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Exploring the Departure of Audit-Partners from Big4 to Small-Sized Audit Firm: Perception from Stock Market Investors

Chieh-Shuo Chen[1], I-Shiu Chen[2], Tung-Chin Yang[3], Cheng-Yen Huang[3]

[1]Department of Accounting, National Changhua University of Education, Chinese Taipei
[2]Urban Development Bureau of Taichung City Government, Chinese Taipei
[3]Department of Finance, National Changhua University of Education, Chinese Taipei
Email: chiehshuo@gmail.com

Abstract

This study examines the impact of audit-partners departure from Big4 to small-sized audit firm on the relationship between earnings and stock prices for audited clients. The research finds that for audited clients associated with Big4 audit firm, the departure of audit-partners enhances the earnings-to-stock price relationship, indicating increased investor trust and perceived potential benefits in cohesion and audit quality. However, the departure has no significant effect for audited clients of the small-sized audit firm. Robust tests further find that when expanding the sample to encompass audited clients of all audit firms or employing the regression analysis of unexpected earnings on cumulative abnormal returns, not only the earnings response coefficients for audited clients of the Big4 audit firm significantly increase after the departure event of audit-partners, but also those for audited clients of the small-sized audit firm significantly decreases the departure event of audit-partners. Moreover, the magnitude of change in earnings response coefficients between the two types of audit clients displays significant differences. This indicates that the departure event of audit-partners from Big4 can augment the earnings information content for the audited clients of the Big audit firm, while potentially diminishing the earnings information content for audited clients of the small-sized audit firm that has newly incorporated audit-partners from Big4. It suggests that the immediate enhancement of professional competence and audit quality in a small-sized audit firm with newly added audit-partners is not guaranteed. Rather, there might be integration misunderstandings that trigger investor concerns, thereby reducing the impact of audited clients' earnings on stock prices.

1. Introduction

As the securities market becomes increasingly globalized, the number of financial statement users has grown, with a heightened demand for transparency in financial reporting. This has led listed companies to seek impartial third-party auditing by audit firms to enhance the credibility of their financial statements. In response to market demands and to enhance competitiveness, audit firms must offer services of high audit quality. This commitment involves talent training, resource augmentation, and efficiency improvement. However, internal growth for audit firms is a time-consuming endeavor, necessitating investments and careful management. Faced with intense competitive pressures, many audit firms choose to merge with other audit firms as a strategy to achieve rapid growth within a short timeframe.

The issue of audit firm mergers has garnered significant attention. Starting from 1970, the eight major audit firms (Arthur Andersen, Arthur Young, Deloitte Haskins & Sells, Ernst & Whitney, Peat Marwick Mitchell, Price Waterhouse, Touche Ross, and Coopers & Lybrand) underwent multiple mergers, eventually consolidating into the four major audit firms (Deloitte, Ernst & Young (EY), Klynveld Peat Marwick Goerdeler (KPMG), and PricewaterhouseCoopers (PwC)) in 2002. With evolving business environments and increasing industry complexity, the merger of two audit firms allows them to combine their professional capabilities and internal resources, leading to enriched resources that can enhance employee training and subsequently elevate audit quality. Moreover, larger post-merger audit firms can generate economies of scale, efficiently utilize internal assets, reduce costs (Sullivan, 2002), or enhance functional efficiencies such as training and information technology, thereby benefiting their audited clients (Beresford, 1998). Consequently, audit firms' strategic choice to merge in order to boost competitiveness could potentially enhance investor perceptions of the audit firm's brand reputation and audit quality.

Since mergers can positively impact audit firms, the reverse situation, wherein the departures of prominent audit-partners from a large audit firm can also have ramifications. Due to a notable lack of literature on the topic of audit-partner departures from audit firms, especially those involving Big4 audit firms, investigating the effects of such departures is both intriguing and worth exploring. Thus, this study focuses on the departure of audit-partners from Ernst & Young (a Big4 audit firm) in 2008 due to differing philosophies, as they joined a small-sized audit firm (initially Zhixin and later renamed Diwan in 2009) in Taiwan. The study takes an investor perspective to investigate the impact of the depar-

ture of audit-partners from Big4 to small-sized audit firm on the audited clients of both firms in Taiwan.

The research findings reveal that within the sample of audited clients involving the departure of audit-partners from Big4 to small-sized audit firm, the earnings-to-stock price relationship for the audited clients of the large audit firm significantly enhances after the departure of audit-partners. However, there is no significant impact of the departure on the earnings-to-stock price relationship for the audited clients of the small audit firm after the departure of audit-partners. This implies that the departure event of audit-partners from Big4 audit firm does not diminish investor trust in the professional competence of the large audit firm. Instead, investors perceive increased unity, resource integration and more motivated to increase their reputation within the audit firm, leading to the provision of high-quality audit services and consequently enhancing the influence of audited clients' earnings on stock prices.

Furthermore, the robust tests demonstrate that regardless of using the sample of including other audit firms' audited clients or utilizing the regression analysis of unexpected earnings on cumulative abnormal returns, the departure event of audit-partners not only significantly increases the earnings response coefficients for the audited clients of the large audit firm, but also significantly decreases the earnings response coefficients for the audited clients of the small audit firm. The magnitude of change in earnings response coefficients between the two types of audit clients displays significant differences. This indicates that the departure event of audit-partners from Big4audit firm can augment the information content of earnings for the audited clients of the large audit firm, while potentially diminishing the information content of earnings for the audited clients of the small audit firm that has newly incorporated audit-partners. It suggests that the immediate enhancement of professional competence and audit quality in a small audit firm, due to the addition of audit-partners from a Big4 audit firm, is not guaranteed in the short term. Rather, there might be integration misunderstandings that trigger investor concerns, thereby reducing the impact of audited clients' earnings on stock prices.

The empirical findings of this study not only fill a gap in the existing literature regarding auditor turnover when audit-partners switch audit firms, but also distinguish themselves from the traditional literature on clients changing audit firms or signing audit-partners. Furthermore, the discoveries made in this research can contribute to auditing practice by emphasizing the importance for audit firms to enhance their intellectual property, rights and obligations, as well as the loyalty of audit clients towards the audit firm.

2. Literature Review and Hypotheses Development

2.1. The Departure Event of Audit-Partners from Ernst & Young in Taiwan

The background of this study traces back to the establishment of Ernst & Ernst

audit firm by Ernst in 1903 and the founding of Arthur Young and Company audit firm by Young in 1906. Following the passing of the founders, these two audit firms merged in 1989 to form Ernst & Young. On the other hand, Diwan audit firm was founded in 1969 and became a member firm of Ernst & Young in Taiwan in 1989, originally under the name Diwan. It wasn't until 2007 that it changed its name to Ernst & Young. However, some audit-partners left Ernst & Young due to differences in philosophies and joined Zhixin audit firm in 2008. Zhixin audit firm reverted to its previous name, Diwan Audit firm, in 2009.

2.2. The Merger Effect of Audit Firms

Within audit firms, each audit-partner is typically responsible for a certain number of audit clients. These audit-partners lead teams of auditors within the audit firm, forming the audit teams for each audit-partner. This is a common operational structure in audit firms. Therefore, when audit-partners change audit firms, it not only affects the reputation and scale of the audit firm but also has the potential to impact audit clients. Clients often consider their financial information highly confidential and may be hesitant to switch audit-partners easily. As a result, they might choose to follow the audit-partners to the new audit firm, potentially leading to the transfer of the entire audit team. This situation could lead the audit firm to face losses in terms of clients and talent.

Previous literature has predominantly focused on investigating the impact of audit firm mergers on audit market or audit quality. Wootton et al. (1994) examined the effects of mergers among the Big8 audit firms on the audit market using concentration ratios and the Herfindahl index. Their findings showed an increase in concentration ratios after mergers among the Big4, Big6, and Big8 audit firms, while the Herfindahl index indicated that the post-merger size of audit firms tended to become more uniform and balanced. In the context of the UK, Iyer & Iyer (1996) studied the impact of the merger of the Big8 audit firms into the Big6 on audit fees. They found that the merger did not lead to an increase in audit fees and that the competition in the audit market remained healthy and balanced under the Big6. Choi & Zéghal (1999) explored the effects of audit firm mergers on competition in the accounting service market. Their results revealed that large audit firms in European countries maintained dominant positions in the market both before and after mergers, while in other countries, there was no significant performance difference between large and small audit firms. Lee (2005) discovered that mergers among the Big8 audit firms in Hong Kong increased their market influence and market share. Firth & Lau (2004) found that the mergers of large firms were responses to intensified competition, and audit clients were not willing to pay higher audit fees for brand reshaping within large audit firms. In the case of the merger between Price Waterhouse and Coopers & Lybrand in the UK in 1998, Ding & Jia (2012) found that the audit quality and audit fees of the merged entity and other major audit

firms improved after the merger.

In the context of Taiwan, Liu (2003) investigated the mergers of audit firms in 1991, 1999, and 2000 from the perspectives of agency theory and insurance hypothesis. The study did not find any abnormal returns in the stock prices of audit clients due to the mergers of audit firms. Similarly, Wu & Tseng (2008) examined the three mergers of audit firms in their research. They did not find significant evidence indicating an increase in audit independence after the mergers of audit firms. These studies suggest that in the context of Taiwan, the mergers of audit firms might not have had a significant impact on stock prices of audit clients or on the perceived audit independence after the mergers.

2.3. Earnings Response Coefficient

The earnings response coefficient (ERC) is a measure of the relationship between earnings and stock prices. Ball & Brown (1968) were among the first to study the relationship between earnings and stock prices. They confirmed that if earnings can be reflected in stock prices, it signifies informational content of accounting earnings, and the higher the implicit informational content, the better the quality of earnings. Therefore, ERC can be used to measure earnings quality (Francis et al., 2005; Wang, 2006). Krishnan et al. (2005) found that there is a significant negative correlation between non-audit fee ratios and levels and ERC. This indicates that investors indeed perceive that non-audit services could compromise the independence of auditors.

Teoh & Wong (1993) utilized ERC as a representation of investors' perception of audit quality. They believed that if an audit firm has a better reputation, investors are more likely to trust the company's financial reports. This suggests that high-quality audits lead to more credible financial reports. Their research revealed that the ERC for clients audited by the Big8 audit firms was significantly higher than for clients of non-Big8 audit firms. Holthausen & Verrecchia (1988) argued that when financial reports are more trustworthy, investors' reactions to unexpected earnings are more pronounced. Their study also confirmed that clients audited by high-quality audit firms have significantly higher ERC compared to clients of low-quality audit firms. Therefore, large audit firms with better reputations tend to have higher-quality audits and, consequently, higher ERC. Additionally, Firth et al. (2007) found that a higher proportion of external independent directors enhances users' confidence in financial reports, leading to a higher ERC. This indicates that financial reports possess better information content when the proportion of external independent directors is higher. Kyriakou & Dimitras (2018) showed that the relationship between auditor tenure and audit quality by discretionary accruals was negative for Big4 and non-Big4 audit firms for German and French firms. Moreover, Ghosh & Moon (2005) identified a positive relationship between investors' perception of audit quality and auditor tenure, with an expectation that the impact of earnings on stock price rankings increasing with the extended auditor tenure. From the perspective of stock mar-

ket investors, Lee & Chen (2012) identified a significant positive correlation between the audit tenure of signing auditors and ERC in Taiwanese listed firms. This suggests that a longer audit tenure of signing auditors is associated with higher earnings quality. Zakaria & Daud (2013) investigated how audit quality influences ERC for publicly traded companies in Malaysia during the period from 2007 to 2010. Their findings affirm the significance of being audited by a Big4 audit firm, revealing a positive relationship with ERC. Similarly, when companies switch auditors from non-Big4 to Big4 firms, it yields comparable results. However, the study does not find a significant impact on ERC when auditors switch among Big4 audit firms. Fang & Lu (2020) focused on Taiwanese publicly traded companies that changed audit firms, and found that if a company switches from one large audit firm to another large audit firm, and the successor audit firm charges lower audit fees, it indeed reduces investors' perception of financial reporting quality. On the other hand, Balsam et al. (2003) revealed that clients of industry-specialized auditors exhibit lower discretionary accruals and higher earnings response coefficient compared to clients of non-industry-specialized auditors. This finding is consistent with the notion that clients of industry experts tend to have higher earnings quality than those of non-specialized auditors.

2.4. Hypotheses Development

The primary objective of this study is to investigate the impact of the departure of audit-partner from the Big4audit firms to a small-sized audit firm on the audited clients from the respective of investors. This study diverges from previous literature on audit firm mergers. If the ERC of audited clients increase after the departure of audit-partners, it signifies that investors perceive such departures as contributing to the internal cohesion and resource consolidation within the audit firm. This is conducive to providing high-quality audit services and enhancing the financial reporting quality of audited clients, thereby elevating the informativeness of their earnings. Conversely, a decrease in ERC suggests that investors interpret the departure of audit-partners as unfavorable for the audit firm's resource concentration and industry specialization. This could potentially undermine audit quality and the financial reporting quality for audited clients, ultimately leading to a reduction in the informativeness of their earnings. Based on the foregoing, this study posits the following hypotheses. Besides, Figure 1 shows the conceptual framework of the hypotheses.

H1a: The departure of audit-partners from large audit firms to small ones can impact the informativeness of earnings for the clients of the large audit firms.

H1b: The departure of audit-partners from large audit firms to small ones can impact the informativeness of earnings for the clients of the small audit firms.

H2: The impact of the departure of audit-partners from large audit firms to small ones on the informativeness of earnings for the clients of the large and small audit firm significantly varies.
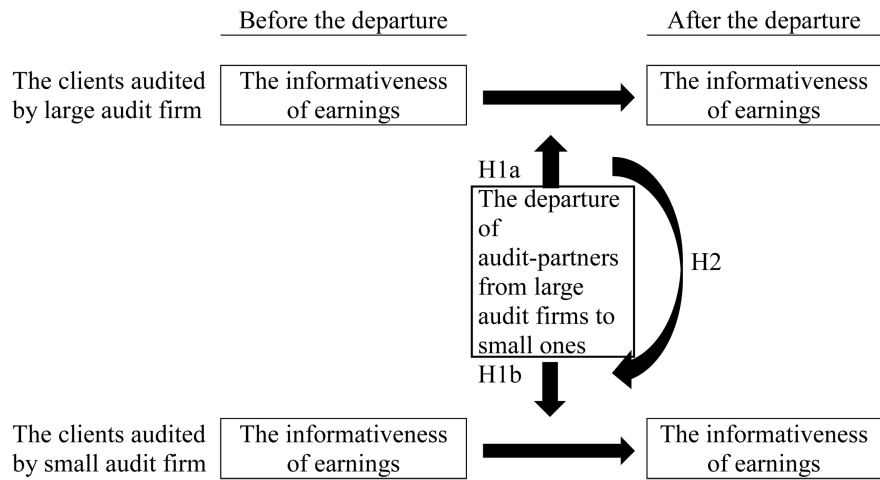
Figure 1. The conceptual framework of the hypotheses.

3. Methodology

3.1. Data Source and Sample Selection

The financial statements, audit, and securities market data required for this study are obtained from the Taiwan Economic Journal (TEJ) in Taiwan. The study period covers the year of the departure event for Ernst & Young's audit-partners, extending five years before and after each event. Thus, the sample period for this study spans from 2003 to 2013. Additionally, the sample includes both listed and previously listed companies. However, financial, insurance, and securities industries, due to government regulations and differing operational and accounting practices, are excluded. After removing samples with missing data, the final sample for this study consists of 1187 observations.

3.2. Empirical Model and Variables Definition

This study refers to relevant literature (Kao & Chiou, 2002; Chiu, 2011; Ding & Jia, 2012; Chen et al., 2013) and employs an earnings-returns model, as shown in the following model (1), to assess the impact of the departure event of audit-partners from the Big4 to small-sized audit firm on the earnings informativeness of their audited clients. The definitions and measurements of variables in model (1) are summarized in Table 1.

$$
\begin{aligned}
\mathrm{RET}_{i,t} = {}& \alpha_0 + \alpha_1 \mathrm{NI}_{i,t} + \alpha_2 \mathrm{POST} + \alpha_3 \mathrm{SFIRM} + \alpha_4 \mathrm{NI}_{i,t} * \mathrm{SFIRM} + \alpha_5 \mathrm{NI}_{i,t} * \mathrm{POST} \\
& + \alpha_6 \mathrm{NI}_{i,t} * \mathrm{SFIRM} * \mathrm{POST} + \alpha_7 \mathrm{SIZE}_{i,t} + \alpha_8 \mathrm{LEV}_{i,t} + \alpha_9 \mathrm{BETA}_{i,t} \\
& + \alpha_{10} \mathrm{GROWTH}_{i,t} + \alpha_{11} \mathrm{AGE}_{i,t} + \alpha_{12} \mathrm{EP}_{i,t} + \alpha_{13} \mathrm{NI}_{i,t} * \mathrm{SIZE}_{i,t} \\
& + \alpha_{14} \mathrm{NI}_{i,t} * \mathrm{LEV}_{i,t} + \alpha_{15} \mathrm{NI}_{i,t} * \mathrm{BETA}_{i,t} + \alpha_{16} \mathrm{NI}_{i,t} * \mathrm{GROWTH}_{i,t} \\
& + \alpha_{17} \mathrm{NI}_{i,t} * \mathrm{AGE}_{i,t} + \alpha_{18} \mathrm{NI}_{i,t} * \mathrm{EP}_{i,t} + \mathrm{INDUSTRY\ VARIABLES} + \varepsilon_{i,t}
\end{aligned} \tag{1}
$$

H1a and H1b of this study respectively examines the impact of the departure event of audit-partners from the Big4 to small-sized audit firms on the earnings response coefficients of audited clients of both large and small audit firms. The test coefficients for two hypotheses are denoted as α5 and α5 + α6, as shown in

Table 1. The definitions and measurements of variables in the model.

		Main Variables
RET	=	annual stock return which is measured by subtracting the closing price on April 1st of the next year from the closing price on April 1st of the current year, and then dividing the result by the closing price on April 1st of the current year for the audited client (Chen et al., 2013).
NI	=	a proxy variable for earnings which is measured by continuing operations segment net income divided by equity market value of the current year (Chen et al., 2013). The study by Easton & Harris (1991) indicated that earnings divided by the beginning-of-year stock price can be employed to assess the relationship between earnings and returns. Additionally, employing this measure as a substitute variable for unexpected earnings can mitigate measurement errors in current period earnings fluctuations. The coefficient of NI is denoted as earnings response coefficient (ERC). If net income increases, the stock price return can also relatively increase, signifying that stock prices can reflect the company's value, resulting in a positive ERC. Conversely, if stock prices fail to reflect the company's value, the ERC becomes negative.
POST	=	a binary variable for whether the departure of audit-partners from Big4 to small-sized audit firm. It is set to 1 after the event occurs and 0 otherwise.
SFIRM	=	a binary variable for small-sized audit firm. It is set to 1 if the audit client is audited by small-sized audit firm (Diwan audit firm), and 0 if the audit client is audited by Big4 (EY audit firm).
		Control Variables
SIZE	=	the company size which is measured by the natural logarithm of total assets (Uang et al., 2011; Yen & Chen, 2011; Chen et al., 2013). Freeman (1987) argued that larger-sized companies have more precise estimates of unexpected earnings, implying a positive correlation between earnings and stock returns. Another study suggested that larger companies may employ accounting choices to reduce political costs, consequently affecting earnings quality, implying that ERC tends to be lower (Lee & Chen, 2012).
LEV	=	the debt ratio which is measured by dividing the total liabilities by the total assets at the end of the year (Lee et al., 2007; Yen & Chen, 2011; Lee & Chen, 2012; Chen et al., 2013). Some literature suggested that higher leverage ratios may make it more difficult for companies to meet debt covenant conditions. To avoid violating debt agreements, companies might engage in earnings manipulation, leading to lower ERC (DeFond & Jiambalvo, 1994).
BETA	=	the system risk which is measured by capital asset pricing model using daily stock returns from the previous year (Chen et al., 2013). According to the CAPM model, as the risk increases, investors will demand higher expected returns, leading to lower future dividend discounted values. Consequently, the responsiveness of earnings becomes lower (Collins & Kothari, 1989). Empirical studies on the Taiwanese securities market had demonstrated a negative relationship between BETA and ERC (Lee et al., 1989).
GROWTH	=	the growth ratio which is measured by dividing equity value by book value of stockholder equity. Companies with high growth rates imply greater future cash flows, leading investors to expect higher future returns, thereby resulting in a higher ERC (Collins & Kothari, 1989).
AGE	=	the years of listing on SEC or OTC (Ding & Jia, 2012). Lee & Chen (2012) suggested that companies with longer tenure in the market have reduced opportunities for information asymmetry. Additionally, Ghosh et al. (2005) found that the earnings response coefficient of a company tends to increase with the number of years it has been listed.
EP	=	the earnings persistence which is measured by the reciprocal of the price-to-earnings ratio (Lee & Chen, 2012). Higher price-to-earnings ratios indicate lower earnings persistence, implying that market price surpasses the company's earnings per share. Consequently, in situations where earnings levels are undervalued, the ERC tends to be smaller (Beaver & Morse, 1978).
IND	=	industry dummy variables.

Table 2. Hypothesis 2 tests whether there is a significant difference in the change of earnings response coefficients of audited clients by the involving large and small audit firms. The test coefficient for this hypothesis is represented by α6, as presented in Table 2.

4. Empirical Results and Analyses

4.1. The Descriptive Statistics and Correlation Coefficients

Table 3 presents the descriptive statistics of this study. The mean and median of RET are 20.9% and 6.1% respectively, which are comparable to Chen et al. (2013). POST indicates that the sample after the departure event of audit-partners from Big4to small-sized audit firm constitutes 42.5% of the total sample. SFIRM indicates that audited clients of small audit firms account for 3.1% of the total sample. There are no significant differences between the mean and median of the control variables.

In addition, the Pearson and Spearman correlation coefficients between all variables in this study are below 0.6 in Table 4, and the Variance Inflation Factor

Table 2. The impact of the NI on RET for the departure of audit-partners from Big4 to small-sized audit firm.

	Before the Departures (POST = 1)	After the Departures (POST = 1)	Differences
The small-sized audit firm involving the departures (SFIRM = 1)	$\alpha_1 + \alpha_4$	$\alpha_1 + \alpha_4 + \alpha_5 + \alpha_6$	$\alpha_5 + \alpha_6$
The Big4 audit firm involving the departures (SFIRM = 0)	α_1	$\alpha_1 + \alpha_5$	α_5
Differences between Big4 and small-sized audit firms			α_6

Table 3. The descriptive statistics of variables. The sample includes the audit clients by the Big4 and small audit firms involving the departure of audit-partners from Big4 to small-sized audit firm.

Variables	n	Mean	Standard Deviation	Min.	Median	Max.
RET	1187	0.209	0.647	−0.802	0.061	5.714
NI	1187	0.077	0.092	−1.966	0.071	0.595
POST	1187	0.425	0.495	0	0	1
SFIRM	1187	0.031	0.174	0	0	1
SIZE	1187	15.146	1.301	12.644	14.919	20.012
LEV	1187	0.339	0.148	0.041	0.326	0.97
BETA	1187	0.832	0.359	−0.045	0.849	1.943
GROWTH	1187	1.664	1.084	0.202	1.384	12.113
AGE	1187	10.146	7.082	2	9	52
EP	1187	0.071	0.045	0	0.066	0.314

Note: The definitions of variables are the same as Table 1.

Table 4. The correlation coefficients. This table shows the Pearson (top right) and Spearman (bottom left) correlation coefficients between all variables.

	RET	NI	POST	SFIRM	SIZE	LEV	BETA	GROWTH	AGE	EP
RET		0.38***	0.11***	−0.02	−0.09***	0.02	−0.08***	0.35***	−0.05	−0.27***
NI	0.51***		0.03	0.04	−0.02	−0.02	−0.03	0.13***	−0.09***	0.06**
POST	0.13***	−0.04		0.09***	0.02	−0.1***	0.09***	0.02	0.27***	−0.21***
SFIRM	−0.02	0.01	0.09***		−0.07**	−0.07**	0.01	0.01	−0.02	0.03
SIZE	−0.06**	0.02	0.04	−0.06**		0.06**	0.34***	0.07**	0.42***	0.04
LEV	0.01	0.11***	−0.09***	−0.07**	0.11***		−0.1***	−0.05*	−0.17***	0.15***
BETA	−0.14***	−0.05*	0.08***	0.01	0.38***	−0.08***		0.11***	0.11***	−0.03
GROWTH	0.39***	0.31***	0.09***	0.03	0.05	−0.01	0.05*		−0.19***	−0.17***
AGE	0.03	−0.1***	0.43***	0.02	0.39***	−0.15***	0.04	−0.19***		−0.15***
EP	−0.28***	0.34***	−0.19***	0.04	0.04	0.14***	−0.04	−0.1***	−0.15***	

Note: The definitions of variables are the same as Table 1. ***, ** and * denote 1%, 5% and 10% significance level, respectively.

(VIF) values in the subsequent regression analysis are all below 10 with the exception of interaction terms. This indicates that there is no severe multicollinearity among the variables. Furthermore, there is a significant positive correlation between RET and NI, as well as between RET and POST. This implies that there are higher stock returns for the audit clients with the higher earnings and the period after the departure event.

4.2. The Mean and Median Tests

This study divides the sample into two periods: before and after the departure of the audit-partners from Big4 to small-sized audit firms. Table 5 indicates that, regardless of the mean or median tests, both RET and BETA are significantly higher after the departure of the audit-partners from Big4 to small-sized audit firms. On the other hand, both LEV and EP are significantly lower after the departure of the audit-partners from Big4 to small-sized audit firms. Further subdivision into sub-samples of large and small audit firms involving the departure of the audit-partners from Big4 to small-sized audit also yielded consistent results.

4.3. The Regression Analysis

The first two research hypotheses of this study investigate the impact of the departure of the audit-partners from Big4 to small-sized audit firms on the earnings response coefficients of both the large and small audit firms involving the departure. The third research hypothesis explores whether the impact of such departure on the earnings response coefficients is consistent between the large and small audit firms involving the departure. Regression analysis is employed in this study, and the results are summarized in Table 6. Table 6 reveals that the coefficient for NI is 2.664, significant at the 1% level, aligning with previous

Table 5. The mean and median tests. This table shows the differences in variables between after and before the departure of the audit-partners from Big4 to small-sizedaudit firms.

	Before the Departure (n = 682)		After the Departure (n = 505)		Differences	
	Mean	Median	Mean	Median	Mean test	Median test
					(tvalue)	(zvalue)
RET	0.149	0.029	0.289	0.099	0.140***	0.070***
NI	0.075	0.075	0.079	0.068	0.004	−0.007
SFRIM	0.018	0.000	0.05	0.000	0.032***	0.000***
SIZE	15.124	14.878	15.176	14.975	0.052	0.097
LEV	0.352	0.344	0.323	0.308	−0.029***	−0.036***
BETA	0.805	0.821	0.869	0.888	0.064***	0.067***
GROWTH	1.644	1.302	1.691	1.475	0.047	0.173***
AGE	8.522	7.000	12.339	11.000	3.817***	4.000***
EP	0.079	0.073	0.06	0.056	−0.019***	−0.017***

Note: The definitions of variables are the same as Table 1. ***, ** and * denote 1%, 5% and 10% significance level, respectively.

Table 6. The regression analysis of testing the ERC. This table shows the impact of audit-clients' earnings on stock returns.

Variables	Coefficient	t value
Intercept	0.582**	2.57
NI	2.479***	14.31
SIZE	−0.048***	−3.04
LEV	0.448***	3.85
BETA	−0.192***	−3.61
GROWTH	0.19***	11.85
AGE	0.007**	2.25
EP	−3.598***	−9.72
industry dummies included		
n	1187	
F value	25.13***	
Adj R^2	0.3188	

Note: The definitions of variables are the same as Table 1. ***, ** and * denote 1%, 5% and 10% significance level, respectively.

literature findings that higher earnings correspond to higher stock returns, indicating the information content of earnings on stock prices (Chen et al., 2013).

The model (1a) in Table 7 indicates that the coefficient of POST is −0.029, but it is not statistically significant. However, the coefficient of NI*POST is 1.117

Table 7. The regression analysis of testing the ERC. This table shows the impact of auditclients' earnings on stock returns for the departure of audit-partners from Big4 to small-sized audit firm.

Variables	model (1a)		model (1b)		model (1)	
	coefficient	t value	coefficient	t value	coefficient	t value
Intercept	0.466	1.56	0.456	1.55	0.472	1.6
NI	2.053	0.71	4.059	1.43	2.525	0.88
POST	−0.029	−0.64			−0.048	−1.04
SFIRM			0.182	1.65	0.163	1.4
NI*SFIRM			−3.494***	−4.25	−2.224	−1.26
NI*POST	1.117**	2.52			1.449***	3.25
NI*SFIRM*POST					−1.733	−1.04
SIZE	−0.04*	−1.94	−0.048**	−2.32	−0.044**	−2.16
LEV	0.49***	3.77	0.583***	4.54	0.527***	4.09
BETA	−0.194***	−2.88	−0.109	−1.61	−0.136**	−2.01
GROWTH	0.047*	1.95	0.029	1.22	0.041*	1.72
AGE	0.008**	2.36	0.009***	2.69	0.008**	2.42
EP	−4.005***	−9.77	−4.186***	−10.33	−4.16***	−10.2
NI*SIZE	0.162	0.82	0.188	0.96	0.207	1.06
NI*LEV	−3.466***	−3.13	−5.21***	−4.82	−4.396***	−3.96
NI*BETA	0.604	0.96	−0.584	−0.91	−0.23	−0.36
NI*GROWTH	1.156***	4.79	1.281***	5.4	1.178***	4.92
NI*AGE	−0.104***	−3.43	−0.091***	−3.05	−0.11***	−3.67
NI*EP	−7.86***	−2.63	−9.728***	−3.38	−6.972**	−2.35
industry dummies included						
n	1187		1187		1187	
F value	33.89***		34.58***		32.28***	
Adj R^2	0.4623		0.4675		0.4728	
Joint test: NI*POST + NI*SFIRM_POST (F value)					−0.284	(0.03)

Note: The definitions of variables are the same as Table 1. ***, ** and * denote 1%, 5% and 10% significance level, respectively.

and is statistically significant at the 5% level, suggesting that the earnings response coefficient of audit clients increases after the departure event of audit-partners. In model (1b), the coefficient of SFIRM is 0.182, but it is not statistically significant. However, the coefficient of NI*SFIRM is −3.494 and is statistically significant at the 1% level, indicating that the earnings response coefficient of audited clients by the small audit firm is lower compared to those by the large audit firm. This aligns with previous literature, indicating that clients of large audit firms have higher earnings informativeness. In model (1) of Table 7, the coefficient of NI is 2.525, suggesting a positive relationship between earnings and stock returns. Additionally, the coefficient of NI*POST is 1.449 and is statis-

tically significant at the 1% level, implying that the earnings response coefficient of audited clients by the large audit firm increases after the departure of audit-partners, implying investors interpret such departures as enhancing the unity within the audit firm and facilitating the consolidation of resources. This facilitates the provision of high-quality audit services and improves the integrity of financial reporting for audited clients, leading to an increased level of information content of earnings, tend to support H1a.

On the other hand, the joint test of NI*POST + NI*SFIRM*POST shows that the coefficient is −0.284 in model (1), although statistical significance is not achieved. Thus, H1b does not receive empirical support. Moreover, the coefficient of NI*SFIRM*POST is −1.733, but it is not statistically significant, representing that there is no significant difference in the change of earnings response coefficients of audit clients due to the departure of audit-partners between large and small audit firms. The empirical results do not provide support for H2. Furthermore, the coefficient of NI*LEV, NI*GROWTH, and NI*EP is −4.396, 1.178, and −6.972, respectively, and is statistically significant at the 1% level, consistent with previous literature.

4.4. The Robust Tests

4.4.1. The Consideration of Including All Audit Firms

Considering that the observed effects on audit clients' earnings response coefficients might not solely stem from the impacts of the departure event of audit-partners, but could also be influenced by broader trends in the audit market, the study's first robustness is tested by including the entire non-financial industry population of listed and OTC companies in Taiwan. SFIRM and another dummy variable are employed (SFIRM for audit clients of the small audit firm involving the departure of audit-partners and LFIRM for audit clients of the large audit firm involving the departure of audit-partners), and the empirical model (1) is reevaluated. The results presented in Table 8 reveal that when the sample covers all non-financial listed and OTC companies, the joint test indicates that the coefficient of NI*POST + NI*SFIRM*POST is −1.805, while the coefficient of NI*POST + NI*LFIRM*POST is 2.803, both statistically significant at the 1% level. This implies that after the departure of audit-partners from the Big4 audit firm to the small audit firm, audit clients of the large firm experience a significant increase in their earnings response coefficients, while audit clients of the small audit firm encounter a notable decrease. Moreover, The joint test of NI*POST + NI*SFIRM*POST = NI*POST + NI*LFIRM*POST also exhibits a statistically significant outcome at the 1% level, suggesting a significant difference in the magnitude of change in earnings response coefficients for audit clients between large and small audit firms involving the departure of audit-partners.

4.4.2. The Use of the Unexpected Earnings Model

The second robustness test in this study employs the unexpected earnings model

Table 8. The regression analysis of testing the ERC for including all audit firms. This table shows the impact of audit clients' earnings on stock returns for the departure of audit-partners from Big4 to small-sized audit firm.

Variables	coefficient	t value
Intercept	0.505***	5.47
NI	1.216*	1.78
POST	0.041**	2.57
SFIRM	0.267***	3.48
LFIRM	−0.094***	−3.2
NI*SFIRM	−0.209	−1.05
NI*LFIRM	−1.131**	−2.34
NI*POST	−0.163	−1.25
NI*SFIRM*POST	−1.641**	−2.51
NI*LFIRM*POST	2.966***	6.18
SIZE	−0.035***	−5.45
LEV	0.411***	9.59
BETA	−0.297***	−12.82
GROWTH	0.044***	7.38
AGE	0.01***	9.24
EP	−2.981***	−28.69
NI*SIZE	0.121**	2.4
NI*LEV	−3.205***	−11.4
NI*BETA	1.957***	10.56
NI*GROWTH	0.886***	21.67
NI*AGE	−0.084***	−11.5
NI*EP	−3.029***	−16.61
n	9094	
F value	166***	
Adj R^2	0.421	
Joint Test: NI*POST + NI*SFIRM*POST (F value)	−1.805***	(7.63)
Joint Test: NI*POST + NI*LFIRM*POST (F value)	2.803***	(33.14)
Joint Test: NI*SFIRM*POST = NI*SFIRM*POST (F value)	1.325***	(32.96)

Note: LFIRM is a dummy variable which is set to 1 if the firm is audited by the large audit firm involving the departure of audit-partners, and 0 otherwise. The definitions of other variables are the same as Table 1. ***, ** and * denote 1%, 5% and 10% significance level, respectively.

to measure the earnings response coefficient through its impact on cumulative abnormal returns (CAR). The calculation of CAR is based on the methodology outlined by Lee & Chen (2012). The event date is set as the end of each year,

Table 9. The regression analysis of testing the ERC for the unexpected earnings model. This table shows the impact of audit clients' unexpected earnings on cumulative abnormal returns for the departure of audit-partners from Big4 to small-sized audit firm.

Variables	coefficient	t value
Intercept	−2.237	2.02
UE	107.702	0.94
POST	−1.312*	−1.86
SFIRM	−4.143**	−2.23
UE*SFIRM	123.487**	2.42
UE*POST	16.104*	1.03
UE*SFIRM*POST	−134.853***	−2.46
SIZE	−0.431	−1.58
LEV	0.378	0.4
BETA	−2.416**	−2.24
GROWTH	−0.937	−1.47
AGE	−0.024	−0.46
EP	27.651***	3.68
SG	0.087	0.75
OCFTA	1.613	0.19
UE*SIZE	1.159	0.54
UE*LEV	35.134	0.14
UE*BETA	2.495	1.94
UE*GROWTH	13.457**	2.24
UE*AGE	−0.872	−1.47
UE*EP	91.867	1.05
UE*SG	−1.198	0.94
UE*OCFTA	−26.919	−0.88
n	952	
F value	2.71***	
Adj R^2	0.0639	
Joint Test: UE*POST + UE*SFIRM*POST (F value)	−121.558***	(5.26)

Note: UE is the unexpected earnings which is measured by dividing the change in net income from continuing operations by the initial market value of common stocks at the beginning of the year. CAR is cumulative abnormal returns. SG is the growth ratio of net sales. OCFTA is the net cash flow divided by the total assets at the beginning of the year. The definitions of other variables are the same as Table 1. ***, ** and * denote 1%, 5% and 10% significance level, respectively.

with a 60-month estimation period leading up to the event date. The 15-month period following the event date is considered the event window, and the CAR over these 15 months are calculated as the dependent variable for the regression

analysis. The unexpected earnings (UE) are used to represent market expectations of company earnings, calculated by dividing the change in net income from continuing operations by the initial market value of common stocks at the beginning of the year. The unexpected earnings model is depicted in model (2). Two additional control variables are included in the model (2), representing sales growth (SG) and operating cash flow from continuing operations (OCFTA) (Collins & Kothari, 1989; Dechow et al., 1995; Becker et al., 1998; Ghosh et al., 2005).

$$
\begin{aligned}
\text{CAR}_{i,t} = {} & \alpha_0 + \alpha_1 \text{UE}_{i,t} + \alpha_2 \text{POST} + \alpha_3 \text{SFIRM} + \alpha_4 \text{UE}_{i,t} * \text{SFIRM} + \alpha_5 \text{UE}_{i,t} \\
& * \text{POST} + \alpha_6 \text{UE}_{i,t} * \text{SFIRM} * \text{POST} + \alpha_7 \text{SIZE}_{i,t} + \alpha_8 \text{LEV}_{i,t} + \alpha_9 \text{BETA}_{i,t} \\
& + \alpha_{10} \text{GROWTH}_{i,t} + \alpha_{11} \text{AGE}_{i,t} + \alpha_{12} \text{EP}_{i,t} + \alpha_{13} \text{SG}_{i,t} + \alpha_{14} \text{OCFTA}_{i,t} \\
& + \alpha_{15} \text{UE}_{i,t} * \text{SIZE}_{i,t} + \alpha_{16} \text{UE}_{i,t} * \text{LEV}_{i,t} + \alpha_{17} \text{UE}_{i,t} * \text{BETA}_{i,t} + \alpha_{18} \text{UE}_{i,t} \\
& * \text{GROWTH}_{i,t} + \alpha_{19} \text{UE}_{i,t} * \text{AGE}_{i,t} + \alpha_{20} \text{UE}_{i,t} * \text{EP}_{i,t} + \alpha_{21} \text{UE}_{i,t} * \text{SG}_{i,t} \\
& + \alpha_{22} \text{UE}_{i,t} * \text{OCFTA}_{i,t} + \text{INDUSTRY VARIABLES} + \varepsilon_{i,t}
\end{aligned}
\tag{2}
$$

Table 9 presents the impact of unexpected earnings on cumulative abnormal returns, indicating a positive effect. The coefficient of UE*POST is 16.104 and is statistically significant at the 10% level, suggesting that the ERC of audit clients by the large audit firm after the departure of audit-partners increases. The joint test result of UR*POST + UE*SFIRM*POST is significantly negative, signifying that the ERC of audit clients by the small audit firm after the departure of audit-partners decreases. The coefficient of UE*SFIRM*POST is −134.853 and is statistically significant at the 1% level, highlighting the significant difference in the variation of ERC of audit clients between large and small audit firm following the departure of audit-partners. The empirical findings in Table 9 align with those in Table 8.

5. Conclusion

Audit firms operate with a unique business model where each audit-partner leads audit teams, creating a distinctive operational structure. Consequently, collective audit-partners departures from an audit firm can potentially impact audit personnel, audit clients, internal resources, and reputation. This study focuses on the impact of the departure of audit-partners from Big4 (Ernst & Young) to small-sized audit firms on the earnings information content of audited clients from the perspectives of investors. The study employs the earnings response coefficient as a proxy for earnings information content. Additionally, the research further investigates whether the impact of audit-partners departures on the earnings information content of audited clients differs significantly between large and small audit firms involving the departure of audit-partners.

The empirical results indicate that when employing the sample with involving the departure of audit-partners from Big4 audit firm to small-sized audit firm, the relationship between earnings and stock prices improves significantly for audit clients associated with the Big4 audit firm after the departure. However,

this departure event doesn't significantly affect the earnings-to-stock price relationship for audit clients of the small-sized audit firm. This suggests that investors don't lose faith in the competence of the Big4 audit firm due to the departure of audit-partners. Instead, they perceive increased cohesion, resource integration, and motivation to enhance the audit firm's reputation, resulting in better audit services and higher influence of audited clients' earnings on stock prices.

Moreover, robust tests demonstrate that employing the sample with including audit clients of other audit firms or using the regression analysis of unexpected earnings on cumulative abnormal returns, the departure of audit-partners leads to a significant increase in earnings response coefficients for the audited clients of the Big4 audit firm involving the departure of audit-partners, while decreasing them for audit clients of the small-sized audit firm involving the departure of audit-partners. The disparity in the change of earnings response coefficients between these two types of audit clients is statistically significant. This suggests that while the departure of audit-partners can enhance earnings information content for audit clients of the Big4 audit firm, it might reduce earnings information content for audit clients of the small-sized audit firm who have incorporated new audit-partners from Big4 in the short term. This implies that the immediate improvement in professional competence and audit quality in the small-sized firm after incorporating new audit-partners from Big4 isn't assured. Integration misunderstandings could potentially raise investor concerns, thereby diminishing the impact of audited clients' earnings on stock prices.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

Ball, R., & Brown, P. (1968). An Empirical Evaluation of Accounting Income Numbers. *Journal of Accounting Research, 6,* 159-178. https://doi.org/10.2307/2490232

Balsam, S., Krishnan, J., & Yang, J. S. (2003). Auditor Industry Specialization and Earnings Quality. *Auditing: A Journal of Practice & Theory, 22,* 71-97. https://doi.org/10.2308/aud.2003.22.2.71

Beaver, W., & Morse, D. (1978). What Determines Price-Earnings Ratios? *Financial Analysts Journal, 34,* 65-76. https://doi.org/10.2469/faj.v34.n4.65

Becker, C. L., DeFond, M. L., Jiambalvo, J., & Subramanyam, K. (1998). The Effect of Audit Quality on Earnings Management. *Contemporary Accounting Research, 15,* 1-24. https://doi.org/10.1111/j.1911-3846.1998.tb00547.x

Beresford, D. R. (1998). And then There Were Four: Auditor Independence on the Line. *NACD Directorship, 24,* 1-4.

Chen, A. L., Kao, L. F., & Wu, C. I. (2013). The Effects of Impairment Recognitions and Reversals on Earnings Response Coefficient. *Journal of Management and Business Research, 30,* 55-71.

Chiu, C. L. (2011). Study on the Audit Quality and Returns-Earnings Relation. *Journal of*

Management Practices and Principles, 5, 1-9.

Choi, M. S., & Zéghal, D. (1999). The Effect of Accounting Firm Mergers on International Markets for Accounting Services. *Journal of International Accounting, Auditing and Taxation, 8,* 1-22. https://doi.org/10.1016/S1061-9518(99)00002-6

Collins, D. W., & Kothari, S. (1989). An Analysis of Intertemporal and Cross-Sectional Determinants of Earnings Response Coefficients. *Journal of Accounting and Economics, 11,* 143-181. https://doi.org/10.1016/0165-4101(89)90004-9

Dechow, P. M., Sloan, R. G., & Sweeney, A. P. (1995). Detecting Earnings Management. *The Accounting Review, 70,* 193-225.

DeFond, M. L., & Jiambalvo, J. (1994). Debt Covenant Violation and Manipulation of Accruals. *Journal of Accounting and Economics, 17,* 145-176. https://doi.org/10.1016/0165-4101(94)90008-6

Ding, R., & Jia, Y. (2012). Auditor Mergers, Audit Quality and Audit Fees: Evidence from the PricewaterhouseCoopers Merger in the UK. *Journal of Accounting and Public Policy, 31,* 69-85. https://doi.org/10.1016/j.jaccpubpol.2011.08.002

Easton, P. D., & Harris, T. S. (1991). Earnings as an Explanatory Variable for Returns. *Journal of Accounting Research, 29,* 19-36. https://doi.org/10.2307/2491026

Fang, C. J., & Lu, C. S. (2020). Effects of Discounting Initial Audit Fees Paid to Succeeding Audit Firms on Investors' Perceptions to Earnings Quality. *Sun Yat-Sen Management Review, 28,* 469-506.

Firth, M., & Lau, T. (2004). Audit Pricing Following Mergers of Accounting Practices: Evidence from Hong Kong. *Accounting and Business Research, 34,* 201-213. https://doi.org/10.1080/00014788.2004.9729964

Firth, M., Fung, P. M., & Rui, O. M. (2007). Ownership, Two-Tier Board Structure, and the Informativeness of Earnings—Evidence from China. *Journal of Accounting and Public Policy, 26,* 463-496. https://doi.org/10.1016/j.jaccpubpol.2007.05.004

Francis, J., Schipper, K., & Vincent, L. (2005). Earnings and Dividend Informativeness When Cash Flow Rights Are Separated from Voting Rights. *Journal of Accounting and Economics, 39,* 329-360. https://doi.org/10.1016/j.jacceco.2005.01.001

Freeman, R. N. (1987). The Association between Accounting Earnings and Security Returns for Large and Small Firms. *Journal of Accounting and Economics, 9,* 195-228. https://doi.org/10.1016/0165-4101(87)90005-X

Ghosh, A., & Moon, D. (2005). Auditor Tenure and Perceptions of Audit Quality. *The Accounting Review, 80,* 585-612. https://doi.org/10.2308/accr.2005.80.2.585

Ghosh, A., Gu, Z., & Jain, P. C. (2005). Sustained Earnings and Revenue Growth, Earnings Quality, and Earnings Response Coefficients. *Review of Accounting Studies, 10,* 33-57. https://doi.org/10.1007/s11142-004-6339-3

Holthausen, R. W., & Verrecchia, R. E. (1988). The Effect of Sequential Information Releases on the Variance of Price Changes in an Intertemporal Multi-Asset Market. *Journal of Accounting Research, 26,* 82-106. https://doi.org/10.2307/2491114

Iyer, V., & Iyer, G. (1996). Effect of Big 8 Mergers on Audit Fees: Evidence from the United Kingdom. *Auditing: A Journal of Practice & Theory, 15,* 123-132.

Kao, L. F., & Chiou, J. R. (2002). The Effect of Collateralized Shares on Informativeness of Accounting Earnings. *NTU Management Review, 13,* 127-162.

Krishnan, J., Sami, H., & Zhang, Y. (2005). Does the Provision of Nonaudit Services Affect Investor Perceptions of Auditor Independence? *Auditing: A Journal of Practice & Theory, 24,* 111-135. https://doi.org/10.2308/aud.2005.24.2.111

Kyriakou, M. I., & Dimitras, A. I. (2018). BIG4 or Non-BIG4 Auditors: Their Impact on Audit Quality during the Global Financial Crisis. *Theoretical Economics Letters, 8,* 909-917. https://doi.org/10.4236/tel.2018.85064

Lee, C. W., Liu, W. C., & Kao, K. L. (1989). Stock Price Behavior and the Size Effect: Empirical Study on the Taiwan Stock Market. *Management Review, 8,* 99-121.

Lee, D. S. (2005). The Impact of the Big 8 Mergers on Market Power: Evidence from the Hong Kong Market. *Journal of International Financial Management & Accounting, 16,* 69-96. https://doi.org/10.1111/j.1467-646X.2005.00112.x

Lee, J. Z., & Chen, H. C. (2012). Audit Partner Tenure and Perceived Audit Quality-Perception from Stock Market Investors. *Sun Yat-Sen Management Review, 20,* 881-907.

Lee, K. J., Jin, J., & Huh, S. K. (2007). The Effect of the Firm's Monopoly Power on the Earnings Response Coefficient. *Academy of Accounting and Financial Studies Journal, 11,* 35-50.

Liu, C. (2003). Firms: A Joint Test of the Agency Hypothesis and Insurance Hypothesis. *The International Journal of Accounting Studies, 36,* 1-22.

Sullivan, M. W. (2002). The Effect of the Big Eight Accounting Firm Mergers on the Market for Audit Services. *Journal of Law and Economics, 45,* 375-399. https://doi.org/10.1086/340812

Teoh, S. H., & Wong, T. (1993). Perceived Auditor Quality and the Earnings Response Coefficient. *The Accounting Review, 68,* 346-366.

Uang, J. Y., Lee, M., & Chen, Y. H. (2011). Do Overseas Investors Underprice Earnings in the Emerging Market? Evidence from China. *International Journal of Commerce and Strategy, 3,* 197-210.

Wang, D. (2006). Founding Family Ownership and Earnings Quality. *Journal of Accounting Research, 44,* 619-656. https://doi.org/10.1111/j.1475-679X.2006.00213.x

Wootton, C., Tonge, S., &Wolk, C. (1994). Pre and Post Big 8 Mergers: Comparison of Auditor Concentration. *Accounting Horizons, 8,* 58-74.

Wu, T. Z. C., & Tseng, Y. C. (2008). Effects of Merger of CPA Firms on Auditor Independence. *The International Journal of Accounting Studies, 47,* 29-60.

Yen, S. H., & Chen, H. L. (2011). A Comparative Analysis of Voluntary and Mandatory Financial Forecast Information Content. *Tamkang Journal of Humanities and Social Sciences, 48,* 74-103.

Zakaria, N. B., & Daud, D. (2013). Does Big 4 Affect the Earnings Response Coefficient (ERC)? Evidence from Malaysia. *Journal of Modern Accounting and Auditing, 9,* 1204-1215.