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The Disclosure of Engagement Audit Partner and Earnings Response Coefficient

Master Thesis

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Abstract

This thesis investigates whether the engagement audit partner disclosure mandated by the PCAOB, which is effective for public company audit reports issued on or after 31 January 2017, affects the market valuation of earnings surprises in the U.S. The Earnings Response Coefficient (ERC) is expected to be higher when engagement partner identity is publicly disclosed than when it is not. This is due to the belief that audit partner disclosure improves audit quality and investor protection. This thesis uses fiscal quarter data from 2015 to 2017 to analyse the hypotheses. This thesis finds no significant change in the ERC between the pre-disclosure period and the post-disclosure period regarding the implementation of the disclosure requirement. However, results from additional tests suggest that the ERC is higher for the fiscal quarter when audit engagement partner name is disclosed relative to the fiscal quarter prior to the disclosure, especially for large companies. I also investigate the impact of engagement partner busyness on the pre-disclosure ERC compared to the post-disclosure ERC. As the market has access to the number of public listed clients audited by an audit partner, the market will understand how busy each audit partner is. Thus, the ERC is expected to be lower in the post-disclosure period for companies audited by busy audit partner. However, the results indicate that in the post-disclosure period, investors do not perceive audit partner busyness negatively. In conclusion, investors do not believe that audit partner disclosure enhances audit quality and audit partner busyness impairs audit quality.

Keywords: engagement audit partner disclosure, earnings response coefficient (ERC), audit partner busyness.

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1. Introduction

This thesis examines the effect of engagement audit partner[1] disclosure on the market response to earnings announcement. Thus, the research question is as follows:

> *RQ: Does the disclosure of engagement audit partner names have an impact on the market reaction to earnings announcement?*

The issue of requiring engagement partner disclosure has been through long debate for several years since the Public Company Accounting Oversight Board (PCAOB) proposed the disclosure requirement in 2011. Proponents of the rule claim that the disclosure requirement will increase information transparency and engagement partner's accountability, which eventually lead to improvement in audit quality and investor protection. On the other hand, the opponents argue that engagement partners are already accountable for the audits. Instead of increasing audit partner's accountability, the disclosure requirement will create potential unintended consequences. Such consequences are misleading investors by emphasizing the sole responsibility of engagement partner on the audit while in fact an audit is a group effort, and creating confusion about audit firm's role in the audit (PCAOB, 2015). Not to mention that the disclosure requirement tempts investors to decrease cognitive effort during information processing (i.e. oversimplified financial statements analysis) by relying the most on the auditor's attributes rather than the auditor's message in the audit report (King et al. 2012).

Prior studies provide empirical evidence on the costs and benefits of requiring engagement partner disclosure. Carcello and Li (2013) find that audit quality and audit fees increase in the period when the engagement partners sign the audit report than in the pre-signature period. In contrast, Blay et al. (2014) do not find any substantial improvement in audit quality following the implementation of the partner signature mandate. This thesis attempts to shed light on the debatable issue by providing empirical results on the capital market consequences of requiring engagement partner disclosure in the U.S.

Providing insight from the capital market participants on the implementation of disclosure requirement is important for several reasons. First, it is timely since the Securities and Exchange Commission (SEC) has approved the disclosure requirement. Audit firms are required to file a report with the PCAOB on Form AP, the name of the engagement partner for all public company audits issued on or after 31 January 2017 (SEC, 2016). Second, to the best of my knowledge, no study to date has examined the engagement partner disclosure's

[1] The terms engagement audit partner, engagement partner, and audit partner are used interchangeably in this thesis.

effect on the market reaction to earnings announcement in the United States (U.S.). Only a few studies examine the impact of audit partner signature requirement on audit quality using non-U.S. data, for instance in the United Kingdom (Carcello and Li, 2013) and in the Netherlands (Blay et al. 2014), yet both studies present conflicting evidence whether this requirement improves audit quality. Although the signature requirement is not identical to the disclosure requirement, they have similarity in enhancing transparency and accountability, which eventually improve audit quality (PCAOB, 2015). Third, the PCAOB (2015) highlights the importance of engagement partner disclosure to investors. This new rule could increase investor protection resulting from greater audit partner accountability and higher audit transparency. In addition, investors and financial statement users could use the data compiled from the disclosure and other sources to track the audit partner's record and evaluate their quality. Audit partner quality matters to capital market participants and the informational value provided by the individual audit partner is beyond the value provided by the audit firms (Aobdia et al. 2015). Investors and financial statement users generally support the disclosure requirement and expect that they can reap the benefits of this requirement. Fourth, due to the mixed evidence from prior literature (Carcello and Li, 2013; Blay et al. 2014), research explores other benefits of the disclosure requirement is needed. For instance, investor confidence in the audit process may increase after the requirement to disclose engagement partner name is implemented, thus lead to greater reliability of financial statements (e.g. increased earnings response coefficient) (Blay et al. 2014).

This thesis is motivated by ongoing debate on the effect of new rule implementation in the U.S. I examine whether there is a change in the market reaction to earnings announcement (measured by earnings response coefficient) for public listed companies in the U.S. when the requirement to disclose the engagement partner name is implemented. I expect that the Earnings Response Coefficient (ERC) is higher in the period when the engagement partner identity is publicly available, as the market perceives higher audit quality because of audit transparency and partner's accountability increase. In addition, the engagement partner disclosure provides information to capital market participants regarding audit partner's client portfolio[2] in one year. Therefore, when the engagement partner name is disclosed, I expect that audit partner busyness (i.e. the number or size of audit partner's client portfolio in a year) would lower the ERC.

[2] The audit partner disclosure requirement is effective only for public company clients (SEC issuers).

To examine the market perception of engagement partner disclosure, I compare the ERC of the U.S. listed firms in the period before audit partner names are disclosed (pre-disclosure period) to the period when the disclosure requirement is effective (post-disclosure period). Sample used for this analysis covers the period of fiscal quarters from 2015 to 2017. Fiscal quarters in 2015 to 2016 are considered as pre-disclosure period, while the first fiscal quarter of 2017 is post-disclosure period. I use the cumulative abnormal returns-earnings surprise regression model and make an interaction between a disclosure indicator variable, *POST* that is set to equal one when the audit partner names are disclosed, and zero otherwise, with earnings surprise (*UE*) variable. The coefficient of interest is the coefficient on *UE*POST*. I expect that the ERC will be higher in the post-disclosure period compared to the pre-disclosure period, thus the coefficient on *UE*POST* is expected to be positive. Based on the main analyses, I find no significant changes in the market reaction to earnings announcement related to the implementation of engagement partner disclosure in 2017. To provide further evidence on the relation between engagement partner disclosure and the ERC, I conduct additional analyses by dividing the sample into two groups (large firms and small firms) and conduct the analyses through different sample period. The results suggest that the ERC is higher in the post-disclosure period for large firms only when the sample is restricted to two fiscal quarters prior to and after the disclosure. The results could be interpreted in a way that, in general, capital market participants do not perceive that audit partner disclosure improves audit quality. This finding supports the argument from the disclosure's opponents that the engagement partner's accountability and audit quality in the U.S. were already at the high levels (Blay et al. 2014).

Next, I examine the market perception of audit partner busyness (i.e. number of public audit engagements and size of audit partner's portfolio). The observations for the second analysis range from fiscal quarters in 2016 to 2017. Fiscal quarters in 2015 are excluded from the observation because data regarding audit partner busyness only portrays the period of 2016. Based on the assumption that there is no auditor change during 2016 to 2017, that is audit partner busyness for fiscal quarter in 2017 would be the same as in 2016. Relaxing the assumption of audit partner busyness to 2015 would create inaccurate data. Hence, to provide results that are more accurate, I only include fiscal quarters of 2016 to the first fiscal quarter of 2017. In addition, I restrict the data for audit partner busyness only to audit engagements that have Form AP filed no more than 31 March 2017. I use the cumulative abnormal returns-earnings surprise regression model and interact *BUSY* variable with *UE* and *POST* variables (*UE*POST*BUSY*). *BUSY* variable has two measurements, which are the count of public

audit engagements and the portfolio size of an audit partner in a year. In the post-disclosure period, since the market understands how busy an audit partner is, I expect the coefficient on the interaction will be negative because the market negatively perceives earnings announcement made by firms audited by busy audit partner. Based on the main analyses, I find that the coefficient on *UE*POST*BUSY* is positive and significant for both *BUSY* measurements. The findings hold significant in the additional analyses using an indicator variable that reflects the level of partner busyness. It could be interpreted from the results that, in the post-disclosure period, the market does not perceive that audit partner busyness negatively affect audit quality. This finding aligns with the theories that suggest the relation between audit partner busyness and audit quality is positive (Fama, 1980; Fama and Jensen, 1983).

This thesis extends the auditing literature in following ways. First, to my knowledge, this is the first study examines investors perception of audit engagement partner disclosure in the U.S. Burke et al. (2017) investigate the disclosure requirement outcomes on audit quality, audit fees, and audit delay in the U.S. but not the effect on investor's perception. Prior literature focuses on the different aspect of public identification which is audit partner signature requirement (Carcello and Li, 2013; Blay et al. 2014). There is no study that examine the relation between engagement partner name disclosure and capital market consequences yet. In addition, prior studies (Carcello and Li, 2013; Blay et al. 2014) use non-U.S. data since the U.S data is not available until the end of 2016. Because of different baseline conditions (for instance market efficiency, policy choices, legal environment, or regulatory oversight), it is difficult to generalize the results from other countries setting to the U.S. setting (Kinney, 2015). Second, this thesis contributes to the literature focuses on the audit partners level (Chen et al. 2008; Chi et al. 2009; Gul et al. 2013; Aobdia et al. 2015; Cahan and Sun, 2015; Knechel et al. 2015; Wang et al. 2015; Hsieh and Lin, 2016; Chi et al. 2017). This thesis extends the literature by providing evidence on the audit partner busyness at audit partner level.

Therefore, this thesis should be relevant for the recent sentiment toward the new PCAOB rule, the audit engagement partner disclosure. Especially, this thesis will provide a new insight from the investor's perspective on the new rule implementation.

2. Background and prior literature

2.1. Background

Following international consensus to disclose engagement partner identity, on 15 December 2015 the PCAOB adopted a new rule that require audit firms to disclose engagement audit partner name for each public listed company audit (PCAOB, 2015). According to the SEC (2016), the disclosure requirement is effective for audit reports issued on or after 31 January 2017. For each SEC issuer's audit report, accounting firm is obliged to file Form AP that include the name of the engagement partner and Partner ID, with the deadline for filing Form AP is 35 days after the date the auditor report is firstly included in the document submitted to the SEC (SEC, 2016). According to PCAOB (2015), most countries with highly developed capital markets require engagement partner identity disclosure (for instance Japan, United Kingdom, France, Germany, Australia, India, Brazil, China, Switzerland, Spain, Russian Federation, the Netherlands, South Africa, Sweden, Mexico, and Italy). Yet, until 2016, investors and other financial statement users of public listed companies in the U.S. only know the identity of audit firms responsible for the audit not the identity of engagement partners lead the audit.

The disclosure requirement has been through six years discussion period and four rounds of public comment. There is a debatable issue on whether the benefits of this requirement will outweigh the costs and the risks. The PCAOB (2015) believes that this requirement will enhance the audit process transparency that leads to increased audit partner accountability. Regardless the fact that auditors are already accountable in every audit process arising from the monitoring systems, such as internal performance reviews, regulatory oversight, and litigation risk, the disclosure requirement will add reputation risk that will stimulate auditors to manage a good reputation by performing high-quality audits (PCAOB, 2015). Thus, the PCAOB's objectives to protect the investor interests and further the public interest in the preparation of informative, accurate, and independent audit reports will be achieved (PCAOB, 2015).

Another benefit of the disclosure requirement is to provide informational value to the market participants beyond value provided by audit firm identity (Azizkhani et al. 2013; Aobdia et al. 2015). Before the disclosure requirement comes into effect in the U.S., investors use audit firm size, industry specialization and reputation as signals for audit quality (DeFond and Zhang, 2014). The PCAOB (2015) argues that engagement partner disclosure will give investors better knowledge of audit quality by providing audit partner's track record (e.g. number and names of clients, industry experience, number and nature of restatement, number

of going concern report modifications, number of auditors' report citing material weakness in internal control, audit tenure, disciplinary actions, and litigation case). Audit partner's track record can be used and as a signal for audit quality and would be helpful for investors in assessing the audit partner reputation (PCAOB, 2015). Moreover, investors can use the information content from the disclosure requirement in several ways. For instance to help in the investment decision-making, to evaluate the audit partner tenure, and to ensure that the external audit remains independent and objective by examining previous relationships and social ties that management and the audit committee may have had with the audit partner (Reid and Youngman, 2017).

Generally, investors support the disclosure requirement. California Public Employees' Retirement System (2015), as the largest defined benefit pension fund in the U.S., supports the public disclosure of the engagement partner identity as this transparency enhances accountability. Another investor representative, Council of Institutional Investors (2015), argues that the information content from audit partner disclosure would be relevant for investors in overseeing audit committees and in ratification vote for external auditor as investors are able to observe the audit partner's track record through times.

In contrast, opponents of the rule cast doubt the idea of the disclosure requirement usefulness to investors. According to Auditing Standards Committee (2015), the engagement partner disclosure will not be useful and may be harmful to investors in making investment decision. Since there is no research that directly examines the impact of audit partner disclosure in the U.S. market and the usefulness of the information to the U.S. market participants may not be known until the information can be evaluated over a number of years (Auditing Standards Committee, 2015). In addition, Center for Capital Markets Competitiveness (2015) argues that investors already trust the PCAOB to regulate accounting firms and auditors, and audit committees to oversee the external audit. The disclosure requirement would undermine trust in regulatory and governance process by leading investors to unnecessarily second-guessing the PCAOB and audit committees decisions based on partial and incomplete information (Center for Capital Markets Competitiveness, 2015).

Considering the pros and contras of the disclosure requirement for investors, this thesis investigates whether the implementation of this rule has an impact on the market reaction to earnings announcement in the U.S. capital market. To measure the market reaction to earnings announcement, this thesis uses ERC (earnings response coefficient) model. The ERC the slope coefficient in the regression of unexpected earnings on abnormal returns, it

measures how much new information contained in the earnings capitalized in the stock price (Teoh and Wong, 1993).

Return-earnings association has been the main interest in the capital market research since the seminal work of Ball and Brown in 1968. This stream of research shows that earnings numbers matter to capital market participants and reveals why capital market participants devote so much effort and time to forecasting earnings (Nichols and Wahlen, 2004). Moreover, research in the capital market area also has examined that the market responsiveness to earnings announcement depends on many factors, which are determinants of the ERC (Kormendi and Lipe, 1987; Easton and Zmijewski, 1989; Collins and Kothari, 1989). Auditing literature also provides evidence that the stock price reaction to earnings surprises is related to the quality of the reported earnings numbers, with regard to audit outcomes and auditor characteristics (Choi and Jeter, 1992; Teoh and Wong, 1993; Ghosh and Moon, 2005; Francis and Ke, 2006).

According to Teoh and Wong (1993), the earnings signal that is released at the earnings announcement date reflects the true value of the firm with noise, therefore the higher the earnings signal, the more favorable the investor response. Moreover, the stock price response will increase with the level of prior uncertainty regarding the underlying value of the firm, because the informational value of the earnings signal is higher when there is greater prior uncertainty (Teoh and Wong, 1993). On the other hand, the stock price response will decrease with the noise in earnings signal, because high noise implies a less credible earnings signal (Teoh and Wong, 1993). In conclusion, Teoh and Wong (1993) posit that the ERC will increase with the earnings signal quality when holding constant differences in prior uncertainty about underlying value of the firm.

The next section discusses prior literature on engagement partner disclosure and audit partner level to give the idea of this thesis contribution to the literature and explain the benefit of the disclosure requirement to investors. Moreover, prior literature on returns-earnings relation and on earnings response coefficient discusses the intuition why capital market participants react to the earnings announcement.

2.2. Prior literature

2.2.1. The disclosure of engagement audit partner identity

There are not many archival studies that examine the impact of requiring engagement partner disclosure (Carcello and Li, 2013; Blay et al. 2014; Liu, 2017). These studies evaluate different policy setting (i.e. audit partner signature requirement) and use non-U.S. data. Although the signature requirement is not the same with the disclosure requirement adopted

in the U.S., they are supposed to share similar objective in improving the audits transparency and audit partners accountability (PCAOB, 2015).

First, in the U.K., Carcello and Li (2013) investigate the benefits and costs of mandating audit engagement partners to sign the audit reports. The authors use four proxies for audit quality (i.e. abnormal accruals, the propensity to meet an earnings threshold, earnings informativeness, and qualified audit report) to capture the benefits and audit fees as the costs of mandating signature requirement. They find a decrease in abnormal accruals, an increase in reporting small earnings frequency, and a significant rise in the numbers of qualified audit reports and in earnings response coefficient, right in the first year after the signature requirement is applied (Carcello and Li, 2013). These findings suggest that the signature requirement improves audit quality. In addition, Carcello and Li (2013) also find that audit fees increase in the post-signature period, confirming that this requirement has a cost that should be considered either.

Second, in the Netherlands, Blay et al. (2014) examine whether mandatory partner signature policy affects audit quality. As proxies for the audit quality, Blay et al. (2014) use accruals quality (i.e. current accruals, abnormal working capital accruals, and an annualized Dechow and Dichev (2002) accrual quality measure) and propensity to meet or beat earnings benchmark. In contrast to Carcello and Li (2013), Blay et al. (2014) do not find any evidence of improvement in audit quality after audit partners sign the audit reports, either in accruals quality and earnings benchmark. The authors (Blay et al. 2014) assume that the accountability and the audit quality in the Netherlands may already sufficient and in the high levels, thus the audit quality might not differ from the pre-signature to the post-signature period.

Third, Liu (2017) investigates the signature requirement's effects on financial analyst's information environment (i.e. analyst following, analyst's absolute forecast errors and forecast dispersion) in the U.K. The author finds that in the post-signature period, analyst following increases for U.K. firms, and both analyst forecast errors and forecast dispersion decrease (Liu, 2017). Overall, the implementation of signature requirement improves the financial analyst's information environment, as the result of improvement in audit quality (measured by discretionary accruals and Big 4) (Liu, 2017).

As a complement to the archival studies, Carcello and Santore (2015) examine the impact of requiring audit partner identification using analytical model. They develop a model of auditor conservatism and reporting behavior both with a partner disclosure requirement and without (Carcello and Santore, 2015). In the partner disclosure regime, the reputational

burden shifts from the audit firm to the partner level. Therefore, (1) audit partners will increase the resources apply to the audit, thus audit report accuracy should increase but the aggregate payoff to all partners will decrease; (2) partner might issue more conservative report than the firm would prefer; and (3) especially in large firms, the partner disclosure's effects are more pronounced (Carcello and Santore, 2015).

Prior studies mentioned above have similarity in its objective. The authors try to provide an answer to the question whether the disclosure of audit partner identity would benefit investors and users of financial statements due to increase in audit quality. Although the findings of these studies are relevant to the issue regarding the implementation of audit partner disclosure, generalizing the findings from international setting to the U.S. market may be difficult to achieve due to several reasons. First, prior literature evaluates the signature requirement effect. The effect of signature requirement on the accountability of audit partners might be different from the disclosure requirement. Second, there is a different legal liability regime between the U.K. and the U.S., whereas in the U.S. the legal liability tied to the auditors is more pronounced (Carcello and Li, 2013). Third, there were other changes in audit requirements implemented in the U.K. around the time of the signature requirement implementation. For instance, a provision in the Companies Act that allows auditors to enter into a liability limitation agreement and changes in the audit inspection-reporting regime (Carcello and Li, 2013). Furthermore, the study (Carcello and Li, 2013) uses data from the period of the recent financial crisis, which may also affect the results (PCAOB, 2015).

This thesis aims to extend prior literature by providing empirical evidence on the impact of audit partner name disclosure in the U.S., where no study to date has done due to data availability issue in the past time. Moreover, this thesis complements prior study (Liu, 2017) by providing evidence on other benefits of disclosure requirement and focuses on the investor perception on the disclosure requirement (measured by ERC). This thesis is motivated by mixed evidence on the impact of disclosure requirement on audit quality (Carcello and Li, 2013; Blay et al. 2014). Measuring audit quality is difficult and literature in auditing has used a large number of proxies for audit quality, yet there is no agreement on which measure is the best (DeFond and Zhang, 2014). Thus, providing new insight from investor's point of view is important. Especially when the PCAOB highlights that investors would benefit the most from the disclosure requirement and the majority of investors support the disclosure requirement (PCAOB, 2015).

2.2.2. Audit partner level

The disclosure of audit engagement partner name is supposed to benefit investors by enhancing transparency in the audit process (PCAOB, 2015). Moreover, the disclosure requirement provides information through times to create a database regarding audit partner's: (1) tenure (Azizkhani et al. 2013); (2) rotation (Laurion et al. 2017); (3) experience (Cahan and Sun, 2014; Chi et al. 2017); (4) industry specialization (Ittonen et al. 2015); (5) reporting style (Knechel et al. 2015); (6) quality (Aobdia et al. 2015; Wang et al. 2015); and (7) characteristics (Gul et al. 2013; Cahan and Sun, 2014). This type of information will be useful to investors in order to get a better perspective of audit quality and credibility of audited financial reporting.

Prior literature suggests that audit partner tenure affects audit quality. First, Azizkhani et al. (2013) find that for non-Big 4 firms, partner tenure has a nonlinear association with the cost of equity capital. As a proxy for investor response, the authors use the *ex-ante* cost of equity capital because it is expected to have an association with the credibility of audited financial statements (Azizkhani et al. 2013). Similarly, Chi et al. (2017) find that audit partner's tenure improves audit quality (measured by discretionary accruals) and creditor perceptions of audit quality (proxied by interest rate spreads). Next, Laurion et al. (2017) show that audit partner rotation increases the likelihood for restatement and discoveries, and affects the recognition of special item income in the audited financial statements for the period after audit partner rotation.

In addition, audit quality is affected by audit partner's experience and industry expertise. Pre-client experience (i.e. the number of years the audit partner has engaged in audit work) increases the audit quality (Cahan and Sun, 2014) and creditor perception of audit quality (Chi et al. 2017). Moreover, Ittonen et al. (2015) examine audit partner specialization (based on partner's experience) and audit quality, the findings exhibit that client specialization is negatively related to abnormal accruals of audited firms.

Without the disclosure of engagement partner identity, investors rely only on the audit firm proxy for audit quality, such as audit firm size (Teoh and Wong, 1993; Hussainey, 2009) and audit firm industry specialization (Balsam et al. 2003)). Hussainey (2009) finds that investor ability to anticipate future earnings is higher when financial statements audited by Big N firms. Auditor's industry specialization is perceived differently by the market as well, companies audited by industry specialist auditors tend to have higher ERC compared to non-specialist ones (Balsam et al. 2003).

However, audit quality varies among engagement partners in the same audit firm (Gul et al. 2013; PCAOB 2015). There is a different level of audit aggressiveness across individual auditors (Gul et al. 2013) and for the same partner, the aggressive and conservative audit reporting persist over time and extend to its clients (Knechel et al. 2015). Moreover, audit partner aggressiveness has negative impacts to the clients, for instance, the market penalizes these firms by giving higher interest rates, worse credit rating, and less favorable insolvency forecasts for private companies (Knechel et al. 2015). According to Wang et al. (2015), the identity of individual audit partner provides informational value to the capital market and audit partner quality (measured by audit failure rate) impacts the probability of annual report misstatement (measured by restatement). Furthermore, Aobdia et al. (2015) find (1) a positive association between ERC and audit partner quality; (2) a positive market reaction to auditor changes from lower to higher quality partner; and (3) smaller IPO underpricing and better debt contract terms when companies audited by higher quality partners.

Audit engagement partner's characteristics (e.g. gender, education, industry specialization) can be used as proxies for the level of audit partner due care in the audit process (Cahan and Sun, 2014). Gul et al. (2013) use audit partner characteristics such as education, gender, Big N experience, birth cohort, and political affiliation as one of the determinants of audit quality and they find significant results that audit reporting and audited financial statements are affected by individual auditors.

This thesis extends the literature on the audit partner level, by giving a new insight from investor perception regarding the informational value of audit partner identity.

2.2.3. Returns-earnings relation

The relation between earnings information and stock returns has been the interest of academic researchers in finance and accounting for many years, it begins since the seminal work of Ball and Brown in 1968. A study by Nichols and Wahlen (2004) provides updated evidence on the relation between returns and earnings. Nichols and Wahlen (2004) use three theoretical links between share prices and earnings developed by Beaver (1998), which are: current period earnings gives some of the information that the market uses in forecasting earnings in the future period; forecast of future earnings used to predict future period dividends; and the future dividend's present value determines stock price. The authors conduct a replication research from three classic studies that examine returns-earnings association by using data from 1988 to 2002. Their findings extend prior literature by providing additional evidence that do not appear in the three seminal papers (Nichols and Wahlen, 2004).

First, replicating Ball and Brown (1968), the authors find that firms with positive annual earnings changes exhibit positive abnormal returns, while firms with negative earnings changes exhibit negative abnormal returns (Nichols and Wahlen, 2004). Moreover, the earnings changes implications on the returns have increased significantly, Ball and Brown (1986) find that the difference in annual normal returns based on the sign of earnings changes is 16.8 percent, while it is 35.6 percent in Nichols and Wahlen (2004). The authors conduct further analysis by examining the implication of sign and magnitude of earnings changes on abnormal returns and find that the larger the magnitude of earnings changes, the larger the abnormal returns (Nichols and Wahlen, 2004).

Second, Nichols and Wahlen (2004) replicate the work of Kormendi and Lipe (1987) that examine the relation between earnings persistence and stock returns. The authors find that during years with earnings increases, high-persistence firms exhibit higher abnormal returns than low-persistence firms do, but this difference is low during years with earnings decreases (Nichols and Wahlen, 2004). According to Nichols and Wahlen (2004), this evidence suggests that the observed differences in returns are attributable to differences in earnings persistence rather than the magnitude of earnings changes.

Third, to test whether earnings numbers provide new value-relevant information to the capital markets, Nichols and Wahlen (2004) conduct an analysis that examine the market reaction during days immediately surrounding earnings announcements. The authors make some improvements that are: using quarterly earnings information, using unexpected earnings to capture the new information in the earnings announcement, and focusing on 10-day window cumulative abnormal returns (Nichols and Wahlen, 2004). The findings show that the market reacts quickly and significantly with the sign of quarterly unexpected earnings (Nichols and Wahlen, 2004). The results suggest that earnings number provide new information to capital markets that is used to predict future earnings, expect future dividends, and determine current stock price.

Lastly, replicating the seminal work of Bernard and Thomas (1989), Nichols and Wahlen (2004) analyse the pre-announcement portfolio returns and the timing of the market reaction to earnings announcement. The authors find that the abnormal returns move significantly with the sign and magnitude of quarterly earnings surprises since 60 days prior to the announcement to the day of the announcement (Nichols and Wahlen, 2004). Furthermore, the findings show post-earnings-announcement drift, abnormal returns continue to drift significantly with the sign and magnitude of the prior quarter earnings surprise, for extreme earnings surprises beginning on 1 day after the announcement to 60 days after

(Nichols and Wahlen, 2004). The results suggest that the market is not completely efficient since the market still reacts to the earnings surprises even days after the announcement occur (Nichols and Wahlen, 2004).

Overall, Nichols and Wahlen (2004) explain the importance of accounting earnings and confirm that prior results from three classic studies still hold over current period.

2.2.4. Earnings response coefficient

Research in the capital market area has been conducted to examine the information content of earnings using earnings response coefficient (ERC), the slope coefficient from returns-earnings regression. Early research documents four economic determinants of ERC, which are persistence, risk, growth, and risk-free interest rate (Kormendi and Lipe, 1987; Easton and Zmijewski, 1989; Collins and Kothari, 1989). First, Kormendi and Lipe (1987) find that the magnitude of ERC depends on earnings persistence (calculated by earnings time-series analysis). Next, Easton and Zmijewski (1989) document that ERC varies across firms, positively associated with revision coefficient and firm size (market value of equity), and negatively associated with risk (beta from the market model return). These findings are in-line with Collins and Kothari (1989), in which they conduct cross-sectional and temporal variation analyses in examining the ERC. Collins and Kothari (1989) find that ERC varies within firm size (market value of equity), decreases in interest rate and systematic risk (beta), and varies positively with growth opportunity (market-to-book equity ratio) and earnings persistence (ARIMA time-series model). In addition to the early research, Dhaliwal and Reynolds (1994) and Billings (1999) corroborate the previous studies on ERC by finding a negative association between ERC and risk (bond-ratings and debt-to-market equity ratios). However, Jetter and Chaney (1992) do not find any evidence that supports the relation between earnings volatility or systematic risk (beta from the market model return) and ERC. Although they find that ERC differs among industries, firm size (market value of equity) level is positively associated with the magnitude of ERC, leverage level (debt to equity ratio) is negatively related to ERC, and low-profit firms exhibit lower ERC (Jetter and Chaney, 1992).

In the auditing literature, some studies examine the relation between ERC and the quality of the reported earnings numbers. Teoh and Wong (1993) investigate whether companies audited by Big N audit firms exhibit greater ERC, based on the prediction that earnings report is more credible when high-quality auditor conducts the audit. The authors find that higher ERC is related to earnings reports with less noise (i.e. firms with Big N auditor have more precise earnings) (Teoh and Wong, 1993). Ghosh and Moon (2005)

conduct a research that examines the perception of investors and information intermediaries on auditor tenure using ERC model. The authors find that the ERC is higher for longer auditor tenure, implying that investors and information intermediaries perceive auditor tenure enhances earnings quality (Ghosh and Moon, 2005). Prior studies also find that the provision of non-audit service provided by auditors, especially for non-Big N firms, lower the perceived credibility of financial reporting (captured by lower ERC) because investors value the earnings quality to be adversely affected by the level of non-audit service (Francis and Ke, 2006; Gul et al. 2006). Related to audit outcomes, Choi and Jeter (1992) examine whether qualified audit reports impact the market's responsiveness to earnings announcements. The findings suggest that the ERC is significantly decline for the fiscal quarters after the issuance of a qualified audit opinion (Choi and Jeter, 1992). Furthermore, some researchers also conduct studies examining the impact of disclosure on the ERC. The disclosure of auditor changes (for disagreement or fee-related reasons) and the disclosure of other audit participants in the PCAOB filings subsequently lower the ERC (Hackenbrack and Hogan, 2002; Dee et al. 2015). Hackenbrack and Hogan (2002) find that Form 8-K disclosures of the reason for an auditor change help investors in assessing the quality of financial reporting and revise their prior expectation of earnings precision. While Dee et al. (2015) show a decline in the ERC for companies that disclose other audit participants involved in their audits for the first time. The authors suggest that the disclosure of other audit participants would be useful for investors in assessing audit quality, hence financial reporting quality (Dee et al. 2015). The literature mentioned above implies that information regarding auditor affects the market valuation of earnings and in-line with the lending credibility theory.

3. Theory and hypothesis development

3.1. The source credibility theory

The literature on the source credibility theory suggests that due to reasonable desire to decrease the information uncertainty associated with the information evaluation, information users seek greater transparency about information source (King et al. 2012). According to King et al. (2012), information user's need to identify an anonymous source is greater when they plan to hold the source accountable due to legal and other retribution. Rather than to simply accept the message, the information user feels a strong need to evaluate, they do not fully understand why the source remains anonymous, and they perceive the potential ability to identify an anonymous source (King et al. 2012).

This theory confirms the unanimously support from investors to the audit engagement partner name disclosure. Investors need to hold audit engagement partner accountable, need to evaluate the audited financial statements thoroughly, do not see the reasons why the identity of audit partners kept secret, and since the audit committee and management know the identity of audit engagement partner the identity of audit partner could be easily disclosed (King et al. 2012).

Overall, this theory suggests that audit engagement partner name disclosure will increase the investor perception of audit quality in appearance, due to higher transparency in the audit process (i.e. when the audit partner identity is not anonymous) (King et al. 2012).

3.2. Market perception of engagement audit partner name disclosure

Audit's role in the capital market is crucial. Agency theory states that audits are conducted in order to reduce the information asymmetry between investors and the management about the company's performance that reflected in the financial reporting. Auditing is known for its lending credibility role, which is to provide independent assurance on the credibility of accounting information.

Investors of public listed companies cannot directly observe the audit quality. They rely on the audit committee and other proxies for audit quality such as audit firm size or expertise (Francis, 2004). When the identity of the audit engagement partner is not publicly available, the information asymmetry between management and investors is higher, since the management and audit committee are the only parties who know the identity of audit engagement partner. In order to reduce the degree of information asymmetry, investors could gather information about skills, expertise, and independence of the engagement partner (PCAOB, 2015).

The identity of audit engagement partner is not publicly available until the PCAOB adopted the disclosure requirement in 2015, which comes into effect in 2017. Even though, there are other ways to identify the engagement partner identity. For instance, the engagement partner identity is available to investors at annual shareholder meeting (PCAOB, 2015) or on the SEC comment letters, which are publicly disclosed, where the public listed companies correspond with the SEC's Division of Corporation Finance (Laurion et al. 2017). Every two years SEC's Division of Corporation Finance reviews each annual report and related filings issued by public listed companies, thus on the correspondence between issuers and the SEC, the name of audit engagement partners can be identified (Laurion et al. 2017). However, the process of acquiring information regarding audit engagement partners may be

costly to investors and the information may be less useful relative to a database that covers audits across time and is available to all intended users (PCAOB, 2015).

The disclosure of engagement partner name is believed to increase the transparency in the audit process and audit partner accountability, thus lead to an increase in the engagement partner's responsibility for overall audit quality (PCAOB, 2015). Moreover, transparency regarding audit engagement partner identity will allow public to research the engagement partner's experience and track record (PCAOB, 2015). Furthermore, through times, it will be reasonable that there will be a database contains the engagement partner's experience and track record in the U.S. For instance, through Audit Analytics[3] and PCAOB website[4] that is publicly available.

The database regarding audit engagement partner will be beneficial to investors. It will provide more information about the audits and therefore the reliability of the financial statements when it is analysed together with the audited financial statements and potential audit quality indicators (PCAOB, 2015). Hence, the degree of information asymmetry, related to financial reporting quality, between investors and the company management will be reduced (PCAOB, 2015). This view is in line with Aobdia et al. (2015). They suggest that the information about engagement partner is important to capital market participants for there is a positive association between audit partner quality and earnings response coefficient (Aobdia et al., 2015).

Taken into account theoretical arguments above, it is expected that capital market participants perceive the disclosure of audit partner name positively, since this new rule promotes a higher transparency and accountability in the audit process, meaning the higher quality in audit and reported earnings. Therefore, I expect that the market will react stronger to the earnings announcement in the period when audit partner name is disclosed (post-disclosure period) compared to the period when it is not (pre-disclosure period). Therefore, I formulate the following hypothesis:

H1: The market reaction to earnings announcement is higher in the post-disclosure period relative to the pre-disclosure period.

[3] Audit Analytics is an independent research provider focuses on the accounting, insurance, regulatory, legal and investment communities. It provides a database for public regarding auditor changes, auditor engagements, audit fees, audit opinions, internal controls, restatements, etc. that covers all SEC registrants (www.auditanalytics.com).

[4] The information regarding audit engagement partner name is available in a searchable database on the PCAOB's website (https://pcaobus.org/Pages/AuditorSearch.aspx.

3.3. Market perception of busy audit partner

Investors can observe the auditor's track record by using data from the audit partner disclosure such as the number of clients audited by an audit partner or the size of an audit partner's engagement portfolio in a year. Audit partner's client portfolio in a year is often used as a proxy for audit partner busyness in prior literature (Sundgren and Svanstrom, 2014; Goodwin and Wu, 2016).

Prior research shows that audit partner busyness may have a negative impact on audit quality. The attention level of an audit partner devoted to the average clients in his portfolio will decrease as the level of busyness becomes higher, thus may affect his behavior in audit judgment and decision-making (Goodwin and Wu, 2016). Thus, the number of clients audited by an audit partner is negatively associated with the audit quality (Sundgren and Svanstrom, 2014).

Moreover, Lopez and Peter (2012) find that workload pressures (proxied by the audit busy season) lower audit quality (measured by abnormal accruals) at the audit engagement level. Work pressures impact the effectiveness of the audit techniques employed by audit managers and partners (Agoglia et al., 2010). According to Lopez and Peter (2012), the tension between limited audit resources and a higher number of audit engagements that have to be completed within limited time window creates workload pressures. Not to mention, most public listed companies in the U.S. have fiscal year end date in December, leading to a busy season condition (Lopez and Peter, 2012).

Therefore, audit partner busyness can be used by investors as an indicator of audit quality, to the extent that the association between audit partner busyness and audit quality is causal (Goodwin and Wu, 2016). Prior to the disclosure requirement, investors do not have any information regarding audit partner busyness. Investors might perceive that each audit partner has an equal workload. When the audit partner name is disclosed, investors could use data from the disclosure database (i.e. the number of audit engagements or the size of engagement portfolio held by an audit partner in a year) and might revise their prior belief on how busy an audit partner is. Therefore, in the post-disclosure period, as the market understands audit partner busyness, the market will react negatively to the earnings announcement of companies audited by busy audit partner since the market perceives that partner's busyness impairs audit quality. Thus, I formulate the following hypothesis:

H2: For companies audited by busy audit partner, the market reaction to earnings announcement is lower in the post-disclosure period compared to the pre-disclosure period.

4. Research Design

The predictive validity framework (Libby boxes) is presented in Appendix A, it shows how the conceptual relation examined in this thesis is operationalized in the research design.

4.1. Earnings response coefficient (ERC)

ERC is the slope coefficient in a regression of earnings surprise (new information in accounting earnings announcements) on abnormal stock returns. It measures the stock price response to accounting earnings announcements (Easton and Zmijewski, 1989). The model used in numerous prior studies for ERC estimate is as follows:

$$CAR_{it} = \alpha + \beta UE_{it} + \varepsilon_{it} \quad (1)$$

where CAR_{it} is a cumulative abnormal returns measure for firm *i* in period *t*, UE is a measure of unexpected earnings for firm *i* in period *t*, and the coefficient β is the ERC. This thesis uses the same model as equation (1) to estimate the ERC.

The abnormal return is the difference between the actual return and the expected return. To measure the abnormal returns, this thesis uses the market model following prior literature (Teoh and Wong, 1993; Balsam et al. 2003; Francis and Ke, 2006). The market model is a statistical model that relates the return of any given security to the return of the market portfolio (MacKinlay, 1997). This model is chosen because it has a better improvement than other models (Cabble and Holland, 1999). The market model is:

$$R_{it} = a_i + b_i R_{mt} + \varepsilon_{it} \quad (2)$$

where R_{it} is the return of firm *i* on event date *t*, R_{mt} is the return on the CRSP equally-weighted market index on event date *t*, ε_{it} is the error term, and α_i and b_i are the intercept and slope coefficient for firm *i*. The coefficient, α_i and b_i are ordinary least squares (OLS) estimates using daily returns from the estimation window. Then, the abnormal return can be calculated after arranging formula (2) (MacKinlay, 1997):

$$AR_{it} = R_{it} - (\hat{a}_i + \hat{b}_i R_{mt}) \quad (3)$$

where AR_{it} is the abnormal return of firm *i* on event date *t*. This thesis uses 3-day window cumulative abnormal returns centered on the earnings announcement date (-1,+1). Therefore, the following equation is estimated:

$$CAR_{it} = \sum_{-1}^{+1}\left[R_{it} - (\hat{a}_i + \hat{b}_i R_{mt})\right] \quad (4)$$

where CAR_{it} is the cumulative abnormal returns of firm *i* on event date *t*.

To measure earnings surprise for firm *i* in period *t*, the equation below is used:

$$Unexpected\ Earnings\ (UE)_{it} = \frac{Actual\ Earnings_{it} - Expected\ Earnings_{it}}{Price_{it}} \quad (5)$$

This thesis uses earnings per share (EPS) as earnings measurement, where $Actual\ Earnings$ is the EPS actual and $Expected\ Earnings$ is the EPS from the most recent median consensus analyst forecast. While $Price$ is the stock price at the beginning of period. The measurement for unexpected earnings using analyst forecast is commonly used in prior research (Teoh and Wong, 1993, Balsam et al. 2003; Francis and Ke, 2006).

4.2. Regression models

Following Francis and Ke (2006), I use the regression model below to investigate the change in the ERC from the pre-disclosure period to the post-disclosure period:

$$CAR3_{iq} = \alpha + \beta_1 UE_{iq} + \beta_2 POST + \beta_3 UE_{iq} * POST + \beta_n UE_{iq} * control\ variables + \varepsilon_{iq} \quad (6)$$

where $CAR3$ is 3-day window cumulative abnormal return; UE is unexpected earnings; $POST$ is an indicator variable equal to 1 if the earnings are announced after the audit partner names are disclosed , and 0 otherwise; $control\ variables$ is a set of control variables that are predicted to affect the ERC; and ε_{it} is the error term. The subscripts *i* and *q* denote firm and quarter.

The dependent variable, $CAR3$, is cumulative abnormal returns, computed for the three-day window (-1,+1) centered on the firm's quarterly earnings announcement date (event date). The objective of using 3-day event window in event studies is to control for information leakage prior to the event date (Francis and Ke, 2006). I use 90-day estimation window ending 7 days before the earnings announcement with minimum return data required for estimation is 10 days for the market model parameter (Balsam et al. 2003). It is important to not overlapping the estimation window and the event window (MacKinlay, 1997).

Unexpected earnings, UE, is measured as quarterly actual EPS minus the most recent median consensus analyst forecast of quarterly EPS, scaled by stock price at the beginning of quarter *q*.

$POST$ is an indicator variable equals to 1 if the quarterly earnings announcement is made after the Form AP is filed and zero otherwise. That is, the first fiscal quarter of 2017 takes the value of 1, while those in 2015 and 2016 take the value of 0.

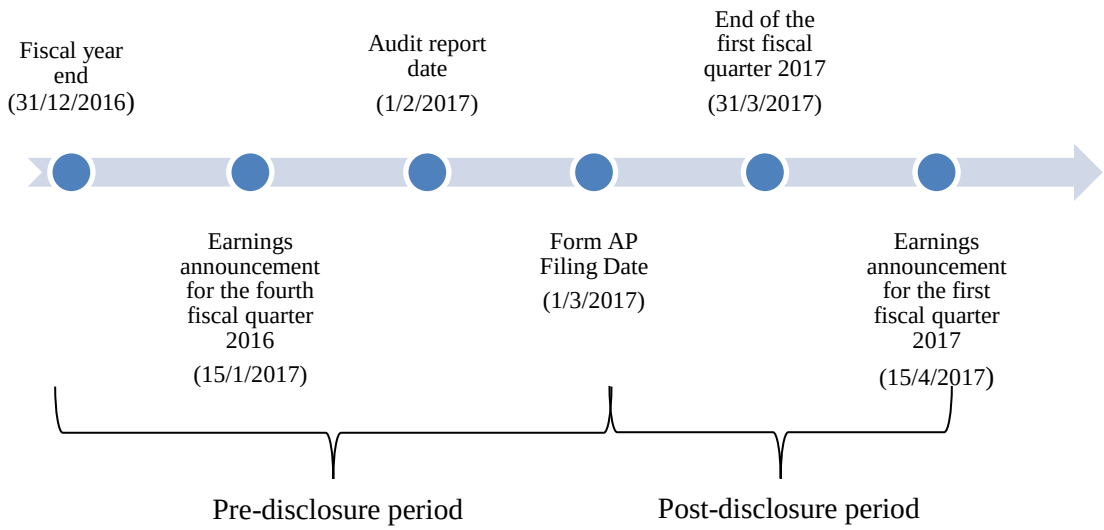
Following prior studies, I use a set of *control variables* (i.e. *MTB*, *DE*, *LOSS*, *BIG4*, *ABS_UE*, *Q4*, and *SIZE)* in the regression as interactions with the unexpected earnings variable, *UE*, because these variables are expected to affect the ERC. First, *MTB* is market-to-book ratio at the beginning of quarter *q* as a proxy for growth opportunity (Teoh and Wong, 1993; Balsam et al. 2003; Francis and Ke, 2006). Future earnings could be affected by growth opportunity and investors tend to be more responsive to earnings surprise from higher-growth opportunity firms (Teoh and Wong, 1993). Second, *DE* is debt-to-equity ratio at the beginning of quarter *q* as a proxy for firm risk (Francis and Ke, 2006). Third, *LOSS* is an indicator variable equals to 1 if quarterly actual EPS is negative, and 0 otherwise. *LOSS* is a proxy for earnings persistence because earnings of loss firms are less persistent (Francis and Ke, 2006; Lim and Tan, 2008). Francis and Ke (2006) indicate that firm risk and earnings persistence negatively affect the ERC because investors perceive earnings from risky firms and less persistence earnings negatively. Fourth, *BIG4* is an indicator variable coded to 1 if the firms are audited by Big 4[5] audit firms, and 0 otherwise (Teoh and Wong, 1993). Teoh and Wong (1993) show that investors react more strongly on the earnings surprise for companies audited by Big N audit firms relative to Non Big N. Next, I include *ABS_UE* to control for the nonlinearity in the ERC (Francis and Ke, 2006). *ABS_UE* is the absolute value of unexpected earnings. In addition, *Q4* is included to control for the variance in the ERC for earnings announcements made in the first three quarters than those made in the last quarter (Francis and Ke, 2006). *Q4* is an indicator variable equals to 1 if the observation's fiscal quarter is 4, and 0 otherwise. Lastly, because ERC varies in firm size, I also use *SIZE* as control variable. *SIZE* is the (natural logarithm) market value of equity at the beginning of quarter *q* as a proxy for firm size (Jetter et al., 1992; Teoh and Wong, 1993; Francis and Ke, 2006).

The interaction between unexpected earnings and control variables is not the main interest of this thesis. Therefore, I do not test the effect of these control variables on the ERC. Nevertheless, based on prior studies described above, I expect the interaction coefficient of *UE* with *DE*, *LOSS*, *ABS_UE*, and *Q4* will be negative. While the coefficient on the interaction between *UE* and *MTB*, *BIG4* is expected to be positive. In addition, evidence from prior research whether firm size affects ERC is mixed, thus there is no prediction sign for the interaction coefficient of *UE* and *SIZE*.

[5] Big 4 audit firms are Deloitte, Ernst & Young, KPMG, and PricewaterhouseCoopers.

Based on the first hypothesis, the variable of interest is β_3 because it reflects the shift in the ERC between the disclosure regime and non-disclosure regime that is left unexplained by the interaction between unexpected earnings and control variables. If the market perceives earnings as more credible in the disclosure period, then the ERC will be higher for the earnings announcement made after the audit partner name is disclosed. Thus, I expect β_3 would be positive. For testing the first hypothesis, I use a sample of public listed firms, obtained from Form AP filing database, with fiscal quarter observations range from 2015 to 2017. The observation period starts from 2015 since this is the year when the audit partner disclosure is adopted by the PCAOB. Thus, to capture the timely shift in the ERC between pre-disclosure period and post-disclosure period, the sample covers the period when the disclosure requirement is not implemented to when it is effective. The post-disclosure period is applied for the first fiscal quarter of 2017 because this is the period when earnings are announced after Forms AP are filed. Figure 1 presents the timeline example of Form AP disclosure.

Figure 1: Example of partner disclosure timeline



Next, as in Francis and Ke (2006), I use the following regression to test the comparison on the ERC between pre-disclosure period and post-disclosure period related to audit partner busyness:

$$CAR3_{iq} = \alpha + \beta_1 UE_{iq} + \beta_2 POST + \beta_3 UE_{iq} * POST + \beta_4 UE_{iq} * BUSY + \beta_5 UE_{iq} * POST * BUSY + \beta_n UE_{iq} * control\ variables + \varepsilon_{iq} \quad (7)$$

where $CAR3$ is 3-day window cumulative abnormal return; UE is unexpected earnings; $POST$ is an indicator variable equals to 1 if the fiscal quarter period is after the disclosure of audit partner names, and 0 otherwise; $BUSY$ is a proxy for audit partner busyness; $control\ variables$ is a set of control variables; and ε_{it} is the error term. The subscripts *i* and *q* denote firm and quarter, respectively.

BUSY as a proxy for audit partner busyness has two measurements: number of clients audited by an audit partner in a year (*CLIENTS)* and audit partner's market capitalization in a year *(MCAP*). I run the regression from equation (7) separately for each *BUSY* measurement. There are two steps taken for *BUSY* variable to be included in the equation (7). The first step is making a list of clients for each audit partner (i.e. audit partner's client portfolio). It is obtained from Form AP filing database on the PCAOB website based on several criteria. First, the audit engagements are restricted to financial statements with 31 December 2016 fiscal year end. Second, non-employee benefit plan and investment company are excluded from the list. Third, firms with auditor changes during 2016 to 2017 are eliminated as well. Next, to avoid forward-looking data I exclude audit engagements that have form AP filed after 31 March 2017. It is because the ERC in the post-disclosure period reflects the market reaction to the first quarter earnings announcement. The assumption is that the market reacts only to the new information that does not exceed the end period of first fiscal quarter 2017, thus the cut-off for the partner busyness data is on 31 March 2017. Lastly, the number of clients (*CLIENTS)* and market capitalization *(MCAP*) for each audit partner are calculated from the portfolio. Market capitalization for each audit partner is obtained from the sum of the client's market value of equity at the end of 2016. Under the assumption that there is no audit partner change during 2016 and 2017 for each sample firm, thus values for *MCAP* in the observation takes value from the fiscal year 2016. The second step is merging the *BUSY* variable with the firm-quarter observations. The merging process is based on Engagement Partner ID, which is unique for each audit partner. Firms audited by the same audit partner have the same value for *BUSY* variable.

Following Francis and Ke (2006), the regression model compares the ERC before and after the disclosure of audit partner names. Prior to the audit partner disclosure, the market does not have any information regarding audit partner busyness. If the disclosure requirement represents new information and the capital market perceives that audit partner busyness negatively affects audit quality, then I expect β_5 will be negative. In addition, the coefficient on $UE * BUSY$ might not totally caused by the effect of the audit partner busyness alone if estimated only with earnings surprises after the audit partner disclosure. Because *BUSY* might be correlated with unobservable ERC determinants not included in the control variables. Therefore, using earnings surprises in the pre-disclosure period control for these unobservable ERC determinants and the $UE * POST * BUSY$ interaction would provide a stronger test on the second hypothesis (Francis and Ke, 2006). For testing the second hypothesis, the sample period covers the fiscal quarters in 2016 (pre-disclosure period) to 2017 (post-disclosure period). I exclude fiscal quarters in 2015 because then the analysis will provide accurate comparison on the ERC between pre-disclosure and post-disclosure period related to audit partner busyness. In addition, the partner busyness data is only available for 2016 fiscal year audits. Based on the assumption that there is no auditor change during 2016-2017, then, the audit partner busyness for fiscal quarter in 2017 would be the same as in 2016. To relax the assumption to fiscal year 2015 will create inaccurate data on audit partner busyness.

Variables used for the hypotheses testing are described in the Appendix B.

5. Sample selection and data preparation

For hypotheses testing, this thesis uses sample from companies listed on NYSE, AMEX, and NASDAQ. I use different observation period for each hypothesis. The data used for testing H1 ranges from fiscal quarters in 2015 to 2017, while for H2 testing the sample period covers fiscal quarters in 2016 to 2017.

This thesis uses data collected from five databases: the PCAOB website, *AuditAnalytics*, Compustat, I/B/E/S, and Eventus. The last four databases are available on the Erasmus University Rotterdam's data subscriptions through Wharton Research Data Services (WRDS). All datasets from different databases are merged through the use of STATA.

First, the initial sample for this thesis is identified from the PCAOB website[6]. This data consists of Form AP filings for all SEC issuers starting from 1 February 2017[7]. 10,949

[6] Database for Form AP filings is available at https://rasr.pcaobus.org/Search/Search.aspx

records are obtained from this database consists of audit reports data for fiscal year 2013-2017 for all SEC issuers, included employee benefit plan and investment company. I exclude filings for employee benefit plan and investment company from the dataset and retain only filings for audits of 31 December 2016 fiscal year end financial reporting. For the first hypothesis, the sample restricted to audit reports issued from 31 January to 29 June 2017 to isolate the effect only on audit partner name disclosure and to avoid the confounding effect on the certain audit participant disclosure[8] (Burke et al. 2017). Align with the sample construction for audit partner busyness, for the second hypothesis, firms with Form AP filing date exceed 31 March 2017 are excluded from the sample. Because Central Index Key (CIK) is the identifier used in other databases, thus firms without CIK are dropped. The initial sample for the first hypothesis is 5,571 firms and 3,221 firms for the second hypothesis (dataset 1).

Second, I obtain data for auditor changes from *AuditAnalytics* using CIK as firm identifier from the initial sample. The merging process between dataset 1 and auditor changes data is based on CIK as key variable. I eliminate firms that have auditor changes during 2015-2017 for H1 and during 2016-2017 for H2, based on assumption that firms without auditor switching have the same audit partner throughout the observation period. This sample selection results in samples for H1 and H2, which are 4,448 firms and 2,727 firms, respectively (dataset 2).

Third, financial data are collected from Compustat Fundamental Quarterly. H1 data ranges from 2014 to 2016 fiscal quarters, while H2 data is obtained for 2015 to 2017 fiscal quarter. Data for fiscal quarters in 2014 and 2015 for H1 and H2, respectively, are used to calculate the lag value for control variables. These data are market value of equity, book value of equity, total debt, fiscal closing price, and earnings announcement date. Earnings announcement date for each observation is required as event date, thus I obtained this data from Compustat Fundamental Quarterly (data item RDQ). Following Livnat and Mendenhall (2006), data for price and earnings announcement date from Compustat are used in this thesis. I obtain CUSIP, SIC code, and Stock Exchange code (data item EXCHG) for each firm from Compustat as well. I retain data only for companies listed on NYSE (EXCHG 11), AMEX (EXCHG 12), and NASDAQ (EXCHG 14). Then, based on CIK as key variable, I merge dataset 2 with Compustat data, resulting in initial sample of 4,002 firms and 2,543

[7] Data of Form AP filings was downloaded and constructed in August 2017.
[8] The disclosure for other participants in the audit is effective for audit report issued on or after 30 June 2017 (SEC, 2016).

firms for H1 and H2, respectively. Calculation for control variables is made within this dataset. Following Francis and Ke (2006), no industry is excluded from the observation because this thesis focuses on the ERC comparison between pre- disclosure period and post-disclosure period, hence does not relate to accounting accruals.

Next, data for unexpected earnings are downloaded from I/B/E/S summary statistics. I/B/E/S requires 8-digit CUSIP as identifier, while Compustat provides 9-digit CUSIP. Thus, the 9-digit CUSIP needs to be converted to 8-digit CUSIP by deleting the last 1 digit. Data obtained from I/B/E/S consist of EPS median analyst forecast, actual EPS, I/B/E/S statistical period, and forecast period end date. Data for both hypotheses are quarterly analyst forecast. Analyst forecasts made after earnings announcement date are dropped. Then, I retain only the most recent median consensus analyst forecast (I/B/E/S statistical period closest to the earnings announcement date). Afterwards, these data are merged with the initial sample using 8-digit CUSIP as key variable, resulting in dataset 3. Calculation for unexpected earnings variable is made within this dataset, which is actual EPS minus the most recent median consensus forecast (from I/B/E/S) scaled by stock price at the beginning of the quarter (from Compustat).

Lastly, to get $CAR3$ variable, Eventus[9] database is used through Cross Sectional Daily menu. Eventus requires 8-digit CUSIP as identifier. To begin with, I construct data from dataset 3 containing 8-digit CUSIP and earnings announcement dates for each observation. Then, I upload this data on Eventus and select CRSP equally-weighted based on the market model. I choose estimation window and event window for H1 and H2 as defined earlier. Then these data are merged with dataset 3 using 8-digit CUSIP as key variable. Data from I/B/E/S analyst forecast and Eventus cumulative abnormal return for the second fiscal quarter of 2017 are not available yet. Therefore, data available for the post-disclosure period is limited to the first fiscal quarter of 2017. All missing data for the dependent, independent, and control variables are dropped from the observation resulting in 17,947 firm-quarter observations for H1 and 9,414 firm-quarter observations for H2. Prior to the analyses, all continuous variables are winsorized at the 1 percent and 99 percent level to remove extreme values. Sample selection process is described in the Table 1 below.

[9] Eventus is used for event study analysis, it performs the calculation for cumulative abnormal returns using stock prices data from CRSP.

Table 1 Sample Selection and the Distribution of Observations by Industry

Panel A: Sample Selection Procedure

Description	Number of observations	
Step 1: Initial sample selection	H1	H2
Form AP Filings from PCAOB website for the period 1 February-10 August 2017	10,949	10,949
Less: employee benefit plan and investment company	- 4,321	- 4,321
Less: firm non 31 December 2016 fiscal year end	- 993	- 993
Less: firm with missing CIK	- 41	- 41
Less: firm with auditor report date not in the period between 31 January-29 June 2017	- 64	-
Less: firm with Form AP filing date exceed 31 March 2017	-	2,373
Dataset 1	5,571	3,221
Less: firm with auditor changes	- 1,123	- 494
Dataset 2	4,448	2,727
Less: firm not listed on NYSE, AMEX, or NASDAQ	- 446	- 184
Initial sample of unique firms	4,002	2,543
Step 2: Final sample selection		
Firm-quarter observations	30,300	12,691
Less: missing data for earnings announcement date and control variables in Compustat	- 5,303	- 1,546
Less: missing data actual and median EPS forecast in I/B/E/S	- 6,832	- 1,706
Less: missing data CAR in Eventus	- 218	- 25
Final sample of firm-quarter observations	17,947	9,414

Panel B: Distribution of Observations by Industry

	Sample for the first hypothesis (N = 17,947)		Sample for the second hypothesis (N = 9,414)	
Industry Description	n	%	n	%
Agriculture	9	0.05%	5	0.05%
Mining and construction	513	2.86%	253	2.69%
Food	274	1.53%	155	1.65%
Textiles and printing/publishing	429	2.39%	259	2.75%
Chemicals	477	2.66%	242	2.57%
Pharmaceuticals	2,349	13.09%	1173	12.46%
Extractive	919	5.12%	515	5.47%
Durable manufacturers	2,632	14.67%	1378	14.64%
Transportation	1,217	6.78%	564	5.99%
Utilities	817	4.55%	444	4.72%
Retail	743	4.14%	403	4.28%
Financial institutions	4,253	23.70%	2360	25.07%
Services	1,277	7.12%	661	7.02%
Computers	2,014	11.22%	984	10.45%
Conglomerats	24	0.13%	18	0.19%
Total	17,947	100%	9,414	100%

This table provides information on the sample selection and industry distribution. Panel A presents the procedure taken to get the final sample for the main analyses. Panel B presents the industry distribution of the sample used in both hypotheses. Industry membership is determined by SIC code, as used in Frankel et al. (2002), as follows: agriculture (0100-0999), mining and construction (1000-1999, excluding (1300-1399), food (2000-2111), textiles and printing/publishing (2200-2799), chemicals (2800-2824, 2840-2899), pharmaceuticals (2830-2836), extractive (1300-1399, 2900-2999), durable manufacturers (3000-3999, excluding 3570-3579 and 3670-3679), transportation (4000-48999), utilities (4900-4999), retail (5000-5999), financial institutions (6000-6999), services (7000-8999, excluding 7370-7379), computers (3570-3579, 3670-3679, 7370-7379), and conglomerats (9997).

6. Empirical results

6.1. Descriptive analysis

Table 2 Panel A reports the descriptive statistics for the data used in testing the first hypothesis. There are 17,947 observations in total with the sample size for pre-disclosure period is larger than the post-disclosure period, because Form AP is filed mostly in 2017. The data indicates that the pre-disclosure sample does not differ significantly in the mean levels of the proxies for growth, firm risk, earnings persistence, and firm size, with those in the post-disclosure sample.

Table 2 Panel B reports the descriptive statistics for the data used in testing the second hypothesis. The total sample for testing H2 is 9,414 firm-quarters with bigger portion of the sample in the pre-disclosure period. Only two variables are significantly different in the mean level between the two periods. *ABS_UE* is higher in the mean value of the pre-disclosure sample (0.007) compared to the post-disclosure sample (0.006). This indicates that the magnitude of earnings surprise is slightly higher for firms in the pre-disclosure period. The mean value of *SIZE* in the post-disclosure period (7.414) is higher than in the pre-disclosure period (7.266), meaning that the average market value of equity for firms in the post-disclosure period is larger than the pre-disclosure period.

Both panels show that the cumulative abnormal return has a positive value on average and the earnings surprise is close to zero on average. The market-to-book ratio indicates a positive sign, meaning that the firms in the sample are potentially growing. In panel A, the debt-to-equity ratio has a mean value above one. This could be an indication that, on average, firms in the sample are financed with more debt than equity. While in Panel B, the mean value equals to one, indicating that the firms in the sample, on average, has approximately the equal portion of financing between debt and equity.

Table 2 Panel C reports the descriptive statistics for the audit partner busyness. From the sample constructed for audit partner busyness as explained in section 4.2, there are 1,800 unique audit partner whose names are disclosed in Form AP. Number of clients for each audit partner in a year has a median value of 1 with minimum and maximum value are 1 and 10, respectively. While the market capitalization for each audit partner in a year has a median value of $1,990.832 million with minimum and maximum value are $1.093 million and $540,659.3 million, respectively.

Table 2 Descriptive Statistics

Panel A: Regression Variables for the First Hypothesis

Variables	Full sample (N = 17, 947)			Pre-disclosure sample (N = 15,707)			Post-disclosure sample (N = 1, 7947)			Difference in means	t-stat
	Mean	Median	Std Dev.	Mean	Median	Std Dev.	Mean	Median	Std Dev.		
CAR3	0.002	0.002	0.080	0.002	0.003	0.081	0.003	0.000	0.074	-0.001	-0.417
UE	0.000	0.000	0.014	0.000	0.000	0.014	0.000	0.001	0.014	0.000	0.472
MTB	3.333	2.076	7.641	3.346	2.061	7.577	3.241	2.192	8.077	0.105	0.577
DE	1.033	0.579	3.010	1.032	0.574	2.971	1.044	0.620	3.269	-0.012	-0.169
ABS_UE	0.007	0.002	0.017	0.007	0.002	0.016	0.007	0.002	0.018	0.000	-0.574
SIZE	7.171	7.097	1.837	7.172	7.093	1.835	7.166	7.124	1.855	0.006	0.142
POST	0.125	0.000	0.331								
LOSS	0.269	0.000	0.443	0.266	0.000	0.442	0.293	0.000	0.455		
BIG4	0.778	1.000	0.416	0.778	1.000	0.416	0.778	1.000	0.416		
Q4	0.221	0.000	0.415	0.252	0.000	0.434	0.000	0.000	0.000		

Panel B: Regression Variables for the Second Hypothesis

Variables	Full sample (N = 9, 414)			Pre-disclosure sample (N = 7,420)			Post-disclosure sample (N = 1, 994)			Difference in means	t-stat
	Mean	Median	Std Dev.	Mean	Median	Std Dev.	Mean	Median	Std Dev.		
CAR3	0.004	0.003	0.075	0.004	0.003	0.076	0.004	-0.001	0.070	0.000	0.062
UE	0.000	0.000	0.013	0.000	0.000	0.013	0.000	0.000	0.012	0.000	1.243
CLIENTS	1.892	2.000	1.059	1.888	2.000	1.057	1.904	2.000	1.068	-0.016	-0.593
MCAP	7.987	8.093	1.693	7.982	8.093	1.699	8.005	8.097	1.671	-0.023	-0.560
MTB	3.086	2.028	8.716	3.072	1.980	8.670	3.141	2.197	8.888	-0.069	-0.313
DE	1.000	0.616	3.786	1.006	0.603	3.766	0.978	0.652	3.861	0.028	0.284
ABS_UE	0.007	0.002	0.016	0.007	0.002	0.016	0.006	0.002	0.015	0.001 **	1.956
SIZE	7.297	7.224	1.794	7.266	7.193	1.801	7.414	7.350	1.766	-0.148 ***	-3.313
POST	0.212	0.000	0.409								
LOSS	0.255	0.000	0.436	0.255	0.000	0.436	0.258	0.000	0.438		
BIG4	0.782	1.000	0.413	0.780	1.000	0.414	0.789	1.000	0.408		
Q4	0.196	0.000	0.397	0.249	0.000	0.433	0.000	0.000	0.000		

Panel C: Data for Audit Partner Busyness (N = 1,800 Unique Audit Partner)

Variables	Mean	Median	Std Dev.	Min	P25	P75	Max	
Number of clients per audit partner-year	1.537	1	0.855	1	1	2	10	
Market capitalization per audit partner-year	10,676.5	1,990.832	32,572.370	1.093	498.086	7,388.589	540,659.3	(in $ million)

This table provides the descriptive statistics for variables in the main analyses. Panel A and B presents the descriptive statistics for variables used in testing H1 and H2 respectively. Pre-disclosure sample is the firm-quarters with earnings announcement made before the Form AP Filings. Post-disclosure sample is the firm-quarters with earnings announcement made after the Form AP Filings. The difference between the means is calculated by subtracting the means of "Pre-disclosure sample" from the means of "Post-disclosure sample", and a t-test is conducted to identify if the difference is significant. The difference between the means for dummy variable is not calculated since it would only take the value of 1 and 0. See Appendix B for variable definitions. Panel C presents the descriptive statistics for *BUSY* variable based on unique audit partner sample in 2016. ** and *** denote significance at 5% and 1% level, respectively, two-tailed test.

Table 3 reports Spearman correlation among the regression variables used in the main analyses for testing both hypotheses. The coefficients reported in Panel A do not indicate any strong correlation between variables even though most of them are significantly correlated. However, *SIZE* has moderate significant correlations with *LOSS* (-0.415), *BIG4* (0.461), and *ABS_UE* (-0.449). While in Panel B there is an indication of strong significant correlation between *SIZE* and *MCAP*, the coefficient between these two variables is 0.815. It is logic since both variables use market value of equity as its measurement. *SIZE* is also significantly correlated with *LOSS* (-0.399), *BIG4* (0.447), and *ABS_UE* (-0.433) with moderate level of correlation. The issue of multicollinearity is corroborated with variance inflation factors test.

6.2. Regression assumptions

OLS regression assumes that there is no perfect linear relation between any of the independent variables in the model (no multicollinearity), the variance of the error term is constant (no heteroskedasticity) and the residuals are distributed normally. This thesis conducts several tests to examine these assumptions for the main analyses. Variance inflation factor (VIF) is used to test multicollinearity, Breusch-Pagan/Cook-Weisberg test for heteroskedasticity, and Skewness/Kurtosis tests for normality. The results are displayed in Appendix C Table 4.

Table 4 shows the results of testing the regression assumptions for both hypotheses. For multicollinearity test, the interaction between *UE* and *SIZE* has VIF value that exceeds the rule of thumb of 10 (18.13, 19.64, and 25.96 in Panel A, B, and C, respectively) This indicates that multicollinearity exists. Therefore, eliminating *UE*SIZE* from the regression may reduce the standard errors and is better fit the model. After the removal, the VIF value of other variables is at the acceptable level. Next, heteroskedasticity tests show that the chi-square values are high and the p-values are below 0.05, indicating that the regression residuals are not constant or heteroskedasticity exists. As a result, the standard errors are biased. Then, it leads to bias in test statistics and confidence intervals. To treat heteroskedasticity issue, robust standard errors are applied in the regressions. Lastly, tests for normal distribution of the errors report that the p-values are zero, indicating the regression residuals are not normally distributed. Due to the large sample size, the non-normal distribution of the errors would not be a concern in interpreting the regression's results.

Table 3 Spearman correlation matrix for the main analyses

Panel A: Correlations for the first hypothesis

	CAR3		*UE*		*POST*		*MTB*		*DE*		*LOSS*		*BIG4*		*ABS_UE*		*Q4*		*SIZE*
CAR3	1.000																		
UE	0.302	*	1.000																
POST	-0.005		0.005		1.000														
MTB	-0.012		0.008		0.019	*	1.000												
DE	-0.001		-0.043	*	0.012		0.072	*	1.000										
LOSS	-0.076	*	-0.163	*	0.021	*	0.036	*	-0.261	*	1.000								
BIG4	0.013		0.052	*	0.000		0.082	*	0.140	*	-0.104	*	1.000						
ABS_UE	0.027	*	0.123	*	-0.008		-0.238	*	-0.072	*	0.395	*	-0.125	*	1.000				
Q4	-0.015	*	-0.013		-0.201	*	-0.020	*	-0.005		0.010		-0.008		0.036	*	1.000		
SIZE	0.005		0.020	*	0.003		0.253	*	0.252	*	-0.415	*	0.461	*	-0.449	*	-0.021		1.000

Panel B: Correlations for the second hypothesis

	CAR3		*UE*		*POST*		*CLIENTS*		*MCAP*		*MTB*		*DE*		*LOSS*		*BIG4*		*ABS_UE*		*Q4*		*SIZE*
CAR3	1.000																						
UE	0.285	*	1.000																				
POST	-0.014		-0.012		1.000																		
CLIENTS	-0.019		-0.049	*	0.007		1.000																
MCAP	-0.004		-0.001		0.004		-		1.000														
MTB	-0.020		0.001		0.045	*	-0.049	*	0.190	*	1.000												
DE	0.007		-0.042	*	0.011		-0.031	*	0.206	*	0.123	*	1.000										
LOSS	-0.055	*	-0.157	*	0.003		0.115	*	-0.297	*	0.007		-0.230	*	1.000								
BIG4	-0.006		0.034	*	0.009		-0.063	*	0.454	*	0.101	*	0.112	*	-0.051	*	1.000						
ABS_UE	0.045	*	0.160	*	-0.020	*	0.069	*	-0.335	*	-0.242	*	-0.064	*	0.394	*	-0.097	*	1.000				
Q4	-0.014		-0.013		-0.256	*	-0.002		-0.008		0.020		-0.009		0.000		-0.007		0.007		1.000		
SIZE	-0.016		0.008		0.037	*	-0.156	*	0.815	*	0.276	*	0.230	*	-0.399	*	0.447	*	-0.433	*	0.001		1.000

* Significant at 5%, two-tailed. This table provides Spearman correlations between variables used in the main analyses. See Appendix B for variable definitions.

6.3. Regression analyses for testing the first hypothesis

6.3.1. Main regression analyses

Table 5 reports the OLS regression results from testing the first hypothesis. The first hypothesis predicts that the ERC is higher in the post-disclosure period relative to the pre-disclosure period, captured by the coefficient on *UE*POST* should be positive and significant. *POST* variable is coded to 1 if the observation is in the period when audit partner names are disclosed, and 0 otherwise. The first hypothesis is examined by estimating the regression model specified in equation 6.

I conduct the analyses using different sample for the first hypothesis. Table 5 column (1) displays the basic regression result using the full sample of 2015 to 2017 firm-quarters that is 17,947 observations. Next, I conduct sensitivity checks presented in columns (2) through (4). These tests serve as robustness checks because they indicate that the basic result in column (1) holds under different sets of samples that control for confounding effects. Column (2) presents the regression result of the full sample, included industry fixed effect. Fixed effect model has been used in prior studies (Francis and Ke, 2006; Lim and Tan, 2008; Ghosh et al. 2009; Aobdia et al. 2015) to control for the omitted correlated variables bias caused by cross-sectional analysis. Because ERC varies across industries (Easton and Zmijewski, 1989; Jetter and Chaney, 1992), this thesis uses industry fixed effect (2-digit SIC code as a group variable) for sensitivity analyses due to a diverse range of industry in the sample (see Table 1 Panel B for industry distribution). Column (3) displays the regression result by requiring each firm to have complete firm-quarter observations, which is 8 quarters before and 1 quarter after the partner names disclosure. The objective of conducting balanced panel analysis is to assure that the result in column (1) is not due to changes in sample mix across the two periods. The sample used in this analysis is 14,697 firm-quarter observations. Column (4) presents the regression result by retaining only two fiscal quarters surrounding the disclosure of audit partner names, which is the fourth fiscal quarter in 2016 and the first fiscal quarter in 2017. This analysis is conducted in order to examine the shift in the ERC immediately before and after the audit partner disclosure. Due to high VIF value, *UE*Q4* is excluded from the regression. The sample selection on this analysis results in 4,326 firm-quarter observations. Due to multicollinearity issue, the interaction between *UE* and *SIZE* is excluded from all regressions.

In all four regressions (column (1) to (4)), the F-statistics for the goodness-of-fit are significant at the 0.0001 level, indicating the regressions specification appear to be adequate. The adjusted R-squared in all four regressions is in the range of adjusted R-squared

manifested by prior studies examining the earnings response coefficient, usually less than 10 percent (Teoh and Wong, 1993; Balsam et al. 2003; Francis and Ke, 2006; Lim and Tan, 2008). In column (2), the adjusted R-squared is higher by 0.2% than in column (1), indicating higher explanatory power when industry fixed effect is included. The adjusted R-squared for using balanced sample in column (3) is the highest among four analyses with the value of 7.4%. Thus, balanced sample analysis has better explanation power than the original analysis. In column (4), the adjusted R-squared (4.2%) is smaller than that in column (1) (5.6%), indicating that using the full sample is better than using smaller sample size.

In column (1), the coefficient of interest (*UE*POST*) has a positive sign (0.107), indicating that the ERC is higher in the post-disclosure period. However, the t-statistics of this coefficient (0.604) is not significant. Therefore, the first hypothesis is not supported as there is no evidence that the ERC is significantly higher in the post-disclosure period. The result is robust across all sensitivity analyses presented in columns (2) to (4) in Table 5. The coefficient on *UE*POST* is always positive. The highest coefficient value on *UE*POST* (0.133) presented in column (4), indicating that the higher ERC in the post-disclosure period is more pronounce when the observation is restricted only to two quarters immediately before and after the audit partner disclosure. Nevertheless, the t-statistics on the coefficient *UE*POST* remain insignificant. Conclusively, these results support the basic finding in column (1) that the first hypothesis is rejected. These evidence suggest that investors do not perceive that the implementation of audit partner disclosure enhance audit quality. It is possible that the market perceives the partner accountability level and audit quality in the U.S. were already at high levels, as researchers (Francis, 2004) and practitioners argue (e.g. Ernst & Young, 2014). This could be due to high litigation risk and good monitoring systems in the U.S. (PCAOB, 2015).

Table 5 provides further results on other variables used in the regression. Consistent with prior research, the unexpected earnings are positively correlated with 3-day window cumulative abnormal returns in all four regressions, ranging from 1.545 to 4.282 and statistically significant at 1 percent level, two-tailed.

Next, the regression results for ERC determinants are presented in table5. Most of the coefficient signs on the interaction between *UE* and control variables are generally consistent with the prediction. First, the result for growth opportunity proxy, across all columns the coefficient on *UE*MTB* is always positive but the value is small. This indicates that the ERC is slightly higher for firms that are growing. However, the coefficients are not statistically significant, so the ERC does not vary in growth level. Second, the coefficient on *UE*DE*

results in mixed signs, it has negative signs in column (1) and (2) but positive in the other two columns. Similar to Lim and Tan (2008), the coefficient on *UE*DE* (0.029) is positive and significant at 10 percent level in column (3). This result provides weak evidence that the ERC is higher for risky firms. The weak evidence and inconsistent signs on proxy for firm risk are not surprising because prior studies also provide inconclusive results (Teoh and Wong, 1993). Third, the coefficients on *UE*LOSS* and *UE*ABS_UE* are always negative and significant at 5 percent level or better, indicating that firms with low earnings persistence (*LOSS*) and large magnitudes of earnings surprise (*ABS_UE*) experience lower ERC. Fourth, the coefficient on *UE*BIG4* is always positive, indicating that firms audited by Big 4 audit firms exhibit higher ERC. However, the results are not statistically significant, meaning that the ERC does not differ between firms audited by Big 4 and non-Big 4. Lastly, the coefficient on *UE*Q4* shows a negative sign (-0.157) and significant at 10 percent level in column (3), as same as the prediction sign. This weak evidence suggests that the ERC is lower in the fourth fiscal quarter than in the other fiscal quarters.

Table 5 Main regression results for the first hypothesis

		Dependent variable = *CAR3*			
		(1)	(2)	(3)	(4)
		Full sample	Full sample with industry FE	Balanced sample	Retain only two fiscal quarters immediately before and after the disclosure
Variables	Predicted sign	Coeff. [t-stat]	Coeff. [t-stat]	Coeff. [t-stat]	Coeff. [t-stat]
UE		3.021	3.010	4.282	1.545
		[17.402]***	[17.325]***	[24.466]***	[4.959]***
POST		0.001	0.001	0.002	0.002
		[0.679]	[0.855]	[0.995]	[0.869]
*UE*POST*	+	0.107	0.091	0.058	0.133
		[0.604]	[0.509]	[0.309]	[0.688]
*UE*MTB*	+	0.010	0.010	0.005	0.000
		[1.051]	[1.021]	[0.496]	[-0.002]
*UE*DE*	-	-0.001	-0.003	0.029	0.029
		[-0.048]	[-0.184]	[1.803]*	[1.363]
*UE*LOSS*	-	-1.153	-1.143	-1.409	-0.601
		[-8.479]***	[-8.399]***	[-10.625]***	[-2.440]**
*UE*BIG4*	+	0.113	0.136	0.165	0.247
		[0.927]	[1.122]	[1.301]	[1.326]
*UE*ABS_UE*	-	-19.007	-18.874	-41.151	-7.026
		[-12.129]***	[-12.040]***	[-17.192]***	[-3.948]***
*UE*Q4*	-	0.002	-0.010	-0.157	N/A
		[0.015]	[-0.069]	[-1.166]*	N/A
Constant		0.000	0.007	0.007	-0.016
		[0.388]	[0.387]	[0.256]	[-12.265]***
Industry fixed effect		No	Yes	Yes	Yes
N		17,947	17,947	14,697	4,326
Prob > F		0.000	0.000	0.000	0.000
R-squared		0.057	0.062	0.079	0.057
adj R-squared		0.056	0.058	0.074	0.042

This table shows the results of testing the first hypothesis using the following regression:

$CAR3_{iq} = \alpha + \beta_1 UE_{iq} + \beta_2 POST + \beta_3 UE_{iq} * POST + \beta_n UE_{iq} * control\ variables + \varepsilon_{iq}$

Variables are defined in Appendix B. The variables with "*" are interactions terms. Variables with the value of VIF exceed 10 are excluded from the regression to avoid multicollinearity issue. The regressions are corrected for robustness of standard errors if heteroskedasticity exists. All significance tests are two-tailed. *, **, and *** are significant at 10%, 5%, and 1%, respectively.

6.3.2. Additional analyses: Firm size effect

In addition to the main analyses, I conduct additional analyses by comparing the pre-disclosure ERC with the ERC in the post-disclosure based on different firm size. Since ERC is associated with firm size, yet the interaction between *UE* and *SIZE* is excluded from the regression due to high value of VIF. Therefore, the necessity to disentangle the effect of firm size on the ERC is important. For these analyses, I divide the full sample into two groups. The first group is for large firms, consists of firm-quarter observation with market value of equity in the upper 25th percentile of the full sample (4,487 observations). The second group is for small firms, which are the rest of the sample (13,460 observations). Due to high value of VIF, in large firms, the variable *UE*BIG4* is excluded from the regression. It is logic since Big 4 auditor usually audits large firms.

Table 6 columns (1) to (3) show the results from additional analyses related to firm size effect based on firm-quarter observation and using regression specified in the equation 6. Column (1) presents the regression result for each group (i.e. large firms and small firms) based on full sample. Column (2) presents the result from analysis using a balanced data for large firm sample. Column (3) displays the result from analysis using large firm sample but retain only two fiscal quarters immediately before and after the audit partner disclosure. Industry fixed effect is added in all regressions.

The adjusted R-squared from these analyses are higher than the main analyses. In column (2), the adjusted R-squared is higher than that in column (1) by 1 percent, but it is lower than that in column (3). Furthermore, the regression in column (3) has the highest adjusted R-squared (14.7%) among four analyses on firm size effect, suggesting that this analysis has better explanatory power than the other three regressions.

The results in Table 6 columns (1) to (3) show that the coefficient of interest, *UE*POST*, is always positive for large firms but negative for small firms, indicating that the ERC is higher in the post-disclosure period for large firms but it is lower for small firms in the post-disclosure period. However, for small firms, the coefficient on *UE*POST* is not statistically significant. Thus, it can be inferred that the ERC for small firms is not different between pre-disclosure and post-disclosure period. On the other hand, in column (1) the coefficient on *UE*POST* is positive and significant at 10 percent level for large firms (2.062, t-stat 1.809). Furthermore, in column (3), *UE*POST* is positively associated with *CAR3* (the coefficient is 3.119), significant at 1 percent level (t-stat 2.690). The results indicate a higher ERC in the first fiscal quarter after the disclosure relative to the prior fiscal quarters, for large firms. This evidence suggests that investors in large firms perceive the disclosure requirement

positively. It is possible that investors in large firms are institutional investors that are more sophisticated and more important price-setters in capital markets, compared to individual investors that are less sophisticated and trade primarily for reasons unrelated to information (Ramalingegowda and Yu, 2012). Large institution investors prefer stocks that have greater market capitalizations and higher book-to-market ratios, are more liquid, and have lower returns for the previous year, compared to other investors (Gompers and Metrick, 2001).

Moreover, these analyses provide supportive evidence on prior studies examining the ERC determinants. In columns (1) to (3), for large firms, the coefficient on *UE*MTB* is always positive, and significant at 10 percent level of significance or better, indicating that investors are more responsive to earnings surprises from large firms with growth opportunity. For large firms, the coefficient on *UE*DE* is always negative and significant at 5 percent significance level or better. It is an indication that risky firms exhibit lower ERC, especially for firms with large market capitalization. While in column (1), *UE*LOSS* is negatively associated with *CAR3* only for small firms (the coefficient is -1.011), significant at 1 percent level (t-stat -7.518). This indicates that for small firms, low earnings persistence will lead to lower market valuation of earnings surprises. The coefficient on *UE*ABS_UE* is always negative and significant at 1 percent level of significance for both groups, meaning that capital market participants are less responsive to earnings surprises from firms with large magnitude of unexpected earnings. For large firms, this coefficient is larger than that in the main analyses because the absolute value of earnings surprise is so small, thus, the interaction on *UE*ABS_UE* results in very small value. This indicates that the earnings for large firms are precisely forecasted that the actual earnings have the closest value with the earnings forecasts.

6.3.3. Additional analyses: Using firm-year observation

The last additional analyses for the main hypothesis are conducted by using firm-year observations. These analyses aim to corroborate the classification choice on variable *POS*T used in the main analyses. Analysis in Table 7 column (1) uses initial sample firm with the fiscal year of 2015 to 2016 as its observations, *UE*POSTYEAR* is the interaction of interest. *UE*POSTYEAR* replaces *UE*POST*, where *POSTYEAR* is an indicator variable equals to 1 if the fiscal year of the observation is 2016 and 0 otherwise. Fiscal year 2016 is defined as the post-disclosure period in this analysis because the disclosure requirement is effective on audit reports issued on or after 31 January 2017, which is the audit reports for financial reporting of fiscal year 2016. The second analysis in column (2) of Table 7 uses observations from the fiscal year of 2013 to 2016 from the initial sample firm. In this analysis, *POSTYEAR* takes the

value of 1 if the fiscal years of the observation are 2015 and 2016, and 0 otherwise. This is because the disclosure requirement is adopted by the PCAOB on 15 December 2015. Therefore, it is expected that fiscal year 2015 is already affected by the requirement.

Table 7 columns (1) to (2) present the results of these analyses, the adjusted R-squared for both analyses are the lowest compared to the main analyses (only 3% and 3.4% in Table 7). These lower values of adjusted R-squared in these additional analyses indicate that the regression models have the lowest explanatory power than those used in the main analyses. Moreover, the coefficient of interest, *UE*POSTYEAR*, has negative sign (-0.172 and -0.115) in both regressions, indicating that the ERC is lower in the post-disclosure period than in the pre-disclosure period. This is contrary to the expectations. Yet, the coefficient is insignificant for both analyses, meaning that investors do not perceive that audit quality is affected by the audit partner disclosure. In addition, for ERC determinants, the only coefficient that is significant at 1 percent level of significance is *UE*ABS_UE*, the coefficients are -7.979 and -4.096 in column (1) and (2), respectively. The coefficient on *UE*LOSS* in column (1) is negative (-0.333) and significant at 5 percent level of significance (t-stat -1.971), but in column (2) it is significant at 10 percent level of significance (coeff. -0.253, t-stat -1.856). These results suggest that the ERC is lower for firms with large magnitude of earnings surprises and firms with low earnings persistence. The remaining coefficients for control variables are not significant and the signs are inconsistent. After all, it can be concluded that using firm-quarter observations are a better analysis relative to firm-year analysis. Furthermore, the classification on *POST* variable used in the main analysis is a robust choice since the coefficient signs are the same as predicted.

Table 6 Regression results for the first hypothesis using firm-size effect

		Dependent variable = *CAR3*			
		(1)		(2)	(3)
		Full sample		Balanced sample	Retain only two fiscal quarters immediately before and after the disclosure
		Large firms	Small firms	Large firms	Large firms
Variables	Predicted sign	Coeff. [t-stat]	Coeff. [t-stat]	Coeff. [t-stat]	Coeff. [t-stat]
UE		8.270	2.625	11.177	6.490
		[12.122]***	[15.362]***	[12.122]***	[4.593]***
POST		-0.005	0.003	-0.005	-0.003
		[-2.401]**	[1.250]	[-2.077]**	[-0.891]
*UE*POST*	+	2.062	-0.029	0.062	3.119
		[1.809]*	[-0.169]	[0.044]	[2.690]***
*UE*MTB*	+	0.101	0.010	0.169	0.429
		[1.797]*	[0.840]	[2.485]**	[2.610]***
*UE*DE*	-	-0.273	0.001	-0.288	-0.564
		[-2.853]***	[0.062]	[-2.499]**	[-2.893]***
*UE*LOSS*	-	-0.032	-1.011	-0.617	1.276
		[-0.035]	[-7.518]***	[-0.536]	[0.806]
*UE*BIG4*	+	N/A	0.091	N/A	N/A
		N/A	[0.777]	N/A	N/A
*UE*ABS_UE*	-	-394.204	-12.707	-773.098	-459.159
		[-6.693]***	[-10.942]***	[-7.962]***	[-3.309]***
*UE*Q4*	-	-1.054	-0.024	-1.249	N/A
		[-1.227]	[-0.181]	[-1.246]	N/A
Constant		0.007	0.006	0.008	-0.011
		[0.370]	[0.139]	[0.935]	[-3.111]
Industry fixed effect		Yes	Yes	Yes	Yes
N		4,487	13,460	3,420	1,063
Prob > F		0.000	0.000	0.000	0.000
R-squared		0.084	0.061	0.096	0.196
adj R-squared		0.071	0.056	0.081	0.147

This table shows the results of testing the first hypothesis using the following regression:
$CAR3_{iq} = \alpha + \beta_1 UE_{iq} + \beta_2 POST + \beta_3 UE_{iq} * POST + \beta_n UE_{iq} * control\ variables + \varepsilon_{iq}$
Variables are defined in Appendix B. The variables with "*" are interactions terms. Variables with the value of VIF exceed 10 are excluded from the regression to avoid multicollinearity issue. The regressions are corrected for robustness of standard errors if heteroskedasticity exists. All significance tests are two-tailed. *, **, and *** are significant at 10%, 5%, and 1%, respectively.

Table 7 Regressions results for the first hypothesis using firm-year observation

		Dependent variable = *CAR3*	
		(1)	(2)
		2015-2016 firm year sample	2013-2016 firm year sample
Variables	Predicted sign	Coeff. [t-stat]	Coeff. [t-stat]
UE		1.584	1.313
		[6.639]***	[7.933]***
POSTYEAR		0.003	-0.002
		[1.125]	[-0.984]
*UE*POSTYEAR*	+	-0.172	-0.115
		[-1.170]	[-1.009]
*UE*MTB*	+	-0.004	0.008
		[-0.307]	[0.841]
*UE*DE*	-	0.018	-0.021
		[0.812]	[-1.761]
*UE*LOSS*	-	-0.333	-0.253
		[-1.971]**	[-1.856]*
*UE*BIG4*	+	0.118	-0.031
		[0.746]	[-0.256]
*UE*ABS_UE*	-	-7.979	-4.096
		[-6.303]***	[-6.079]***
Constant		0.022	0.001
		[0.365]	[0.040]
Industry fixed effect		Yes	Yes
N		3,736	6,926
Prob > F		0.000	0.000
R-squared		0.049	0.044
adj R-squared		0.030	0.034

This table shows the results of testing the first hypothesis using the following regression: $CAR3_{iq} = \alpha + \beta_1 UE_{iq} + \beta_2 POSTYEAR + \beta_3 UE_{iq} * POSTYEAR + \beta_n UE_{iq} * control\ variables + \varepsilon_{iq}$

POSTYEAR in column (1) equals to 1 if the fiscal year is the year when the disclosure requirement is implemented and 0 otherwise. That is fiscal year 2016 is coded to 1 and 2015 is coded to 0.

POSTYEAR in column (2) equals to 1 if the fiscal year is the year when the disclosure requirement is adopted by the PCAOB and 0 otherwise. Thus, fiscal year 2015 to 2016 are valued as 1 and fiscal year 2013 to 2014 take the value of 0.

Other variables are defined in Appendix B. The variables with "*" are interactions terms. Variables with the value of VIF exceed 10 are excluded from the regression to avoid multicollinearity issue. The regressions are corrected for robustness of standard errors if heteroskedasticity exists. All sample use industry fixed effect except for the full sample (1). All significance tests are two-tailed. *, **, and *** are significant at 10%, 5%, and 1%, respectively.

6.4. Regression analyses for testing the second hypothesis

6.4.1. Main regression analyses

Table 8 reports the OLS regression results from testing the second hypothesis. The second hypothesis predicts that for companies audited by busy audit partner, the ERC is lower in the post-disclosure period compared to the pre-disclosure period. The second hypothesis is examined by estimating the regression model specified in equation 7. Column (1) shows the result of using *CLIENTS* as a proxy for audit partner busyness. Column (2) presents the result of analysis using *CLIENTS* with industry fixed effect. Column (4) shows the result of using *MCAP* as a proxy for audit partner busyness. Column (5) presents the result of analysis using *MCAP* with industry fixed effect.

In column (1) of table 8, the variable of interest, *UE*POST*CLIENTS* is significant at 5 percent level with a positive coefficient (0.348). Moreover, in column (4), the coefficient on *UE*POST*MCAP* is also positive (0.336) and significant at 1 percent level. These coefficients indicate that, in the post-disclosure period, the higher the number of clients and market capitalization of an audit partner, the higher the ERC. In contrast, in column (1) and (4), in the pre-disclosure period, the coefficients on *UE*CLIENTS* and *UE*MCAP* have negative signs (-0.121 and -0.004, respectively), indicating that the ERC is lower for firms audited by busy audit partner in the pre-disclosure period. However, the coefficient on *UE*CLIENTS* and *UE*MCAP* is insignificant. Therefore, prior to the audit partner disclosure, investors do not discount the earnings of firms audited by busy audit partner since investors do not have any information regarding audit partner busyness. Because audit partner busyness does not influence the market reaction to earnings surprises in the pre-disclosure period, therefore it can be inferred that, in the post-disclosure period, the audit partner disclosure provides new information that investors could not obtain from other sources. Moreover, investors perceive this new information positively and they do not believe that the level of audit partner workload impairs audit quality in the post-disclosure period.

Table 8 column (2) and (5) display the results for analyses using industry fixed effect. The coefficient of interest (*UE*POST*CLIENTS* and *UE*POST*MCAP*) remain unchanged when using industry fixed effect model. However, the adjusted R-squared increases for both analyses, by 0.3% in *CLIENTS* model and by 0.4% in *MCAP* model. The significant change in column (2) is the coefficient on *UE*POST*CLIENTS* (from 0.348 in column (1) to 0.336 in column (2)), it remains significant but the significance level is lower than the original analysis (from 5% to 10% level). While in column (5), the coefficient on *UE*POST*MCAP* is similar to that in basic analysis (the coefficients are 0.335 and 0.336 in column (5) and (4),

respectively). In addition, the coefficients on *UE*CLIENTS* and *UE*MCAP* in column (2) and (5) also remain insignificant. This suggests that, in the pre-disclosure period, investors do not believe that audit partner busyness impacts audit quality, since they do not have any information on how busy audit partner is. These results indicate that the basic results in column (1) and (4) are robust. Therefore, the second hypothesis is not supported, because in the post-disclosure period instead of exhibiting lower ERC, firms audited by busy audit partner exhibit higher ERC. It is evidence that investors do not perceive audit partner busyness negatively affects audit quality in the post-disclosure period. The alternative explanation is, even though audit partners conduct the audits for several clients in a limited time window, the audit quality of those partners is not impaired by the level of their audit workload. This is because the reputational concern entails audit partner as results from good monitoring systems and high litigation risk in the U.S. (PCAOB, 2015). It is also possible that the audit quality in the U.S. is already at desirable level (Francis, 2004). Moreover, this finding is in-line with the alternative theories on audit partner busyness. According to Fama (1980) and Fama and Jensen (1983), audit partner that has larger client base might perceived to be more credible in assuring the integrity of client's financial reporting and therefore able to attract more clients in the audit market. In addition, audit partners with higher level of busyness could be specializing in serving a larger clientele since they are skilled at handling multiple clients, and busier partners could attract more clients because these partners have characteristics that better fit the client's demand for audit services (Goodwin et al. 2016).

6.4.2. Additional analyses: High-busyness audit partner effect

The additional analysis for the second hypothesis is by using an indicator variable that differentiates the level of audit partner busyness. I create dummy variables, *HCLIENTS* and *HMCAP*, equal to 1 if the audit partner is in the upper 25th percentile of busyness based on the sample of 1,800 unique audit partner (see Table 2 Panel C), and 0 otherwise. Thus, *HCLIENTS* takes the value of 1 if the audit partner has more than 2 clients, and 0 otherwise. While *HMCAP* coded to 1 if the audit partner has market capitalization more than $7,388.589 million, and 0 otherwise. These variables indicate the higher level of busyness for each audit partner. Then, *HCLIENTS* and *HMCAP* are used as replacements for *CLIENTS* and *MCAP* in the regression model.

Table 8 columns (3) and (6) present the results from additional analyses using *HCLIENTS* and *HMCAP* as proxies for audit partner busyness, respectively. In column (3), the coefficient on *UE*POST*HCLIENTS* is positive (0.769) and significant at 10 percent level. However, the significance level is lower even though the coefficient is higher than the

original analysis in column (1). In addition, the coefficient on *UE*POST*HMCAP* in column (6) is positive as well (0.99) and significant at 5 percent level of significance. While the coefficient on *UE*HCLIENTS* in column (3) is negative (-0.450) and significant at 5 percent level, the coefficient on *UE*HMCAP* in column (6) is not statistically significant although the coefficient sign is also negative. However, the evidence of audit partner busyness's effect in the pre-disclosure period does not hold in other analyses. So, the significant coefficient on *UE*HCLIENTS* in column (3) only provides weak evidence that in the pre-disclosure period, investors discount the earnings of firms audited by busy audit partner. On the other hand, in the post-disclosure period, there is positive market reaction on earnings surprises of firms audited by busy audit partner. It can be inferred, in the post-disclosure period, the market participants believe that the audit partner's accountability is higher, thus, audit partner busyness does not impair audit quality.

The results from columns (1) through (6) on other variables used in the regressions are explained as follow. Consistent with the results from the first hypothesis testing, the coefficient on *UE* remain positive and significant at 1 percent significance level. The coefficient signs on *UE*MTB, UE*DE, UE*BIG4,* and *UE*Q4* are the same as the predicted signs, however none of these coefficients are statistically significant across all regressions in columns (1) to (6). Therefore, the ERC in the second hypothesis testing does not vary in the level of growth opportunity, firm risk, auditor size, and fiscal quarters. However, the coefficients on *UE*LOSS* and *UE*ABS_UE* are always negative and significant at 1 percent significance level across six regressions. These indicate that the ERC is lower for firms with low earnings persistence (*LOSS*) and large magnitudes of earnings surprise (*ABS_UE*). The coefficient on *UE*POST* is negative and significant at 5 percent significance level or better, except in column (3). This indicates that the ERC, without partner busyness interaction, is lower in the post-disclosure period. This result should be interpreted with caution because this coefficient reflects the ERC in the post-disclosure period that is unexplained by audit partner busyness. Therefore, it is not the same as the coefficient on *UE*POST* in the first hypothesis testing which merely capture the effect of the audit partner disclosure on the ERC.

Table 8 Regressions results for the second hypothesis

		Dependent variable = *CAR3*					
		(1)	(2)	(3)	(4)	(5)	(6)
	Predicted	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.
Variables	sign	[t-stat]	[t-stat]	[t-stat]	[t-stat]	[t-stat]	[t-stat]
UE		2.818	2.791	2.672	2.659	2.594	2.605
		[9.477]***	[9.341]***	[10.671]***	[6.138]***	[5.990]***	[10.373]***
POST		0.001	0.001	0.001	0.001	0.001	0.001
		[0.535]	[0.628]	[0.586]	[0.478]	[0.578]	[0.545]
*UE*POST*		-0.871	-0.862	-0.386	-2.388	-2.395	-0.278
		[-2.131]**	[-2.121]**	[-1.620]	[-3.319]***	[-3.317]***	[-1.233]**
*UE*CLIENTS*		-0.121	-0.117	N/A	N/A	N/A	N/A
		[-1.394]	[-1.352]	N/A	N/A	N/A	N/A
*UE*POST*CLIENTS*	-	0.348	0.336	N/A	N/A	N/A	N/A
		[1.997]**	[1.926]*	N/A	N/A	N/A	N/A
*UE*HCLIENTS*		N/A	N/A	-0.450	N/A	N/A	N/A
		N/A	N/A	[-2.133]**	N/A	N/A	N/A
*UE*POST*HCLIENTS*	-	N/A	N/A	0.769	N/A	N/A	N/A
		N/A	N/A	[1.665]*	N/A	N/A	N/A
*UE*MCAP*		N/A	N/A	N/A	-0.004	0.004	N/A
		N/A	N/A	N/A	[-0.068]	[0.069]	N/A
*UE*POST*MCAP*	-	N/A	N/A	N/A	0.336	0.335	N/A
		N/A	N/A	N/A	[3.214]***	[3.183]***	N/A
*UE*HMCAP*		N/A	N/A	N/A	N/A	N/A	-0.338
		N/A	N/A	N/A	N/A	N/A	[-1.262]
*UE*POST*HMCAP*	-	N/A	N/A	N/A	N/A	N/A	0.99
		N/A	N/A	N/A	N/A	N/A	[2.027]**
*UE*MTB*	+	0.010	0.010	0.012	0.007	0.006	0.01
		[0.723]	[0.695]	[0.836]	[0.487]	[0.458]	[0.669]
*UE*DE*	-	-0.010	-0.013	-0.013	-0.009	-0.012	-0.013
		[-0.584]	[-0.794]	[-0.738]	[-0.526]	[-0.746]	[-0.796]

Variables	Predicted sign	Dependent variable = *CAR3* (1) Coeff. [t-stat]	(2) Coeff. [t-stat]	(3) Coeff. [t-stat]	(4) Coeff. [t-stat]	(5) Coeff. [t-stat]	(6) Coeff. [t-stat]
*UE*LOSS*	-	-0.637	-0.610	-0.617	-0.615	-0.584	-0.625
		[-3.568]***	[-3.421]***	[-3.454]***	[-3.443]***	[-3.277]***	[-3.509]***
*UE*BIG4*	+	0.157	0.172	0.187	0.040	0.042	0.177
		[0.902]	[0.990]	[1.069]	[0.210]	[0.222]	[0.999]
*UE*ABS_UE*	-	-18.765	-18.505	-18.553	-18.578	-18.312	-18.543
		[-8.389]***	[-8.299]***	[-8.353]***	[-8.368]***	[-8.271]***	[-8.299]***
*UE*Q4*	-	-0.141	-0.190	-0.196	-0.157	-0.205	-0.212
		[-0.673]	[-0.904]	[-0.925]	[-0.739]	[-0.965]	[-0.990]
Constant		0.002	-0.009	-0.009	0.002	0.007	-0.009
		[2.035]**	[-0.677]	[-0.675]	[2.146]**	[0.387]	[-0.672]
Industry fixed effect		No	Yes	Yes	No	Yes	Yes
N		9,414	9,414	9,414	9,414	9,414	9,414
Prob > F		0.000	0.000	0.000	0.000	0.000	0.000
R-squared		0.048	0.057	0.058	0.049	0.059	0.057
adj R-squared		0.047	0.050	0.051	0.048	0.052	0.050

This table shows the results of testing the second hypothesis using the following regression: $CAR3_{iq} = \alpha + \beta_1 UE_{iq} + \beta_2 POST + \beta_3 UE_{iq} * POST + \beta_4 UE_{iq} * BUSY + \beta_5 UE_{iq} * POST * BUSY + \beta_n UE_{iq} * control\ variables + \varepsilon_{iq}$

Variables are defined in Appendix B. The variables with "*" are interactions terms. Variables with the value of VIF exceed 10 are excluded from the regression to avoid multicollinearity issue. The regressions are corrected for robustness of standard errors if heteroskedasticity exists. All sample use industry fixed effect except for model (1) and (4). All significance tests are two-tailed. *, **, and *** are significant at 10%, 5%, and 1%, respectively.

7. Conclusion

Audit partner disclosure requirement in the U.S. has been through long debate before the PCAOB adopted the rule in December 2015. This rule is effective for SEC issuer's audit reports issued on or after 31 January 2017. There is still ongoing debate regarding the costs and benefits of this requirement. To date, there are only few studies examining this matter. This thesis aims to answer the research question whether the disclosure of audit engagement partner names affects the market reaction to earnings announcement, measured by earnings response coefficient, in the U.S. As highlighted by the PCAOB that this requirement promotes higher transparency in the audit process, hence leads to enhanced audit quality and investor protection, I expect that the market perceives the disclosure requirement positively.

After conducting several analyses, including additional tests, it can be concluded that the disclosure requirement does not affect the market reaction to earnings announcement. However, the disclosure requirement's effect on the ERC is more pronounced for large firms, especially when comparing the fiscal quarter immediately before and after the disclosure. Therefore, the first hypothesis is not supported. It can be inferred that investors do not perceive that the disclosure requirement enhances audit quality. It is possible that the market perceives the accountability level and audit quality were already at high levels. According to Francis (2004), the general level of audit quality in the U.S. is satisfactory with very few outright audit failures. This could be due to internal performance reviews, regulatory oversight, and litigation risk in the U.S. (PCAOB, 2015). However, for investors in large firms, the disclosure requirement matters. The intuition is institutional investors usually entail stocks of large firms (Gompers and Metrick, 2001) and these investors are more sophisticated than individual investor (Ramalingegowda and Yu, 2012). Moreover, the investor representatives in their comment letter support the disclosure requirement by stating that the transparency in audit process enhances audit partner accountability, in which these representatives are from institutional investors (California Public Employees' Retirement System, 2015; Council of Institutional Investors, 2015).

Next, I predict that, as the market understands how busy an audit partner is, the market will react negatively to the earnings announcement of firms audited by busy audit partner. Results from the second hypothesis testing do not show any evidence that audit partner busyness is negatively associated with the ERC in the post-disclosure period. On the contrary, when the audit partner name is disclosed, the new information related to audit partner busyness is perceived positively by the market. This suggests that audit partner disclosure provides new information to investors that they could not obtain from other

sources before. The results are robust through several analyses. As a result, the second hypothesis is rejected as well. It is possible that the market does not believe that audit partner busyness negatively affect audit quality in the post-disclosure period. This is because the reputational burden shifts from the audit firm to individual partner by identifying the engagement partner (Carcello and Santore, 2015). Therefore, in order to maintain good reputation, audit partners is expected to conduct high quality audit regardless their busyness (i.e. audit workload). It is also possible that the audit quality in the U.S. is already at high level due to good monitoring system and high litigation risk (Francis, 2004, PCAOB, 2015). This alternative explanation is in-line with theories that predict a positive association between audit partner busyness and audit quality (Fama, 1980; Fama and Jensen, 1983).

This thesis contributes to the literature focuses on audit partner disclosure and audit partner level. Prior studies on audit partner disclosure find mixed evidence whether the disclosure requirement enhances audit quality. Besides, those studies use non-U.S. data and different disclosure requirement (i.e. audit partner signature requirement). This thesis sheds a light on the issue regarding audit partner disclosure, particularly in the U.S., by providing evidence that the disclosure requirement does not change the market valuation on earnings surprises. Furthermore, this thesis also finds no evidence that busy audit partner is perceived negatively by the market as the information regarding audit partner busyness available publicly. This thesis should be of interest to policymakers in that it provides timely evidence on the implementation of disclosure requirement.

This thesis is not free of limitations. Firstly, the sample is restricted to companies listed on NYSE, AMEX, and NASDAQ, thus to generalize the results to other settings might be with caution. Secondly, there is only one fiscal quarter data available in the disclosure period because the disclosure requirement is effective in 2017. Therefore, it is worth to acknowledge the possibility that this thesis may not detect any changes in the ERC between pre-disclosure period and post-disclosure period if the effect is sufficiently delayed. However, this thesis provides timely analysis on the capital market consequences of requiring audit partner name disclosure. Third, the results may be biased if there are omitted correlated variables, which are other determinants of the ERC but are not captured by the included control variables. The explanatory power in all of the analyses is small, but within the range of adjusted R-squared resulting from prior studies of earnings response coefficient. In addition, this thesis uses control variables that have been suggested by prior studies to capture growth opportunity, risk, earnings persistence, auditor firm size, and industry fixed effect. Lastly, investor's perception on audit partner busyness is based on measurements: number of audit

engagements and market capitalization for each audit partner in a year, limited to public listed companies. While in fact privates companies are also included in audit partner's client portfolio.

Future research could use broader sample and longer observation period for audit partner disclosure. By using broader observations on post-disclosure period, the effect of audit partner disclosure on earnings response coefficients might become stronger. Additional control variables could be included in the model to mitigate omitted correlated variable issue, for instance the noise in the earnings forecast environment and company restructure. Moreover, further research is needed in order to disentangle the effect of the audit partner disclosure on institutional investor and individual investor, because this thesis finds that the disclosure requirement matters only for investors in large firms.

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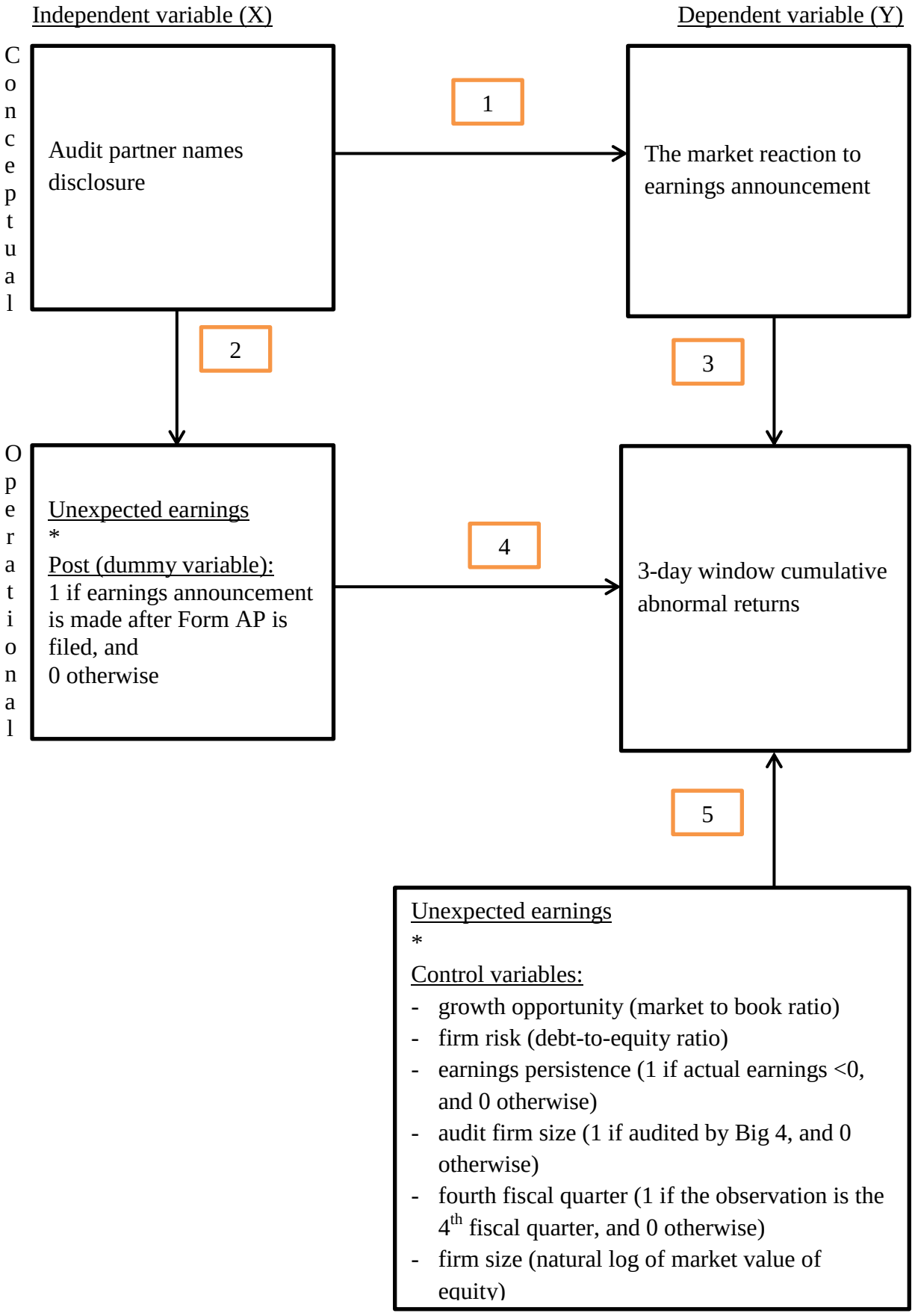
Appendix A: Predictive validity framework



Appendix B: Variable Definitions

Dependent var.	**Definition**
CAR3	3-day window cumulative abnormal return from the market model, centered on the quarterly earnings announcement date. Data obtained from Eventus Cross Sectional Daily using 90-day estimation ending 7 days prior to the earnings announcement date with 10 days of minimum estimation.
Independent var.	**Definition**
UE	Quarterly unexpected earnings, calculated as the difference between actual EPS and the median consensus analyst's latest EPS forecast before the earnings announcement, scaled by stock price at the beginning of the quarter. Both actual and forecast EPS are obtained from the I/B/E/S Summary Statistics, while price is acquired from Compustat Fundamental Quarterly data item PRCCQ.
POST	An indicator variable, takes the value of 1 if the quarterly earnings announcement is made after the audit partner name is disclosed (i.e. after Form AP is filed), and 0 otherwise.
BUSY	A proxy for audit partner busyness consists of:
CLIENTS	Number of public audit engagements for each audit partner in 2016, obtained from Form AP Filing through PCAOB website.
HCLIENTS	An indicator variable coded to 1 if the firms are audited by high-busy audit partner, which is when the number of clients is greater than the 75^{th} percentile value of the unique audit partner sample (2), and 0 otherwise.
MCAP	The (natural logarithm) sum of client's market capitalization from an audit partner's portfolio in 2016, obtained from Compustat Fundamental Annual data item "MKVALT" for fiscal year 2016.
HMCAP	An indicator variable coded to 1 if the firms are audited by high-busy audit partner, which is when the audit partner's market capitalization is greater than the 75^{th} percentile value of the unique audit partner sample ($7,388.589 million), and 0 otherwise.
Control var.	**Definition**
MTB	Market-to-book ratio at the beginning of the fiscal quarter, which is market value of equity divided by book value of equity. Obtained from Compustat Fundamental Quarterly data item "MKVALTQ" for market value of equity and data item "SEQQ-PSTKQ" for book value of equity.
DE	Debt-to-equity ratio at the beginning of the fiscal quarter, calculated as total debt divided by total equity. Obtained from Compustat Fundamental Quarterly data item "DLCQ+DLTTQ" for total debt and data item "SEQQ" for equity.
LOSS	An indicator variable takes the value of 1 if the quarterly actual EPS is negative and 0 otherwise.
BIG4	An indicator variable equals to 1 if the firms are audited by one of the Big 4 auditors (Deloitte, E&Y, KPMG, and PwC), and 0 otherwise.
ABS_UE	The absolute value of unexpected earnings.

Appendix B	**(continued)**
Q4	An indicator variable takes the value of 1 if the fiscal quarter is quarter 4 and 0 otherwise.
SIZE	The (natural logarithm) market value of equity at the beginning of the fiscal quarter.

Appendix C: Tests for OLS assumptions

Table 4 Testing the regression assumptions

Panel A: Tests for the first hypothesis

Testing multicollinearity using variance inflation factor

	Before the removal		After the removal	
Variable	VIF	1/VIF	VIF	1/VIF
UE	28.10	0.036	9.23	0.108
*UE*ABS_UE*	4.47	0.224	4.19	0.239
*UE*LOSS*	4.23	0.236	4.02	0.249
*UE*BIG4*	3.39	0.295	2.81	0.356
*UE*Q4*	1.57	0.639	1.57	0.639
*UE*MTB*	1.38	0.723	1.38	0.726
*UE*DE*	1.35	0.740	1.34	0.747
*UE*POST*	1.26	0.795	1.25	0.797
POST	1.00	0.999	1.00	0.999
*UE*SIZE*	18.13	0.055	-	-
Mean VIF	6.49		2.98	

Variance inflation factor shows if multicollinearity exists, where the rule of thumb is that VIF greater than 10 implies a concern of multicollinearity. *UE*SIZE* is removed from the regression because it violates the rule of thumb and might be highly correlated with the other independent variables. After the removal, the VIF value is at the acceptable level.

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance (homoscedasticity)

Chi2	=	25.82
Prob > chi2	=	0.0000

Breusch-Pagan test for heteroskedasticity, where the p-value shows if the null hypothesis (homoscedasticity) is rejected. The result suggests that there is heteroscedasticity in the variance of the residuals. To deal with the heteroskedasticity issue, robust standard errors are used in the regression.

Skewness/Kurtosis tests for Normality

Ho: Normal distribution of errors

Variable	Obs.	Pr(Skewness)	Pr(Kurtosis)	adj chi2(2)	Prob>chi2
e	17,947	0.0000	0.0000	-	0.0000

Skewness/Kurtosis test for normal distribution of the regression residuals, where the p-value shows if the null hypothesis (the residuals are normally distributed) is rejected. The result suggests that the residuals are not distributed normally, probably due to the large sample size.

Panel B: Tests for the second hypothesis (using *CLIENTS as a proxy for audit partner busyness*)

Testing multicollinearity using variance inflation factor

	Before the removal		After the removal	
Variable	VIF	1/VIF	VIF	1/VIF
UE	32.03	0.031	13.17	0.076
*UE*POST*	6.02	0.166	6.02	0.166
*UE*POST*CLIENTS*	5.96	0.168	5.96	0.168
*UE*CLIENTS*	5.70	0.175	5.66	0.177
*UE*ABS_UE*	4.34	0.231	4.05	0.247
*UE*LOSS*	3.55	0.282	3.40	0.294
*UE*BIG4*	3.44	0.290	2.98	0.335
*UE*Q4*	1.42	0.702	1.42	0.702
*UE*MTB*	1.25	0.799	1.25	0.801
*UE*DE*	1.20	0.831	1.20	0.835
POST	1.00	0.998	1.00	0.998
*UE*SIZE*	19.64	0.051	-	-
Mean VIF	7.13		4.19	

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance (homoscedasticity)

Chi2	=	29.19
Prob > chi2	=	0.0000

Skewness/Kurtosis tests for Normality

Ho: Normal distribution of errors

Variable	Obs.	Pr(Skewness)	Pr(Kurtosis)	adj chi2(2)	Prob>chi2
e	9,414	0.0000	0.0000	-	0.0000

Panel C: Tests for the second hypothesis (using *MCAP as a proxy for audit partner busyness*)

Testing multicollinearity using variance inflation factor

	Before the removal		After the removal	
Variable	VIF	1/VIF	VIF	1/VIF
UE	35.32	0.028	26.66	0.038
*UE*MCAP*	28.69	0.035	22.11	0.045
*UE*POST*	17.6	0.057	17.56	0.057
*UE*POST*MCAP*	17.45	0.057	17.41	0.057
*UE*ABS_UE*	4.38	0.228	4.04	0.247
*UE*BIG4*	3.73	0.268	3.62	0.276
*UE*LOSS*	3.55	0.282	3.44	0.291
*UE*Q4*	1.43	0.701	1.43	0.701
*UE*MTB*	1.24	0.807	1.24	0.808
*UE*DE*	1.20	0.833	1.20	0.836
POST	1.00	0.999	1.00	0.999
*UE*SIZE*	25.96	0.039	-	-
Mean VIF	11.8		9.06	

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance (homoscedasticity)

Chi2	=	20.01
Prob > chi2	=	0.0000

Skewness/Kurtosis tests for Normality

Ho: Normal distribution of errors

Variable	Obs.	Pr(Skewness)	Pr(Kurtosis)	adj chi2(2)	Prob>chi2
e	9,414	0.5143	0.0000	-	0.0000

This table provides the results from several tests, which multicollinearity, heteroskedasticity, and normal distribution of residuals tests, conducted in order to examine the regression assumptions in the main analyses. Panel A, B, and C present the results for the first hypothesis and the second hypothesis, respectively.