

An analysis of audit effort demand based on shareholder ownership power

Abstract

Purpose

Audit hour reporting is rare internationally. Thus, to what extent shareholders have the power to influence audit effort/hour demand is a question left unanswered. This study uses unique South Korean data to determine whether the increasing power of the largest foreign/domestic shareholders and blockholders can influence audit hour demand.

Design

OLS regression analysis is conducted using a sample of Korean listed firms over the 2004-2018 sample period.

Findings

The results show: as the percentage equity holding of the largest foreign shareholder and blockholder (>5%) increases, audit hour demand increases. As the shareholding of the largest domestic shareholder increases, audit hour demanded decreases. The association between audit fees/hours is not qualitatively indifferent, after controlling for the audit fee premium effect. Furthermore, the largest foreign shareholder is shown to demand increasingly higher levels of audit hours from Big4 auditors, relative to NonBig4. All results are consistent with audit demand theory.

Originality value

Whilst previous studies offer audit fee/risk interpretations, this study extends the literature by developing a framework to explain why audit hour demands differ for

specific groups. Because audit hour information is rare internationally, the study has important policy implications.

Keywords: agency/legitimacy theory, audit demand theory, blockholders/domestic/foreign shareholders, firm ownership, South Korea

I. Introduction

The association between audit effort and firm-level ownership structures are surprisingly under reported in the extant literature. There are mixed empirical results when ownership variables/structures such as foreign owners, institutional owners and blockholders are regressed with audit fees/effort (Ali and Lesage, 2013; Alhababsah, 2019; Barroso et al., 2018; Hay et al., 2006; Khan et al., 2015; Madah-Marzuki and Al-Amin, 2021; Nelson and Mohamed-Rusdi, 2015; Mitra et al., 2007; Pronobis and Schaeuble, 2020; Shakhathreh and Alsmadi, 2021). A likely reason for mixed results is because no accounting policy exists to mandate that firms must report audit hour data on a transparent, comparative, year-on-year basis. Audit effort (fee) studies borrow from Simunic's (1980) landmark study. He infers that audit effort is constrained by client demand and auditor supply (theory). Based on Simunic's assertion, countless audit supply theory studies infer audit firms secure audit fees as a strategy to limit litigation risk and reputational damage (Chen, et al., 2019; Griffin et al., 2008; Gul, 1991; Gul et al., 2003; Ji et al., 2018; Habib et al., 2018; Kalelkar, 2017; Kinney Jr. et al., 2004; Lyon and Maher, 2005; Mitra et al., 2007; Nelson and Mohamed-Rusdi, 2015; Rose, 1999; Sangchan et al., 2020; Simon and Taylor, 1997; Taylor et al., 1999; Van der Laan and Christodoulou, 2012; Walker and Johnson, 1996; Yoon, 2020). However, Simunic's

study infers that audit effort consists of i) audit fees, ii) audit hours, and iii) a risk premium demanded by auditors. Thus, because of audit hour data unavailability, assertions about the relationship between audit fees and audit risk is implied. Thus, a caveat exists in the literature, because whether audit effort can be considered a risk premium (fee) required by audit firms to mitigate business risk or demanded by clients (hours) to enhance audit quality is to a large extent a question left unanswered.

High profile publications assert that using only a single audit effort input (fees/hours) reduces the validity of audit quality interpretations (DeFond and Zhang, 2014). For example, contrary to many audit supply/fee assertions, there is evidence that clients demand audit fees/effort to enhance audit quality (Gul and Goodwin, 2010; Hay, 2013; Hay et al., 2008; Khan et al., 2015; Patterson, 2020). Audit hours are considered a direct driver of audit effort (Arnold and De Lange, 2004; Cullinan, 2004; Jung, 2016; Lim and Mali, 2021; Mali and Lim, 2020, 2021; Nam, 2018; Reinstein and McMillan, 2004; Vinten et al., 2005). However, because audit hour data is rare, the audit hour (demand) theory literature is limited. There is growing evidence that audit hours are demanded by clients to reduce agency problems (Caramanis and Lennox, 2008; Jiang and Kim, 2004; Leventis et al., 2011; Lobo and Zhao, 2013). Moreover, there is evidence management demand audit hours as a signalling/legitimacy strategy (DeFond and Zhang, 2014; Jung, 2016). Recent studies combine Simunic's (1980) audit hours/fees/risk interpretations to show that audit effort/hours is only demanded by clients as a signalling/legitimacy strategy when audit hours do not incur a fee premium (Lim and Mali, 2021; Mali and Lim 2020, 2021). These studies infer a qualitatively indifferent (more positive) relationship between audit fees and audit hours is representative of a balanced (imbalanced) audit team that includes junior members as well as experienced staff (partners and specialists) due to the audits inconsequential

(high) audit risk; thus, providing a basis for both audit demand and supply theory assertions. To the best of our knowledge, no previous study considers the association between shareholder power from both audit supply/fee and demand/hour perspectives. Thus, this study's main motivation is to include both audit hour and fee interpretations to extend the literature.

The main research question of this study is: whether the increasing power of different shareholders, the largest i) foreign shareholder, ii) blockholder and ii) domestic shareholder influences the levels of audit effort demanded by a client? The largest foreign (domestic) shareholder represents the percentage holding of the single largest shareholder. A blockholder is a shareholder who owns more than 5% of a firm's shareholding, but not the largest foreign/domestic shareholder. The main theory used to explain the association between shareholder power and audit effort is audit demand theory (DeFond and Zhang, 2014; Simunic, 1980). However, agency theory (Jensen and Meckling, 1976; Watts and Zimmerman, 1983) legitimacy theory (Deegan, 2009; Henderson et al., 2004; Lindblom, 1993; Schuman, 1995) and the monitoring hypothesis (Aggarwal et al., 2011; Gillian and Starks, 2003; Kho et al., 2009; Yoshikawa et al., 2010) are also borrowed to explain why different owners have different incentives to secure audit effort, based on increasing equity ownership and power.

In addition to disentangling how audit hours/fees can be influenced by shareholder power, this study has several other motivations. Second, because the majority of audit fee-ownership studies adopt an audit supply theory perspective, we are motivated to develop a hypothetical framework to explain why incrementally different levels of audit effort (hours) can be demanded by three different groups. I) The association between audit fees and foreign ownership is shown to be mixed (Alhababsah, 2019; Nelson and Mohamed-Rusdi, 2015; Pronobis and Schaeuble, 2020;

Shakhatreh and Alsmadi, 2021). Increasing foreign shareholder ownership can be perceived as increasing business complexity, thus increased audit fees/risk. On the other hand, the monitoring hypothesis infers foreign shareholders have an incentive to demand external monitoring because they lack local expertise and knowledge (Aggarwal et al., 2011; Cho et al., 2014; Huang and Zhu, 2015; Kho et al., 2009; Yoshikawa et al., 2010). We surmise that the monitoring hypothesis is more likely. Thus, based on the monitoring hypothesis assertion, we are motivated to demonstrate whether the association between audit hours and fees are qualitatively indifferent to provide evidence in support of audit demand theory.

II) Blockholders are shown to play an important role in promoting governance and monitoring to reducing opportunistic financial reporting (Bethel and Liebeskind, 1993; Cho and Kim, 2007; Liu et al., 2019). Thus, whether or not the increasing share ownership of blockholders can influence audit hour demand can be considered an important question for market participants. Because the association between audit fees and blockholder ownership is mixed (Barroso et al., 2018; Khan et al., 2015; Mitra et al., 2007), the literature can be extended by developing a framework to explain the impact of blockholder ownership on audit hours. Countless studies show that conflicts of interests exist between the majority shareholder and other minority shareholders. The perception of an agency problem, not its existence is shown to motivate shareholders to act (Jensen and Meckling, 1976; Watts and Zimmerman, 1983). Audit effort is shown to reduce agency problems (Caramanis and Lennox, 2008; Jiang and Kim, 2004; Leventis et al., 2011; Lobo and Zhao, 2013). Thus, we are motivated to empirically capture whether audit hours can be demanded by blockholders as their shareholding power increases to reduce perceived agency problems.

III) Large shareholders are shown to have an information comparative advantage compared to minority shareholders (Choe et al., 2007, 2012; Liu et al., 2019). However, there are differing views on how dominant shareholders utilize their power. There is evidence that large shareholders have a negative effect on governance (Beak et al., 2004; Bae, 2002; Bhjoraj and Sengupta, 2003; Chang, 2003; Joh, 2003; Mitton, 2002; Pound, 1988; Shleifer and Vishny, 1997) and expropriate wealth from minority shareholders (Mitra et al., 2007; Nelson and Mohamed-Rusdi, 2015). On the other hand, large shareholders are shown to have an incentive to demand increased governance (Bushee, 1998; Del Guercio and Hawkins, 1999; Gillan and Starks, 2000; Grinstein and Michaely, 2005; Hartzell and Starks, 2003). Thus, the association between the power of domestic shareholders relative to blockholders and foreign shareholders can provide valuable insights to the literature. In this study, it is surmised that because foreign shareholder possess an information advantage, less audit hours will be demanded. Moreover, the decreased demand for audit effort/hours will not incur a fee (risk) premium by audit firms. We are motivated to empirically capture this supposition by demonstrating whether audit hours decrease at a qualitatively indifferent (higher) rate with audit fees, to provide evidence in support (against) of audit demand (supply) theory.

Third, it is accepted that Big4 audit firms have higher levels of audit quality compared to NonBig4 firms (Behn et al., 2008; DeAngelo, 1981; Fung et al., 2016; Lisic et al., 2015). Therefore, there is the potential that based on audit demand theory and the monitoring hypothesis, groups with lower levels of local knowledge will demand higher levels of external assurances by Big4 auditors. Thus, we are motivated to discover whether an incrementally different relationship exists between the audit hour demands of Big4 clients with powerful foreign shareholders, compared to other groups. Fourth,

mandatory audit firm rotation has gained momentum as a key policy in recent years. However, the policy is shown to have an insignificant effect on audit quality in South Korea (Choi et al., 2017; Mali and Lim, 2018). Many argue that a limiting factor in audit/earnings quality is time pressure (Ettredge, et al., 2014; Guénin-Paracini, 2014; Lambert et al., 2017). In South Korea, the unique Auditor Engagement Policy implemented in 2003 has led to a situation where audit effort/hour information is transparently reported on Annual Reports. Thus, this study is motivated to provide insights to legislators about how the decision to include audit effort as fees/hours on Annual Reports can enhance audit transparency, and show how the demands of different stakeholders can influence contract negotiations.

We conduct a series of empirical tests using OLS regression to determine whether the increasing percentage holding of the largest shareholder, largest domestic shareholder or blockholder has an incremental influence on audit hours/fees over the 2004 to 2018 period. The results demonstrate that as the percentage holding of the largest foreign shareholder increases, audit hours increase. The results also show that as the power of the largest blockholder increases, audit hours also increase. On the other hand, we find that as the power of the largest domestic shareholder increases, audit hours decrease. The association between audit hours and audit fees remain qualitatively indifferent for all regressions. The results are consistent after controlling for the audit fee premium effect. Furthermore, results show that as the percentage holding of the largest shareholder increases, statistically significantly higher levels of audit hours are demanded from Big4 audit firms, relative to other ownership groups. All results support the audit demand theory supposition. The results are robust to various forms of additional analysis. This study makes several important contributions. To avoid unnecessary replication, a full discussion is included in section 6.

The paper proceeds as follows. In section 2, we review relevant literature and develop hypotheses. Section 3 illustrates our research design. Section 4 provides the results of our main analysis. In section 5, we perform additional analysis. Section 6 provides a discussion of our analyses, policy suggestions, avenues for future research and concludes.

II. Literature Review and Hypothesis

2.1. Literature review

Meta analysis by Hay et al. (2006) demonstrates that the association between audit fees and ownership concentration is mixed. Audit fees are shown to increase with foreign ownership (Alhababsah, 2019; Nelson and Mohamed-Rusdi, 2015; Pronobis and Schaeuble, 2020). Niemi (2009) demonstrates that that foreign subsidiaries in Finland pay higher audit fees compared to domestic clients. However, there is also evidence of a negative relationship between foreign ownership and audit fees (Shakhatreh and Alsmadi, 2021). Likewise, the association between audit fees and blockholder/institutional owner power is shown to be negative (Mitra et al., 2007), U-shaped (Barroso et al., 2018) and positive (Khan et al., 2015). Ali and Lesage (2013) show that the differing incentives of institutional owners can have a both a positive and negative effect on audit fees. The above studies use raw audit fees to proxy audit effort, following Simunic's (1980) landmark study that infers audit firms demand a fee premium based on perceived audit risk. However, a limitation of the audit fee-firm ownership literature is that because of audit hour data unavailability, a component of the audit effort equation is missing. Simunic (1980) considers an audit fee to consist of audit hours and a risk (fee) premium that is required to mitigate the business risk of audit firms. Thus, we surmise that a caveat exists in the literature if raw audit fee data is

associated with firm ownership without considering audit hours, because it ignores audit demand theory, and potentially misinterpret the assertions that underpin audit supply theory (Simunic, 1980; DeFond and Zhang, 2014). Taken together, the literature can be extended by studies that clearly differentiate between audit hours and fees, using audit demand and audit supply theories, as a conceptual lens.

Audit supply theory infers that to mitigate reputational damage and litigation risk, audit firms require compensation (Skinner and Srinivasan, 2012; Johnstone and Bedard, 2004; Weber, et al., 2008). Following from Simunic's (1980) study, audit fees have been shown to increase with various client risk characteristics (Alzoubi, 2016; Chen, et al., 2019; Griffin et al., 2008; Gul, 1991; Gul et al., 2003; Ji et al., 2018; Habib et al., 2018; Kinney Jr. et al., 2004; Lyon and Maher, 2005; Rose, 1999; Sangchan et al., 2020; Simon and Taylor, 1997; Taylor et al., 1999; Van der Laan and Christodoulou, 2012; Walker and Johnson, 1996; Yoon, 2020). To a large extent, the positive association between audit fees and audit risk is accepted in the literature. However, on the other hand, Gul and Goodwin (2010) show clients demand increased audit effort/fees following a credit rating downgrade to protect their credit rating status. Equally, audit fees are shown to be demanded by clients to reduce business risk and enhance financial reporting quality (Hay, 2013; Khan et al., 2015; Patterson, 2020) and corporate governance (Hay et al., 2008). The above mixed results clarify the likely reason why the relationship between audit fees and firm ownership is mixed in the literature. Within audit fees, exist a demand for audit effort, as well as an auditors perceived risk (premium). Thus, without considering the audit effort demand of clients and the fee premium required by audit firms, audit fee interpretations can be opaque.

Audit hours are considered a more robust and direct driver of audit effort compared to audit fees, because they provide a numerical representation of substantive

and control tests conducted by audit firms (Arnold and De Lange, 2004; Cullinan, 2004; Jung, 2016; Lim and Mali, 2020; Mali and Lim, 2020, 2021; Nam, 2018; Reinstein and McMillan, 2004; Vinten et al., 2005). Audit demand theory infers that audit effort is constrained by the demand of clients (Simunic, 1980). Audit hour demand is subdivided into the demand requirements of two groups i) stakeholders/shareholders and ii) management. Firstly, agency theory infers that the perception of an agency problem is enough for stakeholders to take action (Jensen and Meckling, 1976; Watts and Zimmerman, 1983). Audit effort is demanded by shareholders to reduce agency problems and managerial opportunism (Caramanis and Lennox, 2008; DeFond and Zhang, 2014; Jiang and Kim, 2004; Leventis et al., 2011; Lobo and Zhao, 2013). Thus, in instances of perceived information asymmetries, with increasing power, shareholders have the potential to demand increasing audit hours.

Secondly, audit effort/hours is shown to be demanded by management. Numerous historical studies show that audit hours are increasing with firm/audit risk, based on management's incentive to signal that financial reporting is robust (Caramanis and Lennox, 2008; Simunic, 1980; Deis and Giroux, 1992; O'Keefe et al., 1994). Jung (2016) shows that audit effort in audit hours reduce borrowing costs. Consistent with DeFond and Zhang's (2014) assertion, more recent studies include both audit fees and hours in regressions to enhance interpretation quality. Legitimacy theory is the process by which management signal effective business strategy to stakeholders (Deegan, 2009; Henderson et al., 2004; Lindblom, 1993; Schuman, 1995). Lim and Mali (2020) find that as a legitimacy strategy, the management of clients with higher credit rating demand increased levels of audit hours to signal firm quality, when audit fees do not increase at an incrementally higher rate. Mali and Lim (2021) demonstrate that management demand increasing levels of audit hours because clients with higher levels of audit

hours are shown to receive economically significant lower levels of WACC. Furthermore, Mali and Lim (2020) report that clients with high operational efficiency performance demand increasing levels of audit effort as a signalling strategy, if no fee premium is incurred. Thus, audit hour demand theory can be conceptualised as follows; based on agency theory, i) shareholders have an incentive to demand additional audit effort in hours to reduce information asymmetry. Furthermore, based on legitimacy theory ii) management have an incentive to demand audit hours as a signalling/legitimacy strategy to demonstrate organizational effectiveness. However, iii) it is likely the above audit demands will only be satisfied if audit hours do not incur at a fee premium.

In this section, theories will be introduced to explain how the incentives of ownership groups can influence audit effort/hour demand. First, based on the active monitoring hypothesis, foreign investors have an incentive to monitor firms because they lack local knowledge (Aggarwal et al., 2011; Baik et al., 2013; Gillian and Starks, 2003; Kho et al., 2009). Yoshikawa et al. (2010) surmise that foreign owners are likely to demand 'global standards' which include governance and transparency. Using a sample of Chinese firms, increasing foreign shareholder power is shown to increase corporate governance and reduce the potential of wealth expropriation (Cho et al., 2014; Huang and Zhu, 2015). Furthermore, Korean evidence shows that increasing foreign ownership enhances earnings quality (Cheon, 2009; Kim and Yoon, 2009). Taken together, based on the active monitoring hypothesis, there is the potential that foreign shareholders demand audit effort in hours to reduce information asymmetry (agency theory) due to a lack of local knowledge. Moreover, there is the potential that the management of clients with large foreign shareholders are likely to have an incentive to satisfy their external monitoring expectations (legitimacy theory).

Ownership power is shown to have both a positive (Bushee, 1998; Del Guercio and Hawkins, 1999; Gillan and Starks, 2000; Grinstein and Michaely, 2005; Hartzell and Starks, 2003) and negative (Beak et al., 2004; Bae, 2002; Bhjoraj and Sengupta, 2003; Chang, 2003; Joh, 2003; Mitton, 2002; Pound, 1988; Shleifer and Vishny, 1997) effect on a firm's governance. Thus, insights about whether powerful domestic shareholders demand/constrain audit effort can provide insights to legislators. The predominant audit supply theory literature asserts that shareholders can reduce audit effort to expropriate wealth from minority shareholders. However, domestic investors are shown to have information quality advantages compared to investors, because of their involvement in business planning (Choe et al., 2007, 2012; Liu et al., 2019). Thus, powerful investors may simply have a lower utility for audit effort/hours compared to other groups. By borrowing from Mali and Lim's (2020, 2021) framework to make demand (hour) and supply (fee) theory assertions, the literature can be extended by providing evidence to show which behaviour is more likely.

In South Korea, all shareholders with more than a 5%+ holding are registered on financial statements and listed as a blockholder. Demsetz (1983) suggests that individual blockholders have sufficient wealth at stake to take an active role in monitoring. Blockholders who oppose management policy can use voting rights to influence board composition (Pound, 1992). Blockholders are shown to have a positive influence on a firm's governance (Bethel and Liebeskind, 1993). Cho and Kim (2007) show that in Korea, blockholders are important in firms with large domestic shareholders to control the governance structures implemented by large shareholders. Liu et al. (2019) suggest that blockholders deter the opportunistic behaviour of dominant shareholders by demanding additional monitoring. However, because audit hour information is rare internationally, whether additional monitoring in the form of

audit hours can be secured based on the increasing power of blockholders is a question left unanswered.

2.2. Auditing in South Korea

A South Korean sample is used because of South Korea's unique financial reporting characteristics. In 2003, a comprehensive study into financial irregularities found that abnormal levels of earnings management caused the collapse of Daewoo, one of Korea's largest conglomerates. It also reported that 1 in 3 domestic firms was committing fraud and 3 out of 10 firms were engaged in earnings management. Therefore, in 2003, as a result of concurrent financial scandals, and a lack of public confidence in financial auditing, the Mandatory Audit Firm Rotation Policy was introduced based on a voluntary basis, amongst other policies to enhance financial reporting informativeness (Lim and Mali, 2022; Mali and Lim, 2022). The Mandatory Audit Firm Rotation Policy required firms to rotate their audit firm on a mandatory basis every six years. Because audit quality did not increase, this policy was ceased in 2010 (Choi et al., 2017; Mali and Lim, 2018). A second important corporate disclosure and transparency policy enacted in 2003 is the Auditor Engagement Rule that mandates that audit hours and fees of incumbent auditors must be included on Annual Reports. South Korea is only one of a handful of countries that includes both audit effort in hours and fees on Annual Reports. The policy is still active as of 2023. Thus, given the history of high-profile financial collapses in South Korea, and the reality that structured and transparent year-on-year audit hour/fee information is included on Annual Reports, we surmise that shareholders have the information required to make audit effort/hour demands, based on differing incentives.

2.3. Hypothesis Development

In the hypothesis section, the audit effort/hours demand incentives of differing ownership groups will be explained. First, the incentives of foreign shareholders are introduced. Whilst South Korea meets the definitions of a developed economy, its legislative infrastructure is a reason why it retains developing nation status by many institutions (Johnson et al., 2000; Woods, 2013; WTA, 2021). Thus, foreign shareholders have an incentive to demand increasing audit effort/hours for two purposes. i) Based on the monitoring hypothesis, various studies infer foreign shareholders demand increasing levels of monitoring, due to their lack of local knowledge and expertise (Cheon, 2009; Kim and Yoon, 2009; Huang and Zhu, 2015; Yoshikawa et al., 2010). Combined with weak legal infrastructure, a lack of local business knowledge can lead to agency problems. The perception of an agency problem, not its existence will motivate stakeholders to act (Jensen and Meckling, 1976; Watts and Zimmerman, 1983). Because audit effort has been shown in the literature to reduce agency problems (Caramanis and Lennox, 2008; Jiang and Kim, 2004; Leventis et al., 2011; Lobo and Zhao, 2013), there is the potential for audit hours to increase with the growing power of the largest foreign shareholder, consistent with demand theory assertions. ii) Audit hours are also shown to be demanded by management for signalling/legitimacy purposes (Lim and Mali, 2020; Mali and Lim, 2020, 2021). Thus, to satisfy the audit demands of powerful foreign shareholders, management are likely to have an incentive to secure to audit effort as a legitimacy strategy to provide assurances about organizational effectiveness. Based on the above, the following hypothesis is developed:

H.1 The growing power of the largest foreign shareholder increases audit hour demand

Second, many argue that domestic investors have an information quality advantage compared to foreign investors (Choe et al., 2007, 2012; Liu et al., 2019). There is also evidence that the increasing power of domestic owners can have a positive effect on governance (Bushee, 1998; Del Guercio and Hawkins, 1999; Gillan and Starks, 2000; Grinstein and Michaely, 2005; Hartzell and Starks, 2003). In such a situation, it can be inferred that audit hours can be considered an additional expense. Thus, as the power of the largest domestic shareholder increases, audit hour demand would decrease, consistent with audit demand theory assertions. On the other hand, there is evidence that the increasing power of domestic shareholders can have a negative effect on governance internationally (Bhujoraj and Sengupta, 2003; Pound, 1988; Shleifer and Vishny, 1997) and in Asia (Beak et al., 2004; Bae, 2002; Chang, 2003; Joh, 2003; Mitton, 2002). In this situation, based on audit supply theory, an increasing audit fee relative to audit hours would demonstrate the incentives of audit firms to reduce litigation risk and reputational damage. This study is underpinned by audit demand theory. Therefore, based on audit demand theory, the decreasing (increasing) audit demand of clients is accepted by audit firms. Thus, a negative but qualitatively indifferent association between audit fees/hours and domestic shareholder power is expected. Based on the above, the following hypothesis is developed:

H.2 The growing power of the largest domestic shareholder decreases audit hour demand

Third, countless studies show that conflicts exist between the largest domestic shareholder and blockholders. As blockholder power increases, their propensity to take part in monitoring and governance also increases (Bethel and Liebeskind, 1993; Cho and Kim, 2007; Demsetz, 1983; Pound, 1992) Furthermore, blockholders have an incentive to reduce agency problems associated with dominant owners (Liu et al.,

2019). Thus, as inferred by the largest foreign shareholder supposition, again, based on agency theory, blockholders have the potential to demand increasing levels of audit hours based on increasing equity ownership power. Again, based on legitimacy theory, it is hypothesized that because auditors are service providers, they will accept the audit effort demands of management. Based on the above, the following hypothesis is developed:

H.3 The growing power of the largest domestic blockholder raises audit hour demand

III. Research Design

3.1. Research model

In Table I, variable definitions are included for equation (1). The dependent variable, audit effort is estimated as audit hours. An audit fee interpretation is also included for completeness. Audit fees are calculated as the natural logarithm of audit fees. The variables of interest represent the power of three different owners. The percentage holding (in shares) of the largest *domestic* owner is a continuous variable estimated from 0 to 1 (0 to 100%). The percentage holding of the largest *foreign* equity shareholder is a continuous variable estimated from 0 to 1 (0 to 100%). *Related* is the equity ownership of the largest (domestic) blockholder who owns >5% of a firm's shares (excluding the largest foreign and domestic shareholders). *Related* is a continuous variable estimated from 0.05 to 1 (5% to 100%)

<Insert Table I approximately here>

$$\begin{aligned}
& \text{Audit_Effort}_{i,t} \\
& = \beta_0 + \beta_1 \text{BigOwn}_{i,t} + \beta_2 \text{Foreign}_{i,t} + \beta_3 \text{Related}_{i,t} + \beta_4 \text{Size}_{i,t} \\
& + \beta_5 \text{Big4}_{i,t} + \beta_6 \text{Investments}_{i,t} + \beta_7 \text{Intangibles}_{i,t} + \beta_8 \text{Age}_{i,t} \\
& + \beta_9 \text{ROA}_{i,t} + \beta_{10} \Delta \text{COGS}_{i,t} + \text{ID} + \text{YD} + \varepsilon_{i,t}
\end{aligned}
\tag{1}$$

Many studies include various insignificant audit effort variables into models in an attempt to control for endogeneity. Only independent variables that consistently demonstrate a statistically significant relationship with audit hours are included in the model, based on Woodside's (2016) assertion that including statistically insignificant variables reduces the predictive validity of empirical tests. To develop the most appropriate model, we conduct a battery of tests using various independent variable determinants such as firm performance (ROA, ROCE, EPS, ATO etc). But only the performance variable that demonstrates the most highly statistically significant relationship with audit effort on a constant basis (ROA) is included into the model. This process is repeated for all control variable (determinants). In all models, VIF tests are conducted. The VIF scores for all regressions are lower than 2, demonstrating no multicollinearity issues.

Based on evidence that larger and more complex clients require increasing audit effort (O'Keefe, 1994), a positive relationship between client *size* and audit hours is expected. We expect larger audit firms (*Big4*) to participate in higher audit hours (fees) because Big4 audit firms have higher expertise (Behn et al., 2008; DeAngelo, 1981; Fung et al., 2016; Ho and Ng, 1996; Lisic et al., 2015; Simon and Taylor, 2002), thus may be considered as value adding, based on audit demand theory (Simunic, 1980). We posit that increasing audit effort would be demanded by older (*Age*) and more

complex firms, consistent with the assertion of Brinn et al., (1994). Mali and Lim (2020) show return on asset has a negative effect on audit hours, thus, ROA is expected to be decreasing with audit hours. Likewise, next, we consider variables that explicitly require audit testing, which increases an auditor's workload. A positive relationship between audit hours and cost of goods sold, because if cost of goods sold (*COGS*) increase/decrease, additional substantial and control tests would be required to discover the reason for this change (Deis and Giroux, 1992). Next, business and operational risk measures are introduced. Higher levels of *investment* is expected to have a positive effect on audit hours, based on a stakeholder's incentives to reduce managerial opportunism (Caramanis and Lennox, 2008). We also expect a positive relationship between audit hour and *intangibles*, based on a client's incentives to signal reduced business risk (Jung, 2016). Industry and year dummy variables are included to control for fixed year/industry effects. All variables are winzorised at the top/bottom 1%

3.2. Sample selection

In Table II, Panel A, the sample selection process is listed. All audit effort information and financial statement information is downloaded from three Korean databases, Dataguide 5.0, KIS-Value and TS2000. After excluding financial firms, we download 14,612 firm year observations for all available firms listed on the Korean stock exchange from 2004 to 2018. We select 2004 as the initial period because most firms report audit hour/fee information from 2004 onwards. 2,585 firms-year observations are excluded because of insufficient data, leaving a final sample of 12,027 firm year observations. In Panel B, details about audit fees and audit hours are provided. From 2004 to 2005, audit effort in hours increased markedly. However, following 2005,

audit hours increased on a consistent basis. Audit fees have increased on a consistent basis for the entirety of the sample period.

<Insert Table II approximately here>

IV. Empirical results

4.1. Descriptive statistics and Pearson correlations

In Table III, details of descriptive statistics and Person correlations are provided. As predicted, audit hours (-0.03^{***}) and fees (-0.07^{***}) decline as the share-ownership of the largest domestic shareholder increases. Also consistent with our expectation, audit hours (0.26^{***}) and fees (0.41^{***}) increase based on the power of the largest foreign owner. Moreover, as the percentage ownership of largest blockholders increases, audit effort in fees (0.02^{*}) and hours (0.04^{***}) are shown to increase. The results imply that based on the increasing power of different ownership groups, clients can demand different level of audit effort, and this demand is accommodated by audit firms. Furthermore, the association between audit fees and audit hours is shown to be 0.60^{***}, implying the association between audit fees/hours are not equivalent, consistent with audit demand/supply theory assertions. All univariate results show the expected signs.

<Insert Table III approximately here>

4.2. Multivariate Analysis

Table IV provides the results for the main analysis. In Panel A, a positive association is demonstrated between audit hours and the increasing power of the

largest foreign shareholder (coeff 0.39; t value, 4.20). In Panel B, the association between audit fees and the increasing power of the largest foreign shareholder is incrementally lower, but consistent with audit hours (coeff, 0.32; t value, 8.76). These results infer that based on the monitoring hypothesis, foreign shareholders that lack local knowledge demand increasing audit effort to reduce agency (theory) problems. Furthermore, because the association between audit fees/hours are qualitatively indifferent, no fee premium is required by audit firms for increasing audit effort, implying that management are likely to accept the audit effort demands of large domestic shareholders as their power increases, as a signalling / legitimacy (theory) strategy (see section 5.5 for an empirical test to support this assertion). Taken together, consistent with previous studies (Lim and Mali, 2020; Mali and Lim, 2020, 2021), empirical results provide evidence in support of our first hypothesis, based on audit demand theory.

On the other hand, in Panel A, as the percentage ownership of the largest domestic shareholder increases, audit hours is shown to decrease (coeff -0.54; t value, -8.82). In Panel B, again, a virtually consistent relationship exists between fees and the increasing power of the largest domestic shareholder (coeff, -0.50 t value, -20.35). Consistent with audit supply theory, if reduced audit hours would be associated with audit risk, based on the potential for the largest domestic shareholder to exercise power to expropriate wealth or for opportunistic reasons, audit fees would be expected to increase at a higher fee relative to audit hours, signalling an audit team would include partners and specialists to reduce audit risk. However, because the results are qualitatively indifferent, it implies a balanced audit team including trainees, inferring that audit risk is not substantial. The results therefore infer that consistent with audit demand theory, lower levels of audit hours are included into audit contracts because

increasing audit hours can be considered an unnecessary expense for the largest domestic shareholder. The results allow us to accept our second hypothesis.

<Insert Table IV approximately here>

In Panel A, as the equity ownership of the largest blockholder increases, additional audit effort is demanded (coeff 0.21; t value 3.18). The association with audit fees is lower (coeff 0.08; t value 3.17), but statically significantly positive. The results infer that as the power of the largest blockholder increases, blockholders are likely to demand increasing levels of audit effort to reduce agency (theory) problems, potentially to challenge the largest domestic shareholder. Moreover, management are likely to satisfy the requests of blockholders based on their increasing power as a signalling / legitimacy (theory) strategy. The results allow us to accept hypothesis three. **Since the two models (Panel A & B) in Table 4 are identical (not comparative analyses using two different groups), except, the dependent variables are different (Audit hours for Panel A, Audit fees for Panel B), we do not compare the two coefficients. However, in the additional comparative analysis section below (5.3), we statistically compare coefficients for different groups, that may have different incentives.**

V. Additional Analysis

5.1 Different group analysis based on credit risk

In all three hypotheses, it is assumed that the underlying factors that influence audit hour/effort demand are the incentives of different ownership groups. For this assertion to be supported, the association between audit effort (fees/hours) and

ownership power would be consistent with our main findings, regardless of risk partitioning. Therefore, to add robustness to the main analysis, the sample is divided into groups acknowledged as having different levels of business risk, based on credit rating status. Credit rating agencies issue credit ratings based on a firm's ability to survive a business cycle (Carey and Hrycay, 2001). Investment (IG) and non-investment grade (NIG) firms can be considered as having inherently different forms of risk (Alissa et al., 2013; Mali and Lim, 2019). Thus, if the association between firm ownership and audit fee/hours are qualitatively similar and equivalent to our main analysis regardless of risk partitioning, the results would provide additional support for the underlying assertion of audit demand theory (in all three hypotheses).

In Table V, Panel A, the results of mean difference tests are provided. The results demonstrate that riskier NIG clients must pay higher audit fees (coeff -5.51, p value 0.01) and secure higher audit hours (coeff -2.21, p value 0.01), consistent with previous studies. After controlling for audit effort determinants, the results show the association between audit fees/hours and shareholder power is qualitatively indifferent for NIG/IG samples. In Panel B, the relationship between audit fees and audit hours are positive and consistent for the largest foreign shareholder (*Foreign; audit hour IG coeff 0.37; t value 3.38; NIG coeff 0.54; t value 2.67, audit fee IG coeff 0.33; t value 7.82; NIG coeff 0.32; t value 3.89*) and blockholder (*Related; audit hour IG coeff 0.21; t value 2.46; NIG coeff 0.19; t value 1.87, audit fee IG coeff 0.08; t value 2.76; NIG coeff 0.04; t value 1.11*). Moreover, the relationship between audit fees and audit hours are negative and consistent for the largest domestic shareholder for NIG and IG samples (*BigOwn; audit hour IG coeff -0.52; t value -6.25; NIG coeff -0.56; t value -5.92, audit fee IG coeff -0.47; t value -14.74; NIG coeff -0.44; t value -11.31*). Taken together, consistent results

regardless of risk partitioning provide further support for audit demand theory, and modelling robustness.

<Insert Table V approximately here>

5.2 Big4 / NonBig4 audit effort demand

The extant literature shows that Big4 auditors provide robust audit quality assurances (DeAngelo, 1981; Fung et al., 2016; Simon and Taylor, 2002). Thus, we have two objectives when we divide our samples into Big4 and NonBig4 clients: i) To test model robustness by demonstrating whether the association between audit fees/hour is consistent regardless of Big4/NonBig4 partitioning (Table V, Panel C and D). ii) To test whether (foreign) shareholder demand increasing levels of audit services based on Big4 NonBig4 (IG/NIG) status (Table VI). First, in Panel C, as expected, the results of mean difference tests show that Big4 audit firms require higher audit fees and hours based on audit expertise/quality assertions.

In Panel D, the relationship between audit fees and audit hours are positive and generally consistent for the largest foreign shareholder (*Foreign; audit hour Big4 coeff 0.43; t value 4.23; NonBig4 coeff 0.03; t value 0.14, audit fee Big4 coeff 0.31; t value 7.06; NonBig4 coeff 0.16; t value 2.23*) and blockholders (*Related; audit hour Big4 coeff 0.12; t value 1.61; NonBig4 coeff 0.27; t value 2.58, audit fee Big4 coeff 0.10; t value 2.99; NonBig4 coeff 0.04; t value 1.23*), regardless of Big4/NonBig4 partitioning. However, the more positive (negative) association between audit hours and fees for blockholders (foreign shareholders) provides evidence that NonBig4 auditors provide a discount to blockholders (demand a fee premium from foreign shareholders) as their power increases. The relationship between audit fees and audit hours are negative and

consistent for the largest domestic shareholder for Big4/NonBig4 samples (*BigOwn*; *audit hour Big4 coeff* -0.43; *t value* -5.32; *NonBig4 coeff* -0.63; *t value* -6.70, *audit fee Big4 coeff* -0.52; *t value* -14.99; *NonBig4 coeff* -0.45; *t value* -13.34). Again, the results provide evidence that our model is robust.

<Insert Table VI approximately here>

5.3 Big4/NonBig4 (IG/NIG) comparative analysis

In the Big4/NonBig4 and IG/NIG analyses above (Table 5), we cannot statistically compare coefficients. In order to directly compare the effect of ownership on audit effort demand, for different incentive groups, (a. IG vs NIG and b. Big4 vs NonBig4), we interact the IG(BIG4) dummy variable, with the main ownership variables of interest. Specifically, the differing audit hour/fee associations shown above for NonBig4 clients with increasingly powerful foreign shareholders/blockholders implies the audit demands of both ownership groups are different. NonBig4 auditors may not possess the capability to provide the audit assurances required by large foreign shareholders. However, they may have the resources and skills required to satisfy the audit effort demands of blockholders. Thus, NonBig4 audit firms may require a fee premium as the demands and the power of the largest shareholder increases. Thus, we question the argument whether there is an incremental increase in Big4 audit effort, based on foreign shareholder power. We also include a firm risk (NIG/IG) interpretation for completeness. In Table VI, the *Ownership*Big4/IG* interaction term represent the i) the three ownership groups, ii) NIG/IG group partitioning and iii) Big4/NonBig4 partitioning. The IG and Big4 dummy variables take the value of 1, the value of 0 represents NIG and NonBig4 samples.

Our first hypothesis infers that based on the monitoring hypothesis and audit demand theory, increasing levels of audit effort can be demanded by the largest foreign shareholder. Thus, there is an expectation that based on the perceived audit quality of Big4 audit firms, as the power of the largest foreign shareholder increases, additional audit effort can be demanded from Big4 auditors. In columns 1 and 2, IG/NIG status is not shown to have an incremental effect on audit fees or hours (Ownership*IG). In columns 3 and 4, the *Foreign*Big4* interaction term demonstrates that as foreign ownership power increases, incrementally higher levels of audit hours are demanded from Big4 audit firms (coeff 0.81; t value, 3.89). Moreover, audit fees increase at a lower rate (coeff 0.51; t value, 6.15). Taken together, the results imply that foreign owners value the services of Big4 audit firms. Thus, as their power increase, they secure increasing audit hours, potentially, at a discounted rate.

5.4 Risk/uncertainty analysis

Stock price volatility is an established indicator of firm-level risk, relative to the market. In Table VII, stock price volatility is used as a firm specific trait, to distinguish between audit hour (demand) and audit fee (supply) levels. Volatility is computed as the standard deviation of yearly stock return multiplied by the square root of trading days. The results from Table VII show, as expected, that as stock price volatility increases, audit fees (Coeff 0.04, t value 3.36) and hours (Coeff 0.24, t value 8.40) increase. However, more importantly, after controlling for stock price volatility, empirical results for the main analysis remain consistent, with large foreign owners (hours: coeff 0.35; t value, 3.70, fees coeff 0.34; t value, 8.98) and blockholders (hours: coeff 0.19; t value, 2.98, fees coeff 0.07; t value, 2.85) demanding increasing audit effort in fees and hours, based on increasing shareholder power. On the other hand, as the

shareholding power of the largest domestic owner increases, audit effort demand continues to decrease (hours: coeff -0.61; t value, -9.72, fees coeff -0.48; t value, -19.39). Taken together, consistent results infer that the effect of ownership on audit effort demand is robust, after controlling for firm specific risk/uncertainty traits.

<Insert Table VII approximately here>

5.5 Differentiation between fees and hours

The study strives to distinguish between audit fees and hours. However, one may question how audit fees and hours can clearly be differentiated, because there should be a strong positive association between audit fees and hours. In order to resolve this issue, the following procedure is introduced. First, we compute a client's audit fee premium (abnormal audit fee) using the equation below. In the below model (2), *Audit Fee* is listed as the dependent variable. Independent variables represent key determinants of audit risk, based on previous literature.

$$\begin{aligned}
 \text{Audit_Fee}_{i,t} = & \beta_0 + \beta_1 \text{Size}_{i,t} + \beta_2 \text{Lev}_{i,t} + \beta_3 \text{Loss}_{i,t} + \beta_4 \text{Current}_{R_{i,t}} + \beta_5 \text{ROA}_{i,t} + \beta_6 \text{BIG4}_{i,t} \\
 & + \beta_7 \text{TRM}_{i,t} + \beta_8 \text{AEM}_{i,t} + \beta_9 \text{Interest_Coverage}_{i,t} + \beta_{10} \text{Volatility}_{i,t} + \text{ID} + \text{YD} \\
 & + \varepsilon_{i,t}
 \end{aligned}
 \tag{2}$$

Key determinants of audit risk include *Size* (Natural logarithm of total assets), *Lev* (Total liabilities to total assets ratio), *Loss* (A dummy variable that is 1 if previous net income is negative, 0 otherwise), *Current_r* (the ratio of current assets to current liabilities ratio), *ROA* (net income divided by total assets), *Big4* (A dummy variable that takes 1 if an auditing firm is Big4 auditor, 0 otherwise), *TRM* (Aggregated real earnings management measure based on Cohen and Zarowin, 2010), *AEM* (Performance adjusted

discretionary accruals based on Kothari et al., 2005), *Interest Coverage* (Operating income to interest expense), *Volatility* (Standard deviation of yearly stock return * Square root of trading days) and industry and year fixed effects. The regression results for this model is included in Table VIII, Panel A. As expected, all audit fee/risk determinants show statistically significant and predicted results. Specifically, *Current R* (Coeff -0.00, t value -9.04) and *ROA* (Coeff -0.17, t value -2.98) show significant and negative coefficients. *Lev* (Coeff 0.06, t value 3.18) and *Loss* (Coeff 0.11, t value 9.31), amongst other risk variables show significant and positive coefficients. The model's mean variance inflation factor (VIF) is 1.29, inferring the model does not have a multicollinearity problem.

$$\begin{aligned}
 & \text{Audit_Effort(hours)}_{i,t} \\
 & = \beta_0 + \beta_1 \text{BigOwn}_{i,t} + \beta_2 \text{Foreign}_{i,t} + \beta_3 \text{Related}_{i,t} + \beta_4 \text{Abnormal Audit Fee}_{i,t} \\
 & + \beta_5 \text{Size}_{i,t} + \beta_6 \text{Big4}_{i,t} + \beta_7 \text{Investments}_{i,t} + \beta_8 \text{Intangibles}_{i,t} + \beta_9 \text{Firm_Age}_{i,t} \\
 & + \beta_{10} \text{ROA}_{i,t} + \beta_{11} \Delta \text{COGS}_{i,t} + \text{ID} + \text{YD} + \varepsilon_{i,t}
 \end{aligned}
 \tag{3}$$

<Insert Table VIII approximately here>

The residual from model (2) represents abnormal level of audit fees, based on audit risk determinants. The audit fee premium (*AbAudit_fee*) residual can therefore be considered a robust indicator of the fee premium demanded by audit firms, based on client risk. In the second stage regression, model (3), the effect of firm ownership on audit hours is determined after controlling for *AbAudit_fee*. Panel B, Table VIII reports the results for model (3). After controlling for the audit fee premium effect, we continue to find that the association between audit hour demand and the power of the largest domestic owners (Coeff -0.42, t value -17.95) is negative. However, the association between the increasing ownership of foreign ownership (Coeff 0.29, t value 8.20), and

blockholders (Coeff 0.05, t value 2.18) are positive. Taken together, the results provide further evidence in support of the main analysis, inferring that the effect of ownership groups on audit hours is incremental, after controlling for audit fee premiums.

VI. Conclusion and discussion

This study makes several important contributions to the literature and audit policymaking. Firstly, Simunic (1980) infers that audit effort consists of audit fees, a risk premium and audit hours. In empirical studies, audit fees are often used to proxy audit risk (premium). However, in the extant literature, the relationship between audit fees and firm ownership is mixed (Ali and Lesage, 2013; Alhababsah, 2019; Barroso et al., 2018; Hay et al., 2006; Khan et al., 2015; Nelson and Mohamed-Rusdi, 2015; Mitra et al., 2007; Pronobis and Schaeuble, 2020; Shakhathreh and Alsmadi, 2021). A potential reason for mixed results is because, whilst audit hours are a felicitous driver of audit effort (Arnold and De Lange, 2004; Cullinan, 2004; Jung, 2016; Nam, 2018; Reinstein and McMillan, 2004; Vinten et al., 2005), they are rarely used in empirical studies because of data unavailability. DeFond and Zhang (2014) surmise that using a single audit effort input (audit fees) in audit effort studies reduces interpretation quality. We extend the literature by reporting how ownership power (largest foreign/domestic shareholder and blockholder) can influence audit effort in both hours and fees. To the best of our knowledge, this is the first study to provide inferences from both audit demand and supply theory perspectives to explain how the incentives of different groups can influence contract negotiations. Moreover, to the best of our knowledge, this is the first study to introduce an audit effort model to examine the relationship between firm ownership and audit hours after controlling for the audit fee premium effect.

Second, we develop a framework to explain why the largest i) foreign shareholder and ii) blockholder demand increasing audit hours based on growing ownership power. The monitoring hypothesis infers international investors seek external monitoring because they lack local knowledge in foreign markets (Cho et al., 2014; Huang and Zhu, 2015; Yoshikawa et al., 2010). Minority shareholders/blockholders are shown to use their power to reduce agency problems, associated with dominant owners (Bethel and Liebeskind, 1993; Cho and Kim, 2007; Demsetz, 1983; Liu et al., 2019; Pound, 1992). The perception of an agency problem will lead to stakeholders to action (Jensen and Meckling, 1976; Watts and Zimmerman, 1983). Audit effort is shown to reduce agency problems (Caramanis and Lennox, 2008; Jiang and Kim, 2004; Leventis et al., 2011; Lobo and Zhao, 2013). Thus, we provide evidence that as equity ownership of the largest foreign shareholder / blockholder increases, their power to include audit effort into contracts to reduce agency problems grows. We also find a qualitatively indifferent association between audit hours/fees. Therefore, the result are consistent with arguments that the audit demands of clients are accepted as a legitimacy/signalling strategy by management (Lim and Mali, 2020, 2023; Mali and Lim, 2020, 2021).

Third, we demonstrate that as the power of the largest domestic shareholder increases, audit hours decrease. However, this result can be interpreted in two ways. Previous studies imply that large shareholders have an incentive to expropriate wealth (Bae et al., 2002; Baek., 2004; Chang, 2003; Mitton, 2002; Joh, 2003; Cho and Kim, 2007). On the other hand, because the largest domestic owner has an information comparative advantage and closer working relationships with management, audit effort may be considered an unnecessary expense (Buchner et al., 2016; Cho and Kim, 2007). To disengage which supposition is more likely, we utilize an audit demand/supply

framework, used by Lim and Mali (2020) and Mali and Lim, (2020,2021). Incrementally increasing audit fees infer higher audit risk and the selection of audit partners and specialists (audit supply theory). A qualitatively indifferent association between audit fees/hours infers a balanced audit team including trainees and more experienced auditors (audit demand theory). Based on the qualitatively indifferent negative association between the increasing power of the largest domestic owners and both audit fees/hours, again, we provide further evidence in support of (against) audit demand (supply) theory.

Fourth, we provide evidence NonBig4 auditors offer a discount to blockholders based on increasing ownership power. On the other hand, we find NonBig4 audit firms charge a fee premium to foreign shareholders. The extant literature shows that Big4 auditors have higher levels of audit quality compared to NonBig4 auditors (DeAngelo, 1981; Fung et al., 2016; Simon and Taylor, 2002). The different association between fees/hours for foreign shareholders and blockholders infer that NonBig4 auditors have the skills, expertise and perceived audit quality to satisfy the audit demands of the largest blockholder, but not the largest foreign shareholder. When we test whether the largest foreign shareholder demands increasing Big4 audit effort/quality, compared to other groups, we find incrementally higher levels of audit hours are demanded. Therefore, we contribute to the literature by showing instances of how i) the audit demands of clients, as well as ii) the incentives of Big4/NonBig4 audit firms influence contract negotiations.

Fifth, South Korea is a unique setting for this study because very few countries require firms to list audit effort in hours on Annual Reports as a rule. In the extant literature, there is an ongoing debate about who should be responsible for identifying accounting threats (DeZoort, 1997; Kang et al., 2019). However, against the backdrop of

this debate, there are various caveats. Audit reports provide very little evidence to demonstrate the assurance tasks completed by clients, or the direct substantive and control tests imparted by audit firms to enhance audit quality. Auditors are shown to feel time pressure to conduct audits of sufficient quality (Barrainkua and Espinosa-Pike, 2015; Ettredge et al., 2014; Guénin-Paracini, 2014; Lambert et al., 2017). Furthermore, evidence from the infamous Enron debacle shows that *ex post*, high audit fees were received by Andersen, but low levels of audit hours were imparted, inferring very few audit tests were conducted (Alexander et al., 2002; Cahan et al., 2009; Markelevich et al., 2005). Taken together, there is strong evidence that reporting audit fee information can provide insights about the demands of audit firms to mitigate reputational risk and reputational damage. Furthermore, there is growing evidence that details about audit hours can provide information to market participants about a client's demand for audit quality. However, in the vast majority of countries, audit hour information is simply excluded from financial reports. Thus, to offer a normative perspective, we would encourage legislators to adopt the audit hour policy currently practiced in South Korea. We conjecture that if audit hour information was publicly available on a relative basis on Annual Reports, it would; improve audit transparency; enhance confidence in the audit profession; be an intervening factor that could influence audit effort demand; potentially decrease instances of financial collapses; but if a bankruptcy situation occurs, audit hour information could provide evidence whether sufficient audit effort was imparted.

Finally, for completeness, we list limitations, alternate explanations and avenues for future research. We do not control for board/management data. This study is specifically designed to capture the audit demands of three groups, the largest blockholder, and the largest foreign/domestic shareholders. We encourage future

studies to demonstrate the influence of CEO ownership, gender, external/internal directors and other board characteristics on audit hour demand. Moreover, in South Korea, audit policies have triggered a pricing competition (Kwon et al., 2014; Park and Lee, 2008). Thus, in South Korea, because of price competition, increasing audit hours may be influenced by a client's power to demand audit hours for a reduced fee. To generalize our findings, where audit hour data is available, we would encourage future studies to test whether they find similar results. Finally, we do not control for audit tenure/switch. The reason we do not control for audit tenure/switch is because the Mandatory Audit Firm Rotation Policy in Korea mandated the removal of incumbent auditors from 2003-2010. Thus, audit tenure/switch must be excluded to reduce the potential of bias.

References

- Alzoubi, E. S. S. (2016). Audit quality and earnings management: evidence from Jordan. *Journal of Applied Accounting Research*, 17(2) 170-189.
- Aggarwal, R., Erel, I., Ferreira, M., & Matos, P. (2011). Does governance travel around the world? Evidence from institutional investors. *Journal of Financial Economics*, 100(1), 154-181.
- Alhababsah, S. (2019). Ownership structure and audit quality: An empirical analysis considering ownership types in Jordan. *Journal of International Accounting, Auditing and Taxation*, 35, 71-84. 35(2), 71-84.
- Ali, C. B., & Lesage, C. (2013). Audit pricing and nature of controlling shareholders: Evidence from France. *China journal of accounting Research*, 6(1), 21-34.
- Alexander, D., Burns, G., Manor, R., McRoberts, F., & Torriero, E. A. (2002). The fall of Andersen. *Chicago Tribune*, 1, 1-12.
- Alissa, W., Bonsall IV, S. B., Koharki, K., & Penn Jr, M. W. (2013). Firms' use of accounting discretion to influence their credit ratings. *Journal of Accounting and Economics*, 55(2-3), 129-147.
- Arnold, B., & De Lange, P. (2004). Enron: an examination of agency problems. *Critical Perspectives on Accounting*, 15(6-7), 751-765.
- Bae, K. H., Kang, J. K. and Kim, J. M. (2002) Tunneling or Value Added? evidence from mergers by Korean business groups, *Journal of Finance*, 57(6) 2695–2740.
- Baek, J. S., Kang, J.K. and Park, K. S. (2004) Corporate Governance and Firm Value: evidence from the Korean financial crisis, *Journal of Financial Economics*, 71(5), 265–313.
- Baik, B., Kang, J. K., Kim, J. M., & Lee, J. (2013). The liability of foreignness in international equity investments: Evidence from the US stock market. *Journal of International Business Studies*, 44(4), 391-411.
- Barroso, R., Ben Ali, C., & Lesage, C. (2018). Blockholders' ownership and audit fees: The impact of the corporate governance model. *European Accounting Review*, 27(1), 149-172.
- Barrainkua, I., & Espinosa-Pike, M. (2015). New insights into underreporting of time: the audit partner context. *Accounting, Auditing & Accountability Journal*, 28(4), 494-514.
- Behn, B. K., Choi, J. H., & Kang, T. (2008). Audit quality and properties of analyst earnings forecasts. *The Accounting Review*, 83(2), 327-349.
- Bethel, J. E., & Liebeskind, J. (1993). The effects of ownership structure on corporate restructuring. *Strategic Management Journal*, 14(1), 15-31.
- Bhojraj, S., & Sengupta, P. (2003). Effect of corporate governance on bond ratings and yields: The role of institutional investors and outside directors. *The journal of Business*, 76(3), 455-475.
- Brinn, T., Peel, M. J., & Roberts, R. (1994). Audit fee determinants of independent & subsidiary unquoted companies in the UK—an exploratory study. *The British Accounting Review*, 26(2), 101-121.
- Buchner, A., Espenlaub, S., Khurshed, A., & Mohamed, A. (2018). Cross-border venture capital investments: The impact of foreignness on returns. *Journal of International Business Studies*, 49(5), 575-604.
- Bushee, B. J. (1998). The influence of institutional investors on myopic R&D investment behavior. *Accounting Review*, 305-333.

- Cahan, S. F., Emanuel, D., & Sun, J. (2009). Are the reputations of the large accounting firms really international? Evidence from the Andersen-Enron affair. *Auditing: A Journal of Practice & Theory*, 28(2), 199-226.
- Caramanis, C., & Lennox, C. (2008). Audit effort and earnings management. *Journal of Accounting and Economics*, 45(1), 116-138.
- Carey, M., and Hrycay, M. (2001). Parameterizing credit risk models with rating data. *Journal of Banking and Finance*. 25(1), 197-270..
- Chang, S. J. (2003) Ownership Structure, Expropriation, and Performance of Group-Affiliated Companies in Korea, *Academy of Management Journal*, 46, 238-253.
- Chen, H., Hua, S., Liu, Z., & Zhang, M. (2019). Audit fees, perceived audit risk, and the financial crisis of 2008. *Asian Review of Accounting*, 27(1), 97-111.
- Cheon, Y. S. 2003. The association between foreign and domestic institutional ownership and earnings quality. *Korean Management Review*, 32(4): 1001-1032.
- Choe, H., Kho, B. C., & Stulz, R. M. (2007). Do foreign investors destabilize stock markets? The Korean experience in 1997. *Journal of Financial Economics*, 54(2), 227-264.
- Choe, H., Kho, B. C., & Stulz, R. M. (2012). Do domestic investors have an edge? The trading experience of foreign investors in Korea. *The Review of Financial Studies*, 18(3), 795- 829.
- Cho, K. R., Huang, C. H., & Padmanabhan, P. (2014). Foreign ownership mode, executive compensation structure, and corporate governance: Has the literature missed an important link? Evidence from Taiwanese firms. *International Business Review*, 23(2), 371-380.
- Cho, D. S., & Kim, J. (2007). Outside directors, ownership structure and firm profitability in Korea. *Corporate Governance: An International Review*, 15(2), 239-250.
- Choi, J. S., Lim, H. J., & Mali, D. (2017). Mandatory audit firm rotation and Big4 effect on audit quality: evidence from South Korea. *Asian Academy of Management Journal of Accounting and Finance*, 13(1), 1-40.
- Cohen, D. A., Zarowin, P. (2010). Accrual-based and real earnings management activities around seasoned equity offerings. *Journal of Accounting and Economics*, 50(1), 2-19.
- Cullinan, C. (2004). Enron as a symptom of audit process breakdown: can the Sarbanes-Oxley Act cure the disease? *Critical perspectives on Accounting*, 15(6-7), 853-864.
- DeAngelo, L. E. (1981). Auditor size and audit quality. *Journal of Accounting and Economics*, 3(3), 183-199.
- DeFond, M., & Zhang, J. (2014). A review of archival auditing research. *Journal of Accounting and Economics*, 58(3), 275-326.
Henderson et al., 2004; Lindblom, 1993; Schuman, 1995).
- Deegan, C. (2009), *Financial Accounting Theory*, 3rd ed., McGraw Hill, Sydney.
- Del Guercio, D., & Hawkins, J. (1999). The motivation and impact of pension fund activism. *Journal of Financial Economics*, 52(3), 293-340.
- Deis Jr, D. R., & Giroux, G. A. (1992). Determinants of audit quality in the public sector. *Accounting Review*, 462-479.
- Demsetz, H. (1983). The structure of ownership and the theory of the firm. *The Journal of Law and Economics*, 26(2), 375-390.
- DeZoort, F. (1997). An investigation of audit committees' oversight responsibilities. *Abacus*, 33(2), 208-227.

- Ettredge, M., Fuerherm, E. E., & Li, C. (2014). Fee pressure and audit quality. *Accounting, Organizations and Society*, 39(4), 247-263.
- Fung, S. Y. K., Zhou, G. S., & Zhu, X. K. (2016). Monitor objectivity with important clients: Evidence from auditor opinions around the world. *Journal of International Business Studies*, 47(3), 263-294.
- Gillan, S. L., & Starks, L. T. (2000). Corporate governance proposals and shareholder activism: The role of institutional investors. *Journal of Financial Economics*, 57(2), 275-305.
- Griffin, P. A., Lont, D. H., & Sun, Y. (2008). Corporate governance and audit fees: Evidence of countervailing relations. *Journal of Contemporary Accounting & Economics*, 4(1), 18-49.
- Grinstein, Y., & Michaely, R. (2005). Institutional holdings and payout policy. *The Journal of Finance*, 60(3), 1389-1426.
- Guénin-Paracini, H., Malsch, B., & Paillé, A. M. (2014). Fear and risk in the audit process. *Accounting, Organizations and Society*, 39(4), 264-288.
- Gul, F. A. (1991). Size of audit fees and perceptions of auditors' ability to resist management pressure in audit conflict situations. *Abacus*, 27(2), 162-172.
- Gul, F. A., Ng, A. Y., & Tong, M. Y. J. W. (2003). Chinese auditors' ethical behavior in an audit conflict situation. *Journal of Business Ethics*, 42(4), 379-392.
- Gul, F. A., & Goodwin, J. (2010). Short-term debt maturity structures, credit ratings, and the pricing of audit services. *The Accounting Review*, 85(3), 877-909.
- Habib, A., Hasan, M. M., & Al-Hadi, A. (2018). Money laundering and audit fees. *Accounting and Business Research*, 48(4), 427-459.
- Hartzell, J. C., & Starks, L. T. (2003). Institutional investors and executive compensation. *The Journal of Finance*, 58(6), 2351-2374.
- Hay, D. C., Knechel, W. R., & Wong, N. (2006). Audit fees: A meta-analysis of the effect of supply and demand attributes. *Contemporary accounting research*, 23(1), 141-191.
- Hay, D. (2013). Further evidence from meta-analysis of audit fee research. *International Journal of Auditing*, 17(2), 162-176.
- Hay, D., Knechel, W. R., & Ling, H. (2008). Evidence on the impact of internal control and corporate governance on audit fees. *International Journal of Auditing*, 12(1), 9-24.
- Henderson, S., Peirson, G. and Harris, K. (2004), *Financial Accounting Theory*, Pearson Prentice Hall, Sydney.
- Ho, S. W., & Ng, P. P. (1996). The determinants of audit fees in HongKong: An empirical study. *Asian review of Accounting*, 4(2), 32-50.
- Huang, W., & Zhu, T. (2015). Foreign institutional investors and corporate governance in emerging markets: Evidence of a split-share structure reform in China. *Journal of Corporate Finance*, 32, 312-326.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305-360.
- Ji, X. D., Lu, W., & Qu, W. (2018). Internal control risk and audit fees: Evidence from China. *Journal of Contemporary Accounting & Economics*, 14(3), 266-287.
- Jiang, L., & Kim, J. B. (2004). Foreign equity ownership and information asymmetry: Evidence from Japan. *Journal of International Financial Management & Accounting*, 15(3), 185-211.
- Joh, S. (2003) Corporate Governance and Firm Profitability: evidence from Korea before the economic crisis, *Journal of Financial Economics*, 287-322.

- Johnson, S., Boone, P., Breach, A., & Friedman, E. (2000). Corporate governance in the Asian financial crisis. *Journal of financial Economics*, 58(1-2), 141-186.
- Johnstone, K. M., & Bedard, J. C. (2004). Audit firm portfolio management decisions. *Journal of Accounting Research*, 42(4), 659-690.
- Jung, S. H. (2016). Audit Effort and Market-perceived Risk: Evidence from South Korea. *Australian Accounting Review*, 26(3), 255-270.
- Kalelkar, R. (2017). Effect of audit and compensation committee membership overlap on audit fees. *Asian Review of Accounting*.
- Kang, M., Lee, H. Y., Mande, V., & Woo, Y. S. (2019). Audit Firm Attributes and Auditor Litigation Risk. *Abacus*, 55(4), 639-675.
- Khan, A., Muttakin, M. B., & Siddiqui, J. (2015). Audit fees, auditor choice and stakeholder influence: Evidence from a family-firm dominated economy. *The British Accounting Review*, 47(3), 304-320.
- Kho, B. C., Stulz, R. M., & Warnock, F. E. (2009). Financial globalization, governance, and the evolution of the home bias. *Journal of Accounting Research*, 47(2), 597-635.
- Kim, M. T., & Yoon, S. S. (2009). Impact of foreign institutional investors on earnings management: Comparison with domestic institutional investors. *The Korean Academic Association of Business Administration*, 22(2), 1093-1114.
- Kinney Jr, W. R., Palmrose, Z. V., & Scholz, S. (2004). Auditor independence, non-audit services, and restatements: Was the US government right? *Journal of Accounting Research*, 42(3), 561-588.
- Kothari, S. P., Leone, A. J., & Wasley, C. E. (2005). Performance matched discretionary accrual measures. *Journal of accounting and economics*, 39(1), 163-197.
- Kwon, S. A., Lim, Y., and Simnett, R. (2014). The effect of mandatory audit firm rotation on audit quality and audit fees: Empirical evidence from the Korean audit market. *Auditing: A Journal of Practice and Theory*, 33(4), 167-196.
- Lambert, T. A., Jones, K. L., Brazel, J. F., & Showalter, D. S. (2017). Audit time pressure and earnings quality: An examination of accelerated filings. *Accounting, Organizations and Society*, 58(1), 50-66.
- Leventis, S., Weetman, P., & Caramanis, C. (2011). Agency costs and product market competition: The case of audit pricing in Greece. *The British Accounting Review*, 43(2), 112-119.
- Liu, C., Chung, C. Y., Sul, H. K., & Wang, K. (2019). Does hometown advantage matter? The case of institutional blockholder monitoring on earnings management in Korea. *Journal of International Business Studies*, 49(2), 196-221.
- Lim, H. J., & Mali, D. (2020). Do credit ratings influence the demand/supply of audit effort?. *Journal of Applied Accounting Research*, 22(1), 72-92.
- Lim, H. J., & Mali, D. (2022). A comparative analysis of human capital information opaqueness in South Korea and the UK. *Journal of Intellectual Capital*, 23(6), 1296-1327.
- Lim, H. J., & Mali, D. (2023). An analysis of the positive effect of real earnings management on financial performance. *Asian Review of Accounting*, (ahead-of-print).
- Lindblom, C.K. (1993), "The implications of organisational legitimacy for corporate social performance and disclosure", paper presented at the Critical Perspectives on Accounting Conference, New York, NY.
- Lisic, L. L., Silveri, S. D., Song, Y., & Wang, K. (2015). Accounting fraud, auditing, and the role of government sanctions in China. *Journal of Business Research*, 68(6), 1186-1195.

- Lobo, G. J., & Zhao, Y. (2013). Relation between audit effort and financial report misstatements: Evidence from quarterly and annual restatements. *The Accounting Review*, 88(4), 1385-1412.
- Lyon, J. D., & Maher, M. W. (2005). The importance of business risk in setting audit fees: Evidence from cases of client misconduct. *Journal of Accounting Research*, 43(1), 133-151.
- Madah Marzuki, M., & Muhammad Al-Amin, M. S. (2021). The effect of audit fees, audit quality and board ownership on tax aggressiveness: evidence from Thailand. *Asian Review of Accounting*, 29(5), 617-636.
- Mali, D., & Lim, H. J. (2018). Conservative reporting and the incremental effect of mandatory audit firm rotation policy: a comparative analysis of audit partner rotation vs audit firm rotation in South Korea. *Australian Accounting Review*, 28(3), 446-463.
- Mali, D., & Lim, J. H. (2019). The influence of firm efficiency on agency credit ratings. *Journal of Credit Risk*, 15(1).
- Mali, D. and Lim, H.-j. (2020), Do Relatively More Efficient Firms Demand Additional Audit Effort (Hours)? *Australian Accounting Review*. 31(2), 108-127.
- Mali, D., & Lim, H. J. (2021). Can audit effort (hours) reduce a firm's cost of capital? Evidence from South Korea. In *Accounting Forum*, 45(2), 171-199.
- Mali, D., & Lim, H. J. (2022). Does relative (absolute) efficiency affect capital costs?. *Annals of Operations Research*, 315(2), 1037-1060.
- Markelevich, A., Barragato, C. A., & Hoitash, R. (2005). The nature and disclosure of fees paid to auditors. *The CPA Journal*, 6.
- Mitra, S., Hossain, M., Deis, D.R., 2007, The empirical relationship between ownership characteristics and audit fees, *Review of Quantitative Finance and Accounting*, 28, 257-285.
- Mitton, T. (2002) A Cross-Firm Analysis of the Impact of Corporate Governance on the East Asian Financial Crisis, *Journal of Financial Economics*, 64, 215-241.
- Nam, H. J. (2018). The impact of mandatory IFRS transition on audit effort and audit fees: evidence from Korea. *Australian Accounting Review*, 28(4), 512-524.
- Nelson, S.P., Mohamed-Rusdi, N.F., 2015, Ownership structures influence on audit fee, *Journal of Accounting in Emerging Economics*, 5(4), 457-478.
- Niemi, L. (2005). Audit effort and fees under concentrated client ownership: Evidence from four international audit firms. *The International Journal of Accounting*, 40(4), 303-323.
- O'Keefe, T. B., Simunic, D. A., Stein, M. (1994). The production of audit services: Evidence from a major public accounting firm. *Journal of Accounting Research*, 32(2), 241-261.
- Park, J. H., & Lee, J. H. (2008). A Study on the Effect of Audit Fees Discount on the Audit Quality. *Korean Journal of Business Administration*, 21(2), 837-863.
- Patterson, E., Smith, R., & Tiras, S. L. (2020). How Changes in Expectations of Earnings Affect the Associations of Earnings Overstatements and Audit Effort with Audit Risk and Market Price. *Contemporary Accounting Research*. Available at SSRN 3462651.
- Pronobis, P., & Schaeuble, J. (2020). Foreign ownership and audit fees in European listed firms. *European Accounting Review*, 1-28.
- Pound, J. (1988). Proxy contests and the efficiency of shareholder oversight. *Journal of Financial Economics*, 20: 237-265.

- Reinstein, A., & McMillan, J. J. (2004). The Enron debacle: More than a perfect storm. *Critical Perspectives on Accounting*, 15(6-7), 955-970.
- Rose, A. M. (1999). Audit pricing and the role of multinational factors: A study of the Hong Kong and Malaysian markets. *Advances in International Accounting*, 12, 129-155.
- Sangchan, P., Habib, A., Jiang, H., & Bhuiyan, M. B. U. (2020). Fair Value Exposure, Changes in Fair Value and Audit Fees: Evidence from the Australian Real Estate Industry. *Australian Accounting Review*, 30(2), 123-143.
- Suchman, M.C. (1995), "Managing legitimacy: strategic and institutional approaches", *Academy of Management Review*, 20(3) 571-610.
- Shakhatreh, M. Z., & Alsmadi, S. A. (2021). Determinants of Audit Fees and the Role of the Board of Directors and Ownership Structure: Evidence from Jordan. *The Journal of Asian Finance, Economics and Business*, 8(5), 627-637.
- Shleifer, A., & Vishny, R. W. (1997). A survey of corporate governance. *The journal of Finance*, 52(2), 737-783.
- Simunic, D. A. (1980). The pricing of audit services: Theory and evidence. *Journal of Accounting Research*, 161-190.
- Skinner, D. J., & Srinivasan, S. (2012). Audit quality and auditor reputation: Evidence from Japan. *The Accounting Review*, 87(5), 1737-1765.
- Simon, D. T., & Taylor, M.H. (2002). A survey of audit pricing in Ireland. *International Journal of Auditing*, 6, 3 - 12.
- Taylor, M. H., & Simon, D. T. (1999). Determinants of audit fees: The importance of litigation, disclosure, and regulatory burdens in audit engagements in 20 countries. *The International Journal of Accounting*, 34(3), 375-388.
- Van der Laan, S., & Christodoulou, D. (2012). Audit Fees and Deeds of Cross Guarantee: An Empirical Evaluation. *Abacus*, 48(3), 293-315.
- Vinten, G., Leventis, S., & Caramanis, C. (2005). Determinants of audit time as a proxy of audit quality. *Managerial Auditing Journal*. 20(5), 460-478.
- Walker, K. B., & Johnson, E. N. (1996). A review and synthesis of research on supplier concentration, quality and fee structure in non-U.S. markets for auditor services. *The International Journal of Accounting*, 31(1), 1- 18.
- Watts, R. L., & Zimmerman, J. L. (1983). Agency problems, auditing, and the theory of the firm: Some evidence. *The Journal of Law and Economics*, 26(3), 613-633.
- Weber, J., Willenborg, M., & Zhang, J. (2008). Does auditor reputation matter? The case of KPMG Germany and ComROAD AG. *Journal of Accounting Research*, 46(4), 941-972.
- Woods, C. (2013). Classifying South Korea as a Developed Market. White Paper Report.
- Woodside, A. G. (2016). The good practices manifesto: Overcoming bad practices pervasive in current research in business. *Journal of Business Research*, 69(2), 365-318.
- World Trade organization / WTO. (2021). *Groups in negotiations*: Accessed on the 02/11/2021
https://www.wto.org/english/tratop_e/dda_e/negotiating_groups_e.htm#grp002b
- Yoon, A. (2020). Discussion of "Audit Firm Assessments of Cyber-Security Risk: Evidence from Audit Fees and SEC Comment Letters". *The International Journal of Accounting*, 55(03), 1950018.
- Yoshikawa, T., & Rasheed, A. A. (2010). Family control and ownership monitoring in family-controlled firms in Japan. *Journal of Management Studies*, 47(2), 274-295.