0.311 (-1.26)	-0.039 (-0.25)	-0.046 (-0.29)
FVA2	0.195 (0.65)	-0.989 (-1.18)	0.636*** (3.84)	0.629*** (3.36)
FVA3	1.546*** (4.21)	-0.420 (-0.54)	1.153*** (3.20)	1.115*** (2.66)
HLNPH	0.006 (0.15)	0.009 (0.21)	0.021 (0.97)	0.020 (0.90)
HLNSH		-0.019 (-0.41)		-0.004 (-0.15)
HLNJH		-0.093 (-1.05)		-0.027 (-0.95)
HLNPH×FVA2	0.009 (0.02)	-0.151 (-0.32)	-0.367 (-1.57)	-0.277 (-1.12)
HLNSH×FVA2		0.720 (0.82)		-0.332 (-1.05)
HLNJH×FVA2		0.583 (0.71)		0.277 (0.82)
HLNPH×FVA3	-1.374*** (-3.13)	-1.191*** (-2.69)	-0.656 (-1.53)	-0.557 (-1.26)
HLNSH×FVA3		-0.754 (-1.17)		-0.378 (-0.62)
HLNJH×FVA3		2.462 (0.63)		0.506 (0.73)
BIG4	0.057 (0.17)	-0.076 (-0.22)	-0.062 (-0.21)	-0.050 (-0.17)
IAS	-0.011 (-0.16)	-0.019 (-0.27)	-0.020 (-0.96)	-0.021 (-0.99)
SIZE	-0.012 (-0.72)	0.003 (0.17)	-0.012 (-1.23)	-0.007 (-0.65)
LEV	-0.281*** (-3.24)	-0.275*** (-3.17)	-0.188*** (-4.18)	-0.184*** (-4.06)
ROA	-0.112 (-0.38)	-0.208 (-0.71)	-0.031 (-0.21)	-0.044 (-0.29)
MTB	0.111*** (9.50)	0.111*** (9.63)	0.075*** (13.71)	0.075*** (13.64)
LOSS	0.038 (0.90)	0.033 (0.79)	-0.021 (-0.86)	-0.021 (-0.86)
RET	0.038 (1.12)	0.043 (1.26)	0.017 (0.80)	0.017 (0.80)
STDRET	-2.896 (-1.61)	-2.086 (-1.16)	-2.361*** (-2.67)	-2.374*** (-2.68)
DTURN	-0.266 (-0.23)	-0.377 (-0.32)	-0.161 (-0.32)	-0.188 (-0.37)
FOR	-0.097 (-0.69)	-0.037 (-0.26)	0.341*** (4.21)	0.339*** (4.18)
BOD	0.157 (1.15)	0.094 (0.69)	-0.041 (-0.61)	-0.035 (-0.53)

PSPEC	-0.024	-0.034	-0.138***	-0.140***
	(-0.52)	(-0.75)	(-3.55)	(-3.55)
Industry FE	Included	Included	Included	Included
Year FE	Included	Included	Included	Included
Auditor FE	Included	Included	Included	Included
Adj.R^2	0.4936	0.5158	0.2662	0.2675
Obs.	473	473	1,632	1,632

Note: All continuous variables are winsorized at the 1st and 99th percentiles. The t-statistics are presented in parentheses. The t-values are based on standard errors clustered by firm. See the Appendix for the variable definitions.

***, **, and * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively (based on two-tailed tests).

TABLE 9 Additional test 2: Audit firm tenure.

Variable	Dependent: $ABSFSE_t$			
	(1) *High tenure*	(2) *High tenure*	(3) *Low tenure*	(4) *Low tenure*
Intercept	-0.414 (-1.01)	-0.631 (-1.45)	0.627** (2.34)	0.591** (2.00)
FVA1	-0.100 (-0.50)	-0.112 (-0.57)	-0.110 (-0.62)	-0.152 (-0.84)
FVA2	1.358*** (5.49)	1.532*** (4.70)	0.170 (0.77)	0.248 (0.97)
FVA3	1.139*** (3.11)	0.374 (0.67)	0.690*** (3.09)	0.419 (1.58)
HLNPH	0.049* (1.70)	0.051* (1.76)	-0.001 (-0.02)	0.000 (0.01)
HLNSH		-0.029 (-0.89)		0.009 (0.33)
HLNJH		-0.019 (-0.58)		-0.032 (-1.01)
HLNPH×FVA2	-1.007*** (-2.83)	-0.876** (-2.39)	0.111 (0.42)	0.094 (0.35)
HLNSH×FVA2		-0.534 (-1.14)		0.063 (0.18)
HLNJH×FVA2		0.064 (0.13)		-0.234 (-0.60)
HLNPH×FVA3	-1.472*** (-2.78)	-1.597*** (-2.94)	-0.490 (-1.46)	-0.402 (-1.16)
HLNSH×FVA3		-0.666 (-1.01)		-0.100 (-0.16)
HLNJH×FVA3		1.808 (1.05)		0.792 (1.26)
BIG4	0.648*** (2.81)	0.659*** (2.86)	-0.020 (-0.75)	-0.005 (-0.14)
IAS	-0.051* (-1.96)	-0.051** (-2.00)	0.015 (0.61)	0.014 (0.55)
SIZE	-0.026** (-2.21)	-0.017 (-1.30)	-0.011 (-1.02)	-0.009 (-0.80)
LEV	-0.145** (-2.37)	-0.145** (-2.38)	-0.148*** (-2.87)	-0.151*** (-2.89)
ROA	-0.282 (-1.49)	-0.304 (-1.61)	0.055 (0.32)	0.037 (0.21)
MTB	0.077*** (9.09)	0.078*** (9.26)	0.075*** (11.35)	0.075*** (11.23)
LOSS	0.032 (1.07)	0.032 (1.08)	-0.039 (-1.36)	-0.040 (-1.43)
RET	0.034 (1.29)	0.034 (1.30)	-0.006 (-0.24)	-0.005 (-0.21)
STDRET	-5.326*** (-4.57)	-5.081*** (-4.36)	-1.226 (-1.20)	-1.137 (-1.11)
DTURN	0.224 (0.34)	0.175 (0.27)	0.364 (0.60)	0.323 (0.53)
FOR	0.344*** (3.43)	0.350*** (3.50)	0.038 (0.41)	0.031 (0.33)
BOD	0.064 (0.72)	0.059 (0.66)	-0.104 (-1.38)	-0.116 (-1.53)
Industry FE	Included	Included	Included	Included

Year FE	Included	Included	Included	Included
Auditor FE	Included	Included	Included	Included
Adj.R^2	0.4008	0.4107	0.2850	0.2886
Obs.	995	995	1,110	1,110

Note: All continuous variables are winsorized at the 1st and 99th percentiles. The t-statistics are presented in parentheses. The t-values are based on standard errors clustered by firm. See the Appendix for the variable definitions.

***, **, and * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively (based on two-tailed tests).

TABLE 10 Robustness test 1: Alternative measure of misvaluation.

Variable	*Dependent: P/V*	
	(1)	(2)
Intercept	-6.970*** (-4.59)	-5.519*** (-3.29)
FVA1	0.441 (0.95)	0.439 (0.93)
FVA2	1.447*** (3.22)	1.767*** (3.09)
FVA3	-1.465* (-1.84)	-1.596* (-1.65)
HLNPH	-0.195* (-1.73)	-0.154 (-1.27)
HLNSH		0.131 (0.97)
HLNJH		0.017 (0.14)
HLNPH×FVA2	-0.619 (-0.63)	0.002 (0.00)
HLNSH×FVA2		-1.220 (-1.14)
HLNJH×FVA2		-0.027 (-0.03)
HLNPH×FVA3	2.474* (1.76)	3.175** (1.98)
HLNSH×FVA3		0.344 (0.20)
HLNJH×FVA3		0.155 (0.10)
BIG4	2.482** (2.49)	2.678*** (2.63)
IAS	-0.034 (-0.40)	0.005 (0.06)
SIZE	0.192*** (4.07)	0.140*** (2.64)
LEV	-0.960*** (-4.48)	-1.277*** (-5.87)
ROA	-3.030*** (-3.52)	-3.916*** (-4.54)
MTB	0.503*** (19.69)	0.526*** (20.69)
LOSS	-0.006 (-0.04)	0.007 (0.05)
RET	-0.253*** (-2.71)	-0.218** (-2.22)
STDRET	22.545*** (3.88)	21.777*** (3.64)
DTURN	-3.535 (-0.56)	-2.628 (-0.41)
FOR	-1.238*** (-3.57)	-1.246*** (-3.49)
BOD	0.091 (0.27)	-0.088 (-0.25)
Industry FE	Included	Included

Year FE	Included	Included
Auditor FE	Included	Included
Adj.R^2	0.5703	0.5577
Obs.	905	905

Note: All continuous variables are winsorized at the 1st and 99th percentiles. The t-statistics are presented in parentheses. The t-values are based on standard errors clustered by firm. See the Appendix for the variable definitions.

***, **, and * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively (based on two-tailed tests).

TABLE 11 Robustness tests 2 and 3: Partner change and interacted controls.

Variable	Dependent: $ABSFSE_t$			
	Partner change		Interacted controls	
	(1)	(2)	(3)	(4)
Intercept	0.769 (1.62)	0.565 (1.10)	0.349 (1.03)	0.366 (1.02)
FVA1	0.027 (0.10)	0.034 (0.13)	0.058 (0.45)	0.111 (0.85)
FVA2	0.614** (2.22)	0.240 (0.81)	0.529*** (3.94)	0.545*** (3.31)
FVA3	0.754 (1.49)	0.912 (1.43)	0.324 (0.31)	1.431 (1.18)
HLNPH	-0.012 (-0.37)	-0.009 (-0.25)	0.013 (0.72)	0.023 (1.21)
HLNSH		-0.054 (-1.34)		-0.014 (-0.69)
HLNJH		-0.003 (-0.07)		-0.031 (-1.32)
HLNPH×FVA3	-0.905* (-1.73)	-1.009* (-1.87)	-0.752** (-1.99)	-0.699* (-1.82)
HLNSH×FVA3		1.008 (0.85)		-0.551 (-1.21)
HLNJH×FVA3		-1.263 (-1.06)		1.340 (0.49)
Controls	Included	Included	Included	Included
Controls × *FVA3*			Included	Included
Industry FE	Included	Included	Included	Included
Year FE	Included	Included	Included	Included
Auditor FE	Included	Included	Included	Included
Adj.R^2	0.3260	0.3273	0.3634	0.3396
Obs.	685	685	2,105	2,105

Note: All continuous variables are winsorized at the 1st and 99th percentiles. The t-statistics are presented in parentheses. The t-values are based on standard errors clustered by firm. See the Appendix for the variable definitions.
***, **, and * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively (based on two-tailed tests).