

Auditor's Industry Specialization and Disclosure Quality of IAS No. 39-Related Accounts

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Abstract

Following International Accounting Standards (IAS) No. 39, Taiwan implemented the No. 34 and No. 36 Statement of Financial Accounting Standards (SFAS) that regulate the measurement and disclosure of financial instruments, respectively. Both IAS and Taiwan SFAS allowed companies to “reclassify” their financial assets in order to avoid having to report a huge loss as a result of the market value measurement; however, the standard also allowed some companies to hide huge losses through this reclassification. The empirical results show that, when financial statements are audited by industry specialists and auditors with market knowledge, the level of information disclosure is higher, and the auditor’s attitude is more rigorous. However, when the client is particularly important, economic factors interfere with the auditor’s attitude toward the client’s financial information disclosure.

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1 Introduction

Relevance and reliability determine the usefulness of accounting information, but they often compete in the processing of accounting information. With the globalization of capital markets and in the knowledge economy era, accounting at fair value with relevance has become a major trend in international accounting standards. To keep Taiwan in line with the international accounting system and to enhance corporate financial information transparency, Taiwan set out Statement of Financial Accounting Standards (SFAS) No. 34, "Financial Instruments: Recognition and Measurement," and No. 36, "Financial Instruments: Disclosure and Presentation," in 2003 and 2005, respectively, to regulate the practice of fair value accounting. These standards have been in place since January 1, 2006.

Since the 1970s, countries have embraced financial deregulation and, with it, the innovation and introduction of derivative financial instruments. Consequently, new types financial instruments³ have been introduced one after another. The applications of financial engineering and computer technology have also promoted the development of new financial instruments. Because of the characteristics of leverage and low transaction costs, new financial instruments rapidly became one of the most efficient financial tools for hedging or speculative investments in

³ Chang [14] "New financial instruments" are newly emergent financial instruments that originate from packaged derivatives to meet market demands. "Financial derivatives," which are derived from underlying assets, such as stocks, foreign exchange, bonds, and commodities, can be roughly divided into option, forward contracts, futures, and swaps.

capital markets. The use of such tools should be reflected on the financial statements to enable investors to understand the risk status of the company.

Accounting for financial instruments under SFAS No. 34 is classified into four categories: trading, held-to-maturity, available-for-sale, and loans and receivables. After initial recognition, trading securities, derivatives, and financial assets designated under the fair value option are measured at fair value through profit or loss. Available-for-sale (AFS) assets are measured at fair value through shareholders' equity. Loans and receivables (L&R), as well as marketable debt securities classified as held to maturity (HTM), are measured at amortized cost. The measurement of financial assets at fair value represents the market's expectation and assessment of the amount, time, and level of uncertainty of future cash flows of the financial instruments.

Most of the current publicly quoted entities in Taiwan employ the "balance sheet date" market price as the fair value basis to measure the AFS financial assets. However, since the fair value accounting resulting from the global financial instruments is still highly controversial⁴, this study investigates whether the measurement basis is excessively optimistic or conservative. Specifically, recognition of excessively high (low) gains and recognition of insufficient (excessive) loss will lead to recognition of loss or gain in the following period. For example, when the financial tsunami broke out in 2008, in order to avoid market deterioration, the International Accounting Standards Board (IASB) amended the provisions of the IAS No. 39 regarding reclassification to allow companies to reclassify financial assets and avoid having to report a huge loss as a result of the

⁴ Lin and Chen [54] state that the IFRS (International Financial Reporting Standards) require many assets, liabilities, and equities be measured by fair value. However, provisions regarding fair value measurement are scattered in different standards, resulting in interference in practice and posing a complex problem to auditors of the related financial statements.

market value measurement⁵. Some banks even proposed to suspend fair value accounting. Hence, investors rely heavily on the professional judgment of auditors for the appropriateness of the fair value measurement and disclosure of financial assets.

Regarding the presentation of financial assets on statements by the listed companies in Taiwan, L&R refers to financial industries, while financial assets that cannot be classified as trading assets or assets held to maturity are categorized as AFS financial assets. If there is an active market price on the balance sheet date, the account is an "AFS financial asset", and the assets are measured and recognized as the unrealized gain or loss at market price. If the financial asset has no active market price, the account is a "cost-measurement financial asset," and the cost of the financial assets is regarded as the measurement basis.

In this study, we focus the research on "AFS financial asset" accounts to test the information disclosure and compare the difference between the company's free cash flow and the value of the AFS financial assets to verify the auditor's attitude toward the client's measurement of financial assets at market value. Table 1, which summarizes the AFS financial assets by fair value measurement and disclosures of Taiwanese listed companies from 2006 to 2009, shows that 42.84 percent of companies have an AFS financial asset account on their financial statements but only 42.39 percent of those companies disclosed "fair value adjustment AFS" in their financial statements' footnotes⁶. The accounting

⁵ The amended IAS No. 39 issued by IASB in October 2008 confirms that, in a few circumstances, companies can reclassify the trading category into the AFS, HTM, or L&R category.

⁶ Taiwan SFAS No.34: when enterprises prepare their financial statements that should be expressed in a different name or any other classification for the evaluation and related financial assets recognized through profit or loss, that is, the fair value adjustment, AFS is used to record the difference between the total cost and total fair value of the financial assets, the fair value adjustment account is identified using AFS assets, and the unrealized gain or loss account is identified using shareholders' equity.

standards also provide that unrealized gains and losses resulting from the AFS financial asset at fair value be listed under the shareholder's equity, but only 58.78 percent of companies indicated this data, so more than half of the companies failed to provide complete information on financial instrument evaluation.

Johnson et al. [47] pointed out that auditors that have a wealth of industry knowledge have the enhanced ability to detect fraud, thereby enhancing the audit quality and earnings quality. Francis and Yu [32] and Reichelt and Wang [60] suggested that auditors from major accounting firms have more exchange opportunities in terms of audit experience and consulting subjects, which can improve their ability to detect fraud or and require the company to make corrections based upon the auditor's opinions, resulting in higher audit quality. This study employs the highest level of industrial audit experience as a proxy for industrial specialist auditor to test the financial instrument information disclosure and the auditors' attitude toward the evaluation of financial assets at market value.

Most studies related to audit quality focus on earnings management, auditor tenure, or the impact of providing audit or non-audit services and audit fees on auditor independence [23, 29, 42, 50, 57, 59, 61]. Such studies also address the correlation between market share and audit quality from the perspective of price competition (low-balling strategy) and audit service [13, 20, 40, 46]. Studies on issues of the measurement and disclosure of financial instruments from the perspective of auditor-client relationship are limited.

Prior studies have focused on the operational activities of derivative financial instruments by management for speculative or hedging purposes. Based on a speculative purpose, the operations of derivative financial instruments can increase the volatility of company earnings; the risk management activities can reduce the volatility of cash flow, stabilize company earnings, and enhance company values [11, 35, 37]. This paper contributes to the literature by introducing the AFS financial assets measured at market price on the balance sheet date from the perspective of the industrial specialist auditor-client relationship and

the market share of an auditor and discusses the auditor's attitude toward the appropriateness of measuring financial instruments at market value and the adequacy of disclosures.

Using the market price on the balance sheet date to measure the value of AFS financial assets represents the company management's belief that such assets can create value for the company in the future. The book value of the AFS financial asset account on the financial statement is the amount agreed to after the auditor's discussion with the client and application of professional judgment. Windsor and Ashkanasy [67] indicated that, when the auditor is subject to moral reasoning, the auditor is less likely to reject negotiation pressure from the company's management. Because of the gray areas in professional judgment as it relates to audit practices and the difficulty of implementing the fair value assessment review procedure⁷, external users cannot discern the auditor's assessment process from the amount reported on the financial statement⁸, let alone know whether the auditor confirmed the appropriateness of measuring the financial statement at market value. The external user cannot know whether the auditor's measurement is due to the client-auditor relationship, the auditor's market share factors, or direct adoption of the client's hypotheses and assessment methods.

In discussing company value, Jensen [44] proposed the free cash flow hypothesis and defined the free cash flow as the remaining cash flow after implementing all the investment programs at net present value. Copeland et al. [18]

⁷ The determination of fair value is usually involved with the subjective judgment of the management, which may affect the nature of applicable control procedures. Meanwhile, the false presentation of fair value may also increase with the increasing complexity of provisions related to accounting and financial reporting.

⁸ The estimation of the fair value of these assets or liabilities may refer to specific measurement methods (i.e., the discounted cash flow method) or estimation reports by independent experts.

measured company value using the free cash flow method to measure the company-held cash that can be returned to shareholders and debtors without endangering the survival and development of the company. Hence, we adopt the commonly used free cash flow method proposed by most scholars in the finance literature [51, 53] to verify the impact of the auditor-client relationship and auditor market share on the measurement of AFS financial assets and the clients' information disclosure.

The remainder of this paper reviews the literature and develops the research hypotheses related to the relationships between industry specialist auditors and their clients, and auditor market share and the measurement and disclosure of financial instruments, empirically testing the hypotheses and providing conclusions regarding the results.

2 Literature Review and Hypotheses Development

2.1 Accounting treatment of financial instruments

Financial instruments with high leverage characteristics and price volatility involve a high financial risk and a high off-balance sheet risk. Based on the new financial instrument's level of innovation and variety, the American Financial Accounting Standards Board (FASB) issued the SFAS No.52 in 1981, which is the first criteria accounting treatment of derivatives. Since then, FASB has released SFAS No. 105, No. 107 and No. 119 to strengthen the information disclosure in the fair value and the risk of financial instruments. In 1998, FASB issued No.133 for all the accounting treatments of derivatives to provide a complete set of criteria. In the same year, the IASB issued IAS No.39, which referred to SFAS No.115 and No.133. The accounting and auditing standards in Taiwan are similar to those in the United States. In order to connect with international accounting standards, the Taiwan Financial Accounting Committee and regulator competent authorities

followed the IAS No. 39 and issued Taiwan SFAS No. 34⁹ and No. 36. Afterward, the evaluation of financial instruments was changed from the lower of cost and market to fair value. For financial derivative transactions, the method of disclosure in financial statement footnotes was replaced with the booked measurement at fair value. The more explicit regulations on the accounting of financial instruments are intended to help users assess the risks related to financial instruments more accurately.

Studies on the use of financial instruments include those on the selection of hedging tools, hedging strategies, and the use of derivative financial instruments in risk management and in reducing cash flow fluctuations [43, 45, 63]. The new financial instruments can also reduce fluctuations in earnings and enhance the value of the company [2, 6, 11, 27, 38, 58]. Allayannis et al. [3] found that the derivative instrument-hedging activities of companies with strong corporate governance mechanisms can improve company value. Tsao et al. [66] discussed the level of use of derivative financial instruments and discretionary accruals in earnings management, as well as the impact of the shareholding structure on the selection of earnings management. They found that the use of derivative financial instruments in earnings management is positively correlated to company value. When the corporate mechanism of the company is relatively weaker, additional discretionary accruals will be used for the purpose of earnings management.

The literature shows that the financial instrument transactions in general industries are focused on hedging in response to competition and customer demands and in order to avoid risks that arise from their own businesses. In recent years, such operations have even been used for earnings management purposes. However, discussions on the relationship between the presentation and exposure

⁹ Taiwan SAFS No.34 was issued in December 2003 with reference to U.S. SAFS No.115, first time amended with reference to IAS No.39 was issued in September 2005 and became effective since January 1, 2006, and was revised a second time because of the financial crisis of 2008.

of financial instruments on financial statements and audit quality are inadequate.

2.2 Auditor-client relationship

The primary function of auditing, a highly professional service industry that requires higher moral standards than other profit-making industries, is to limit reporting discrepancies and to reduce information asymmetry. Grant and Schlesinger [36] proposed methods to improve corporate profitability, including the new client development strategy with the purpose of attracting new customers, the market penetration strategy with the purpose of enhancing customer return rates, and the extension of customer relationships. These three methods reflect the audit market: the first two relate to product differentiation, indicating the investment returns of accounting firms that have industry specialization, the client importance, and the auditor's market share. The third represents the auditor's tenure.

Taiwan's auditing environment differs from those of other countries in that the audit reports show the audit firm's name and two partner names, rather than just the name of the audit firm. In cases of audit failure, the auditor bears personal responsibility. Therefore, audit quality and the accounting firm are less closely correlated in Taiwan than they are in other countries, and the audit quality is subject mostly to the personal factors related to the auditor. Fan et al. [25] stated that the professional expertise of auditors is built from the accumulation of work experience in an industry; industry specialists obtain experience from the audit process in a specific industry. Years of audit experience can help the auditor to understand the client's operational process and improve the auditor's problem-solving capabilities. Because of the differences in industry characteristics, accounting education does not offer a specific course for specific industries in school; most accountants can only accumulate their industry knowledge and ability through experience. This study measures auditor industry specialty by

accumulating the number of audits years and adopts the highest level of industrial audit experience as a proxy for industry specialization.

The literature suggests several ideas regarding the impact of the auditor tenure on audit quality. Those who support the rotation of auditors believe that it can enhance audit market competition, reduce audit fees [24, 65], and improve the independence of auditors, thereby enhancing audit quality [10, 16]. Those opposed to rotation suggest that rotation increases the cost of the initial audit and interferes with the auditors' ability to accumulate knowledge about specific customers [33], audit quality [34, 56], and the ability to reduce the number of frauds on the financial statements [9, 48]. The US Sarbanes-Oxley Act of 2002 mandates a five-year rotation for the lead and reviewing partners. In April 2003, Taiwan amended the regulation for auditing listed companies such that, if the lead or concurring partner has performed audit services for a company in five consecutive years, then that company is subject to the regulator's "substantive review" procedure and a five-year mandatory partner rotation. Since the sample period of this study is between 2006 and 2009 and none of the sample companies changed auditors, we do not include "auditor tenure" in our empirical models.

2.3 Measurement and disclosure of financial assets and client importance

With the high competition and saturation of the audit market, auditors' rising economic reliance on clients may damage their independence. The audit fee is the major income of accounting firms, so when the client is an important one, the auditor may have considerable incentive to compromise. DeAngelo [21] indicated that client importance reflects the percentage of future rent from the client against other clients such that, the higher the percentage, the more important the client. Reynolds and Francis [61] discussed the impact of client size on the

auditor's decisions, suggesting that the auditor is likely to compromise in accepting beneficial financial reporting for a large client in order to maintain a good relationship. Chung and Kallapur [17] discussed the relationship between client importance, non-audit services, and abnormal accruals, finding that the auditor's independence may be compromised by client importance but may be enhanced by corporate governance and industry specialization. Cenker and Nagy [12] examined the relationship between the resignation of auditors and industrial specialization, expecting that auditors are less likely to give up clients that pay higher audit fees than those that pay lower fees.

In Taiwan, Lee and Chen [52] measured client importance by auditor group and explored whether client importance affects the auditor's tolerance of the company's earnings management. Their findings suggested that, the greater the client's importance, the greater the auditor's tolerance toward earnings management. Yang and Guan [68], in a post-Enron study, found that auditors attached more importance to major clients and their reputation and that they tended to make increasingly conservative audit decisions after the Enron scandal.

There are still many disputes regarding fair value accounting for global financial instruments. Although the value of an AFS financial asset is based on the market value at the balance sheet date, we wondered whether this measurement basis is excessively optimistic in relation to the company value since the excess interest is recognized as a gain while the potential losses are unrecognized. In addition, as shown in Table 1, since the implementation of SFAS No. 34 and No. 36, more than half of the companies have not disclosed the "fair value adjustment-AFS" on their financial statement footnotes, and more than a third have not provided clear information about the "unrealized gain or loss-AFS" under shareholder equity. The literature shows that changes in the audit environment affect the attitude of the auditor, while a change in the legal environment causes the audit opinions to become more conservative. Our conjecture is that important clients are more likely to disclose fair value

adjustment-AFS information, and the auditor's attitude is more likely to be prudent when AFS financial assets were measured at market value. Therefore, the study proposes the following research hypotheses:

H1-1: The higher the client's importance to the auditor, the more likely client is to disclose fair value adjustment-AFS information on financial statement footnotes.

H1-2: The higher the client's importance to the auditor, the more conservative the auditor in his or her valuation of AFS financial assets.

2.4 Auditor's industrial specialization

The industrial experience, knowledge, and specialization level of auditors can affect the decision-making process and the audit quality. DeAngelo [21] defined audit quality as the joint probability of detection and reporting material misstatements on the financial statements. An auditor's knowledge about a client or an industry can reduce the probability of audit failure and reduce fraud because the auditor tends to have better evidence-gathering capability and be able to make sound professional judgments. Johnson et al. [47] pointed out that rich industrial knowledge can improve the fraud-detection capabilities of the auditor, leading to more resources invested in the recruiting, training, and audit techniques that enhance audit quality and earnings quality. Becker et al. [7] suggested that auditors who perform high-quality audits are better at identifying problematic auditing practices and are more likely to present reservations. Balsam et al. [5] studied the gaps in the discretionary accruals and earnings response coefficients between companies audited by specialists and those audited by non-specialists and suggested that specialists can reduce earnings mismanagement. Carcello and Nagy's [9] empirical results on the relationships among the size of the client, industrial specialization, and the financial statement showed that, although

large-scale clients have greater ability to force the auditor to compromise, there are still fewer frauds in financial statements audited by specialists than in those edited by non-specialists. Francis and Yu [32] and Reichelt and Wang [60] showed that auditors from major audit firms perform higher-quality audits because they have more experience and more experts with whom to consult in order to improve their fraud-finding capabilities and their ability to demand that clients correct misstatements on financial statements before issuing their opinions.

Chen et al. [15] discussed the differences in audit quality and customer satisfaction between industrial specialists and non-specialists in Taiwan and suggested that specialists' customer satisfaction is considerably higher than that of non-specialists. Fan et al. [25] discussed the impact of client importance in Taiwan and the level of industrial specialization on earnings quality to show that the level of industrial specialization can effectively alleviate the adverse effects of client importance on earnings quality. The literature indicates that industrial specialists in Taiwan have more incentives to retain their reputations, gain higher economic profits, and maintain client relationships. Hence, we infer that industrial specialists in Taiwan can enhance the disclosure of fair value adjustments-AFS and prudentially assess the financial asset at market value; therefore, the following hypotheses are established:

H2-1: *Companies audited by an industrial specialist are more likely to disclose fair value adjustment-AFS in financial statement footnotes.*

H2-2: *Industrial specialist auditors are more conservative in their valuations of AFS financial assets.*

2.5 Audit market competition

In marketing research, Kerin et al. [49] pointed out that early entrants in new markets often achieve a first-mover advantage that results in dominant market

shares and a sustainable competitive advantage. Szymanski et al. [64] performed a meta-analysis on forty-eight studies to investigate the relationship between market share and profitability. They found that market share has a positive association on profitability: market leadership increases brand-name recognition and the perception that the market leader is of high quality, which in turn leads to higher prices and profitability.

There were many mergers in the audit market from 1989 to 2006. Coupled with the dissolution of Arthur Anderson, mergers and acquisitions among the major accounting firms resulted in the current Big Four accounting firms. Using US data to analyze the 1989 audit firm mergers, Francis et al. [31] assert that market share is important because it measures leadership, from which inferences can be made about auditor reputations and expertise. Ferguson et al. [26] test whether city-specific market leadership provides a positive signal of audit quality and a basis for charging higher audit fees. Using the top one hundred publicly traded companies in Britain, McMeeking [55] studied the competition in audit services in the British market and found that the audit fee was generally lower when the auditor was serving the client for the first time and that the fee increased significantly in follow-up contracts.

Simunic [62] constructed an economic model to test the effects of market structure on the pricing of audit services and to investigate the determinants of audit fees, suggested that the large-client segment of the market is potentially less competitive than the small-client segment. Francis and Stokes [30] compared the extremely-large-client and extremely-small-client segments of the Australian market and found evidence for large auditor price premiums for small clients but not for large clients. Their results suggest large differences in accounting firms' product across all client sizes, and diseconomies of scale for the smaller auditors who audit large companies. Hamilton et al. [41] used Australian data from 2000 and 2003 to investigate the competitive pricing in the Australian audit market both before and after Arthur Andersen's demise. Their findings support the view that

Big N auditors earn premiums consistent with their reputations for supplying higher-quality products and that there are scale diseconomies for non-Big N auditors in the very-large-client segment of the market. Hence, this paper infers that auditors with higher market share can promote the disclosure of fair value adjustment-AFS better than those with lower market share can and that they can prudently evaluate the financial assets at market value. Thus, the following hypotheses are established:

H3-1: *The higher the auditor's market share, the greater the probability that the client will disclose fair value adjustment-AFS information on financial statement footnotes.*

H3-2: *The higher the auditor's market share, the more conservative the auditor will be in its valuation of AFS financial assets.*

3 Research Design

3.1 Sample selection

We obtain the auditor's industrial knowledge and audit experience from samples of auditor and financial data of the Taiwan Securities Exchange and Counter Transaction Center from 2006 to 2009 in the *Taiwan Economics Journal* (TEJ) database. We calculate the audit experience of each auditor in each industry to find the most experienced auditor in specific industries during the sample period and define that auditor as the industrial specialist. Then we determine which companies were audited by the industrial specialist. After removal of financial firms and incomplete data, 4,372 among the 4,968 samples have a complete set of data for all four years. This paper takes as its study object 1,873 companies with accounts of AFS financial assets on their financial statements and tests their disclosures on footnotes and the auditor's attitude. The industrial distribution of samples is shown in Table 1.

Table 1: Sample Industry Group Summary

| Industry Group | Sample (N) | AFS financial asset account (N) | Percentage (%) | Fair value adjustment-AFS | | Unrealized gain or loss in shareholder equity | |
|----------------------|------------|---------------------------------|----------------|---------------------------|-------|---|-------|
| | | | | Percentage | | Percentage | |
| | | | | N | (%) | N | (%) |
| Cement | 28 | 26 | 92.86 | 10 | 38.46 | 11 | 42.31 |
| Food | 88 | 46 | 52.27 | 23 | 50.00 | 28 | 60.87 |
| Plastic | 108 | 61 | 56.48 | 40 | 65.57 | 24 | 39.34 |
| Textile | 216 | 105 | 48.61 | 38 | 36.19 | 62 | 59.05 |
| Electrical machinery | 224 | 83 | 37.05 | 35 | 42.17 | 39 | 46.99 |
| Electrical cable | 52 | 38 | 73.08 | 19 | 50.00 | 17 | 44.74 |
| IM medical | 276 | 107 | 38.77 | 60 | 56.07 | 67 | 62.62 |
| Glass ceramics | 20 | 12 | 60.00 | 0 | 0.00 | 5 | 41.46 |
| Paper | 28 | 20 | 71.43 | 6 | 30.00 | 14 | 70.00 |
| Steel | 148 | 64 | 43.24 | 26 | 40.63 | 55 | 85.94 |
| Rubber | 44 | 20 | 45.45 | 15 | 75.00 | 9 | 45.00 |
| Automobile | 20 | 16 | 80.00 | 4 | 25.00 | 9 | 56.25 |
| Electronics | 2,436 | 970 | 39.82 | 361 | 37.22 | 590 | 60.82 |
| Building materials | 208 | 57 | 27.40 | 31 | 54.39 | 37 | 64.91 |
| Shipping | 84 | 47 | 55.95 | 25 | 53.19 | 18 | 38.30 |
| Tourism | 44 | 30 | 68.18 | 15 | 50.00 | 14 | 46.67 |
| Trading | 68 | 35 | 51.47 | 23 | 65.71 | 14 | 40.00 |
| Utilities | 48 | 28 | 58.33 | 9 | 32.14 | 19 | 67.86 |
| Others | 232 | 108 | 46.55 | 54 | 50.00 | 69 | 63.89 |
| Total | 4,372 | 1,873 | 42.84 | 794 | 42.39 | 1,101 | 58.78 |

Note: 4,372 publicly quoted entities in Taiwan during 2006 to 2009.

Table 1 shows that traditional industries, including cement (92.86%), automobile (80%), the electrical cable industry (73.08%), and article making (71.43%) have higher percentages of AFS financial assets than other industries. Although the electronics (n=970) and biomedical industries (n=107) account for more than half of the 1,873 companies, their holdings of AFS financial assets are relatively low in terms of percentage. Among all the listed companies, only 42.39 percent disclose fair value adjustment-AFS on their financial statement notes, and 58.78 percent disclose unrealized gain or loss under shareholder equity. Therefore, more than half of the companies have not clearly told investors the actual situation

regarding investment assets that are subject to the fluctuations of market price. This is particularly the case for traditional industries, such as the cement industry.

3.2 Empirical models and variable definition

This paper tests the information disclosure of financial assets in footnotes and compares the difference between the company's free cash flow and the book value of the AFS financial asset to verify the auditors' attitudes toward the clients' measurement of financial assets at market value.

3.2.1 Fair value adjustment-AFS

We estimate the following logistic regression models to test the impact of client importance¹⁰, industrial specialization, and market competition on the disclosure of fair value adjustment-AFS.

$$\begin{aligned} Adjva_{it} = & \beta_0 + \beta_1 Im\ por_{it} + \beta_2 Spec_{it} + \beta_3 Market_{it} + \beta_4 EPS_{it} + \beta_5 EBIT_{it} \\ & + \beta_6 ROE_{it} + \beta_7 LEV_{it} + \varepsilon_i \end{aligned} \quad (1)$$

In regression equation (2), the interaction of independent variables is added to determine whether there is an incremental effect on the client's decision to disclose fair value adjustment-AFS information in financial statement footnotes.

$$\begin{aligned} Adjva_{it} = & \beta_0 + \beta_1 Im\ por_{it} + \beta_2 Spec_{it} + \beta_3 Market_{it} + \beta_4 EPS_{it} + \beta_5 EBIT_{it} \\ & + \beta_6 ROE_{it} + \beta_7 LEV_{it} + \beta_8 Im\ por_{it} \cdot Spec_{it} + \beta_9 Im\ por_{it} \cdot Market_{it} \\ & + \beta_{10} Spec_{it} \cdot Market_{it} + \beta_{11} Im\ por_{it} \cdot Spec_{it} \cdot Market_{it} + \varepsilon_i \end{aligned} \quad (2)$$

where:

¹⁰ Because none of the sample companies changed auditors in this sample period, we do not include auditor tenure in our empirical model but use the client importance representative of the auditor-client relationship.

| | | |
|------------------------|---|---|
| <i>Adjva</i> | = | 1 if the client discloses fair value adjustment-AFS on its financial statement footnotes, and 0 otherwise; |
| <i>Impor</i> | = | 1 if the ratio of a client's sales revenue against the total sales revenue of all clients that are audited by a certain auditor is greater than the median, and 0 otherwise; |
| <i>Spec</i> | = | 1 if the client is audited by an industry specialist, and 0 otherwise; |
| <i>Market</i> | = | 1 if the ratio of total market value of the clients that are audited by a certain auditor against the total market value of all listed companies is greater than the median, and 0 otherwise; |
| <i>EPS</i> | = | the client's pre-tax earnings per share; |
| <i>ROE</i> | = | the client's pre-tax shareholder equity return rate; |
| <i>EBIT</i> | = | net income before taxation and depreciation divided by total sales revenue; |
| <i>LEV</i> | = | the total liability divided by total equity; |
| $Impor \square Spec$ | = | the interaction of client importance and industry specialist; |
| $Impor \square Market$ | = | the interaction of client importance and auditor market share; |
| $Spec \cdot Market$ | = | the interaction of industry specialization and auditor market share. |

3.2.2 Auditor's attitude

This paper employs the free cash flow method used by most scholars in the finance literature [1, 8, 51, 53] to get the free cash flow that is to be subtracted from the book value of the AFS financial asset. The result of the subtraction is adopted as the proxy for the auditor's attitude toward the financial assets at market value. If the gap is larger than zero, the company has overestimated the financial asset's value. In this case, the auditor is optimistic about the balance of the AFS financial assets because the value recorded is greater than that which can be generated in the future, and the auditor is willing to accept the overestimated value. If the gap is less than zero, the financial assets are measured at a lower price, and the auditor's attitude toward the assets is more conservative. We establish the following logistic regression model to test the auditor's attitude toward AFS

financial assets at market value.

$$BV - FCF_{it} = \beta_0 + \beta_1 \text{Im } por_{it} + \beta_2 \text{Spec}_{it} + \beta_3 \text{Market}_{it} + \beta_4 \text{LOSS}_{it} + \beta_5 \text{CFO}_{it} + \beta_6 \text{CA}_{it} + \beta_7 \text{TCRI}_{it} + \varepsilon_i \quad (3)$$

In regression equation (4), the interaction of independent variables is added to determine whether there is an incremental effect on the auditor's attitude.

$$BV - FCF_{it} = \beta_0 + \beta_1 \text{Im } por_{it} + \beta_2 \text{Spec}_{it} + \beta_3 \text{Market}_{it} + \beta_4 \text{LOSS}_{it} + \beta_5 \text{CFO}_{it} + \beta_6 \text{CA}_{it} + \beta_7 \text{TCRI}_{it} + \beta_8 \text{Im } pt_{it} \cdot \text{Spec}_{it} + \beta_9 \text{Im } por_{it} \cdot \text{Market}_{it} + \beta_{10} \text{Spec}_{it} \cdot \text{Market}_{it} + \beta_{11} \text{Im } por_{it} \cdot \text{Spec}_{it} \cdot \text{Market}_{it} + \varepsilon_i \quad (4)$$

Where:

- BV* = the book value of AFS financial assets;
FCF = the profit before the deduction of depreciation, minus the interest fee, income tax expense, preferred stock cash dividends, and common stock cash dividends;
BV-FCF = 1 if the gap of AFS financial assets and free cash flow is less than zero, and 0 otherwise (the gap greater than zero for optimistic; the gap less than zero for conservative);
LOSS = 1 if the client reported a negative pre-tax income in the previous year, and 0 otherwise;
CFO = client's cash flow from operations scaled by the total assets at the beginning of the year;
CA = ratio of the client's current assets to current liabilities ;
TCRI = The client's credit rating indicator, where the rating is divided into nine levels, with the highest level representing the worse credit.

3.2.3 Variable definition

3.2.3.1 Dependant variables

(1) Fair value adjustment-AFS (*Adjva*): this account is used to record the difference between the total cost and total fair value of the financial assets; the total fair value of the financial assets is identified with AFS assets, and the unrealized gain or loss account is identified with shareholders' equity.

(2) AFS financial assets book value (*BV*): the total cost of AFS financial assets

plus (or minus) the fair value adjustment-AFS on the balance sheet date.

(3) Free cash flow (*FCF*): using the measurement method used by most scholars in the finance literature [1, 8, 51, 53] free cash flow refers to the profit before the deduction of depreciation, minus the interest fee, income tax expense, preferred stock cash dividends, and common stock cash dividends.

3.2.3.2 Independent variables

(1) Client importance (*Impor*): since the listed companies in Taiwan must disclose audit fee data only under specific conditions, the audit fee information cannot be reliably obtained. Therefore, this study adopts the percentage of sales revenue from a specific client against the total sales revenue of the clients that are audited by a certain auditor as the client importance ratio by referring to previous literature [19, 28] to work out the importance of each client. The ratio is divided into two groups: 1 for those with a value greater than the median and 0 otherwise.

(2) Industrial specialist (*Spec*): because of the differences in industry characteristics, accounting education does not offer a specific course for specific industries, and most accountants can accumulate industry knowledge and ability only through audit experience. Therefore, more experienced auditors are those with more industrial knowledgeable and experience. This study adopts the highest level of industrial audit experience as the proxy for industrial specialization. Hence, the variable of industrial specialist is a dummy variable equal to 1 if the company is audited by the industrial specialist and 0 otherwise.

(3) Market share (*Market*): market share refers to the percentage of sales of a certain product of a company in a certain period against the sales of all products in the same category. This paper adopts the ratio of the total market value of the clients that are audited by a certain auditor against the total market value of all listed companies to work out the market share of each auditor. The ratio is equal to 1 if the value is greater than the median and 0 otherwise.

3.2.3.3 Other control variables

This study refers to prior research [4, 39, 41] in including other control variables in equations 1 and 2 to serve as proxies for the client's financial characteristics: company profitability (*EPS*), shareholder returns (*ROE*), net income before interest, taxation and depreciation (*EBIT*), and the ratio of liability to equity (*LEV*). These control variables are indirect factors that can affect the performance of the managers and that may affect their willingness to disclose fair value adjustment. We expect that, the better the profitability, the higher the degree of information disclosure, and the higher the company's risk level, the more concerned creditors are about ensuring a higher degree of information disclosure. Equations 3 and 4 include an indicator variable that is equal to 1 if the client had negative profit in the previous year (*LOSS*), measured by the client's cash flow from operations scaled by total assets at the beginning of the year (*CFO*), current ratio (*CA*), and credit rating (*TCRI*). The rating is divided into nine levels, with lower levels representing better credit and the highest credit rating level indicating that the company is in financial crisis. We expect clients with higher cash flows and current ratios to have auditors with positive attitudes, with the reverse relationship occurring when the client lacks liquidity and a high credit rating.

4 Empirical Results

4.1 Univariate analysis

Table 2 reports descriptive statistics suggesting that the mean of disclosures of fair value adjustment-AFS (*Adjva*) is 0.42. The mean of the gap (*BV-FCF*) is 0.55, and the median number is 1, indicating that the auditors are reserved in their attitude toward the financial assets at market value.

Table 2: Descriptive Statistics

| Summary Statistics of Variables | | | | N=1,873 | |
|---------------------------------|------|-------|--------|----------|--------|
| Variable | Mean | S.D. | Median | Min | Max |
| <i>Adjva</i> | 0.42 | 0.49 | 0.00 | 0.00 | 1.00 |
| <i>BV- FCF</i> | 0.55 | 0.50 | 1.00 | 0.00 | 1.00 |
| <i>Impor</i> (%) | 0.32 | 0.31 | 0.19 | 0.00 | 1.00 |
| <i>Spec</i> | 0.41 | 0.49 | 0.00 | 0.00 | 1.00 |
| <i>Market</i> (%) | 0.01 | 0.01 | 0.00 | 0.00 | 0.08 |
| <i>EPS</i> | 2.14 | 4.21 | 1.51 | -12.75 | 61.77 |
| <i>ROE</i> (%) | 6.67 | 17.19 | 7.65 | -174.40 | 77.00 |
| <i>EBIT</i> (%) | 1.50 | 52.74 | 4.68 | -1151.55 | 72.27 |
| <i>LEV</i> (%) | 0.69 | 1.42 | 0.49 | -21.02 | 50.81 |
| <i>LOSS</i> | 0.18 | 0.38 | 0.00 | 0.00 | 1.00 |
| <i>CFO</i> (%) | 0.08 | 0.11 | 0.07 | -1.51 | 0.63 |
| <i>CA</i> | 2.67 | 4.84 | 1.80 | 0.02 | 160.30 |
| <i>TCRE</i> | 5.29 | 1.63 | 5.00 | 1.00 | 10.00 |

Adjva: dummy variable, 1 if the client discloses fair value adjustment-AFS on its financial statement footnotes, and 0 otherwise; *BV- FCF*: dummy variable, 1 if the gap of AFS financial assets and free cash flow is less than zero, and 0 otherwise (the gap greater than zero for optimistic; the gap less than zero for conservative); *Impor*: the ratio of a client's sales revenue against the total sales revenue of all clients that are audited by a certain auditor ; *Spec*: dummy variable, 1 if the client is audited by an industry specialist, and 0 otherwise; *Market*: the ratio of total market value of the clients that are audited by a certain auditor against the total market value of all listed companies; *EPS*: pre-tax earnings per share; *ROE*: pre-tax shareholder equity return rate; *EBIT*: net income before taxation and depreciation divided by total sales revenue ; *LEV*: the total liability divided by total equity; *LOSS*: dummy variable, 1 if the client reported a negative pre-tax income in the previous year, and 0 otherwise; *CFO*: the cash flow from operations scaled by the total assets at the beginning of the year; *CA*: ratio of the client's current assets to current liabilities; *TCRI*: credit rating index.

The mean of client importance (*Impor*) is 0.32, with a range from 0 to 1, indicating that some auditors do not focus on auditing listed companies, while some rely on these companies for their income. The mean of industrial specialists (*Spec*) is 0.41, indicating that the proportion of audits performed by industrial specialists is not high. The mean of market share (*Market*), 0.01, range from 0 to 0.08. Because the number of auditors is high, the per-auditor market share is relatively low. Regarding control variables, the mean of *EPS* is 2.14, *ROE* is 6.67 percent, *EBIT* is 1.50 percent, *LEV* is 0.69 percent, *LOSS* is 0.18, *CFC* is 0.08 percent, *CA* ratio is 2.67, and *TCRI* is 5.29. The sample data suggest that the

financial position of the listed companies is stable, although the profit-making is not ideal.

Table 3's Panel A reports the Pearson correlation coefficients of the variables. The independent variables, *Impor*, *Spec* and *Market*, are significantly positive with the gap (*BV-FCF*) but insignificant with the *Adjva*. Regarding control variables, except for the variable of *CFO*, which is significantly positive with the gap (*BV-FCF*), the coefficients for *LOSS*, *CA*, and *TCRI* are significantly negative. The correlation coefficients of other variables are generally significant and not high. The variance inflation factors (VIF) values are below 2.45. Overall, there are no co-linearity problems.

Table 3: Correlation Matrix

| <i>Panel A: Pearson Correlation</i> | | | | | | | | |
|-------------------------------------|---------------|--------------|---------------|---------------|-------------|-------------|-------------|-------------|
| Variable | <i>Adjva</i> | <i>Impor</i> | <i>Spec</i> | <i>Market</i> | <i>EPS</i> | <i>ROE</i> | <i>EBIT</i> | <i>LEV</i> |
| <i>Adjva</i> | 1.00 | | | | | | | |
| <i>Impor</i> | 0.03 | 1.00 | | | | | | |
| <i>Spec</i> | -0.03 | -0.11 ** | 1.00 | | | | | |
| <i>Market</i> | 0.02 | -0.21 ** | 0.21 ** | 1.00 | | | | |
| <i>EPS</i> | -0.03 | 0.09 ** | 0.08 ** | 0.19 ** | 1.00 | | | |
| <i>ROE</i> | -0.02 | 0.02 | 0.09 ** | 0.15 ** | 0.71 ** | 1.00 | | |
| <i>EBIT</i> | -0.04 | 0.07 ** | 0.06 * | 0.03 | 0.19 ** | 0.25 ** | 1.00 | |
| <i>LEV</i> | 0.02 | 0.07 ** | -0.06 * | -0.03 | -0.10 ** | -0.34 ** | 0.00 | 1.00 |
| <i>Panel B: Pearson Correlation</i> | | | | | | | | |
| Variable | <i>BV-FCF</i> | <i>Impor</i> | <i>Spec</i> | <i>Market</i> | <i>LOSS</i> | <i>CFO</i> | <i>CA</i> | <i>TCRI</i> |
| <i>BV-FCF</i> | 1.00 | | | | | | | |
| <i>Impor</i> | 0.06 * | 1.00 | | | | | | |
| <i>Spec</i> | 0.10 ** | -0.11 ** | 1.00 | | | | | |
| <i>Market</i> | 0.08 ** | -0.21 ** | 0.21 ** | 1.00 | | | | |
| <i>LOSS</i> | -0.14 ** | -0.03 | -0.09 ** | -0.10 ** | 1.00 | | | |
| <i>CFO</i> | 0.12 ** | 0.02 | 0.12 ** | 0.12 ** | -0.22 ** | 1.00 | | |
| <i>CA</i> | -0.08 ** | -0.09 ** | 0.07 ** | 0.01 | -0.03 | 0.02 | 1.00 | |
| <i>TCRI</i> | -0.19 ** | -0.25 ** | -0.11 ** | -0.24 ** | 0.43 ** | -0.37 ** | 0.00 | 1.00 |
| <i>Panel C: VIF Value</i> | | | | | | | | |
| Variable | <i>Impor</i> | <i>Spec</i> | <i>Market</i> | <i>EPS</i> | <i>ROE</i> | <i>EBIT</i> | <i>LEV</i> | |
| <i>Adjva</i> | 1.09 | 1.06 | 1.13 | 2.15 | 2.44 | 1.09 | 1.20 | |
| | <i>Impor</i> | <i>Spec</i> | <i>Market</i> | <i>LOSS</i> | <i>CFO</i> | <i>CA</i> | <i>TCRI</i> | |
| <i>BV-FCF</i> | 1.19 | 1.07 | 1.19 | 1.25 | 1.18 | 1.01 | 1.59 | |

Impor = 1 if the client importance ratio is greater than the median, and 0 otherwise;
Market = 1 if the auditor's market share is greater than the median, and 0 otherwise.
Other variables are defined in Table2; Statistical significance: *p<.05, **P<.01.

4.2 Multivariate analysis

4.2.1 Disclosure of the fair value adjustment-AFS

Table 4 shows the results of the logistic regression of client importance, industry specialization, and the auditor's market share in the clients' decision to disclose fair value adjustment-AFS in financial statement footnotes. The results of equation 1 show in model 1 the coefficients for *Impor* and *Market* are positive and statistically significant, supporting H1-1 and H3-1 and indicating that the auditor prudently assesses the significance of financial information for investors and can initially provide measurement information. When clients are important, auditors with a larger market share can enhance the level of information disclosure. The coefficient for *Spec* is negative and insignificant; as the literature pointed out, industrial specialists have higher fraud-detection capabilities [47], which are directly related to the earnings quality [5, 9] but have nothing to do with the disclosure of measurement information.

Table 4: Regression Analysis of Fair Value Adjustment-AFS

| <i>Panel A</i> | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 | Model 7 |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Variables | Coefficient (p-value) | Coefficient (p-value) | Coefficient (p-value) | Coefficient (p-value) | Coefficient (p-value) | Coefficient (p-value) | Coefficient (p-value) |
| <i>Impor</i> | .189 * (.053) | .295 *** (.009) | .287 ** (.046) | .327 ** (.023) | .206 (.134) | .183 (.187) | .183 (.187) |
| <i>Spec</i> | -.115 (.241) | .056 (.674) | .057 (.669) | .000 (.999) | -.116 (.240) | -.592 *** (.000) | -.592 *** (.000) |
| <i>Market</i> | .179 * (.074) | .173 * (.084) | .164 (.239) | .178 (.203) | .195 (.159) | -.173 (.291) | -.176 (.313) |
| <i>ImporxSpec</i> | | -.599 * (.056) | -.603 * (.057) | -1.006 *** (.004) | | | |
| <i>ImporxMarket</i> | | | .017 (.931) | -.309 (.170) | -.034 (.863) | .023 (.906) | .030 (.899) |
| <i>SpecxMarket</i> | | | | | | .868 *** (.000) | .873 *** (.000) |
| <i>ImporxSpecxMarket</i> | | | | .781 *** (.003) | | | -.015 (.958) |
| <i>EPS</i> | -.032 * (.078) | -.030 * (.092) | -.030 * (.092) | -.030 * (.098) | -.032 * (.083) | -.031 * (.093) | -.031 * (.094) |
| <i>ROE</i> | .005 (.247) | .005 (.244) | .005 (.243) | .005 (.230) | .005 (.251) | .005 (.302) | .005 (.303) |

| | | | | | | | |
|--------------------------|-----------|-----------|-----------|-----------|-----------|----------|----------|
| <i>EBIT</i> | -.002 * | -.002 * | -.002 * | -.002 | -.002 * | -.002 | -.002 |
| | (.098) | (.090) | (.091) | (.104) | (.097) | (.106) | (.106) |
| <i>LEV</i> | .035 | .036 | .036 | .031 | .035 | .027 | .027 |
| | (.355) | (.350) | (.349) | (.401) | (.358) | (.466) | (.466) |
| Constant | -.432 *** | -.492 *** | -.487 *** | -.454 *** | -.442 *** | -.282 ** | -.282 ** |
| | (.000) | (.000) | (.000) | (.000) | (.000) | (.021) | (.021) |
| N=1,873 | | | | | | | |
| <i>Cox & Snell R</i> | .007 | .009 | .009 | .014 | .007 | .017 | .017 |
| <i>Nagelkerke R</i> | .009 | .012 | .012 | .018 | .009 | .023 | .023 |

| <i>Panel B</i> | Model 8 | Model 9 | Model 10 | Model 11 | Model 12 | Model 13 |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Variables | Coefficient (p-value) | Coefficient (p-value) | Coefficient (p-value) | Coefficient (p-value) | Coefficient (p-value) | Coefficient (p-value) |
| <i>Impor</i> | .194 ** (.049) | .262 ** (.020) | .237 ** (.043) | .234 (.105) | .104 (.344) | .253 * (.085) |
| <i>Spec</i> | -.591 *** (.000) | -.457 ** (.013) | -.411 ** (.034) | -.454 ** (.014) | -.190 * (.079) | -.406 * (.039) |
| <i>Market</i> | -.161 (.207) | -.149 (.243) | -.153 (.230) | -.181 (.270) | .113 (.291) | -.132 (.455) |
| <i>ImporxSpec</i> | | -.390 (.223) | -.538 (.152) | -.405 (.211) | | -.552 (.151) |
| <i>ImporxMarket</i> | | | | .061 (.757) | | -.042 (.864) |
| <i>SpecxMarket</i> | .866 *** (.000) | .825 *** (.000) | .739 ** (.001) | .829 *** (.000) | | .723 *** (.004) |
| <i>ImporxSpecxMarket</i> | | | .200 (.445) | | .348 * (.092) | .232 (.471) |
| <i>EPS</i> | -.031 * (.094) | -.030 (.105) | -.030 * (.097) | -.030 * (.100) | -.034 * (.064) | -.030 (.101) |
| <i>ROE</i> | .005 (.304) | .005 (.301) | .005 (.284) | .005 (.296) | .005 (.229) | .005 (.285) |
| <i>EBIT</i> | -.002 (.104) | -.002 * (.098) | -.002 (.105) | -.002 (.101) | -.002 (.114) | -.002 (.104) |
| <i>LEV</i> | .027 (.468) | .028 (.459) | .028 (.454) | .028 (.454) | .034 (.368) | .028 (.457) |
| Constant | -.289 ** (.006) | -.334 *** (.003) | -.319 *** (.005) | -.317 ** (.011) | -.354 *** (.001) | -.328 *** (.009) |
| N=1,873 | | | | | | |
| <i>Cox & Snell R</i> | .017 | .018 | .018 | .018 | .008 | .018 |
| <i>Nagelkerke R</i> | .023 | .024 | .024 | .024 | .011 | .024 |

This table shows the regression estimates of the equation (1) and equation (2).

All variables are defined in Table 2.

*, ** and *** denote significance at the 0.10, 0.05 and 0.01 levels (two-tailed), respectively.

Next, we use equation 2 to examine the relationships among the variables and validate whether there is an incremental effect of information disclosure. With the exception of models 5~7, the sign for the coefficient for *Impor* is positive, and the other models show a significantly positive relationship to the *Adjva*. As for the influence of market share factors, the coefficient for *Spec* is negative and significant, and the coefficient for *Spec*×*Market* is positive and significant for models 6~13. These results suggest that industrial specialists may compromise and agree not to disclose the information about fair value adjustment when the information does not affect the earnings quality, but when the auditor's market share increases, the auditors level of information disclosure also increases. After controlling for other factors that may affect disclosure, we find that the coefficient for *Impor*×*Spec*×*Market* is significantly positive in models 4 and 12, indicating that, the greater the client importance and the market share of the industrial specialist, the greater the information transparency.

Regarding the control variables, the coefficient for *EPS* and *EBIT* are significantly negative for all models. The descriptive statistics suggest that sample companies are not ideal in terms of profitability, and suboptimal profitability can affect companies' willingness to disclose information. The variables *ROE* and *LEV* are insignificantly positive in our results, indicating that the supervision of investors and creditors may urge the company to improve information transparency.

4.2.2 Auditor's attitude

The results of the auditor's attitude toward revealing financial assets at market value are contained in Table 5. The results of equation 3, shown in model 1, are that the coefficients for *Impor* and *Market* are positive but insignificant, and the coefficient for *Spec* is significantly positive, supporting H2-2. These results suggest that the change in the audit environment after the dissolution of Arthur Andersen rendered auditors' attitude more conservative. We use equation 4 to

examine the relationships among the variables and test whether there is an incremental effect on auditors' attitude toward measuring financial assets at market price on the balance sheet date. The coefficient for *Impor* is positive for all models and significant in eight of the twelve models, with p-values ranging between 0.001 and 0.074. The coefficient for *Spec* is positively significant in models 5~8 and model 12, and the coefficient for *Market* is positively significant in models 3~7 and 11~13. The coefficient for *Impor*×*Spec* is significantly positive, the coefficient for *Impor*×*Market* is significantly negative in all models, and the coefficient for *Impor*×*Spec*×*Market* is significantly negative in models 4,10, and 12~13. The results suggest that greater client importance will result in a more conservative approach and greater independence and that financial statements audited by industrial specialists have higher information quality. When competing in the audit market, auditors may compromise to a certain degree and be willing to be optimistic about the overestimated evaluation of company assets.

The variables *LOSS*, *CA* and *TCRI* are significantly negative, and the coefficient for *CFO* is significantly positive in our results, showing that companies with poorer financial structures expect to measure their assets optimistically and that the auditor has to regard the financial assets optimistically because of considerations related to client importance and market share.

4.2.3 Disclosure of AFS financial assets and the auditor's attitude

We also conduct tests on the companies with disclosures the fair value adjustment-AFS to explore the auditors' attitudes. The results in Table 6 show that the coefficients for three independent variables are insignificant. After the interaction items are added, the coefficient for *Spec* is significantly positive in models 2, 9 and 11~12, and the sign remains positive in other models. The coefficients for *Market* are significantly positive in models 3~13, and the sign is positive in model 2, supporting H2 and H3.

Table 5: Auditor's Attitude (Conservative=1, Optimistic=0)

| <i>Panel A</i> | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 | Model 7 |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Variables | Coefficient (p-value) | Coefficient (p-value) | Coefficient (p-value) | Coefficient (p-value) | Coefficient (p-value) | Coefficient (p-value) | Coefficient (p-value) |
| <i>Impor</i> | .104 (.321) | -.017 (.883) | .332 ** (.023) | .311 ** (.034) | .449 *** (.001) | .451 *** (.001) | .451 *** (.001) |
| <i>Spec</i> | .341 *** (.001) | .123 (.370) | .071 (.606) | .102 (.465) | .334 *** (.001) | .356 ** (.017) | .356 ** (.017) |
| <i>Market</i> | .101 (.335) | .120 (.252) | .501 *** (.000) | .495 *** (.000) | .453 *** (.001) | .471 *** (.005) | .442 ** (.012) |
| <i>ImporxSpec</i> | | .805 ** (.019) | .960 *** (.006) | 1.229 *** (.002) | | | |
| <i>ImporxMarket</i> | | | -.818 *** (.000) | -.626 *** (.007) | -.756 *** (.000) | -.759 *** (.000) | -.694 *** (.004) |
| <i>SpecxMarket</i> | | | | | | -.041 (.841) | .012 (.958) |
| <i>ImporxSpecxMarket</i> | | | | -.477 * (.080) | | | -.135 (.632) |
| <i>LOSS</i> | -.339 ** (.015) | -.350 ** (.012) | -.336 ** (.017) | -.335 ** (.018) | -.324 ** (.021) | -.325 ** (.021) | -.322 ** (.022) |
| <i>CFO</i> | 1.119 ** (.020) | 1.121 ** (.020) | 1.068 ** (.028) | 1.077 ** (.027) | 1.069 ** (.028) | 1.068 ** (.028) | 1.071 ** (.027) |
| <i>CA</i> | -.084 *** (.000) | -.081 *** (.000) | -.083 *** (.000) | -.084 *** (.000) | -.087 *** (.000) | -.087 *** (.000) | -.087 *** (.000) |
| <i>TCRI</i> | -.165 *** (.000) | -.152 *** (.000) | -.178 *** (.000) | -.173 *** (.000) | -.191 *** (.000) | -.191 *** (.000) | -.191 *** (.000) |
| Constant | 1.003 *** (.000) | .987 *** (.000) | .931 *** (.000) | .885 *** (.001) | .952 *** (.000) | .943 *** (.001) | .944 *** (.001) |
| N=1,873 | | | | | | | |
| <i>Cox & Snell R</i> | .061 | .063 | .072 | .073 | .068 | .068 | .068 |
| <i>Nagelkerke R</i> | .081 | .085 | .096 | .098 | .091 | .091 | .091 |

(This table is continued on next page.)

| Table 5 (continued) | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <i>Panel B</i> | Model 8 | Model 9 | Model 10 | Model 11 | Model 12 | Model 13 |
| Variables | Coefficient (p-value) | Coefficient (p-value) | Coefficient (p-value) | Coefficient (p-value) | Coefficient (p-value) | Coefficient (p-value) |
| <i>Impor</i> | .104 (.321) | -.022 (.850) | .100 (.408) | .329 ** (.025) | .214 * (.065) | .267 * (.074) |
| <i>Spec</i> | .333 ** (.024) | .056 (.762) | -.183 (.350) | .043 (.820) | .441 *** (.000) | -.114 (.567) |
| <i>Market</i> | .094 (.477) | .078 (.553) | .098 (.457) | .481 *** (.004) | .186 * (.094) | .328 * (.066) |
| <i>ImporxSpec</i> | | .839 ** (.017) | 1.676 *** (.000) | .972 *** (.006) | | 1.490 *** (.001) |
| <i>ImporxMarket</i> | | | | -.815 *** (.000) | | -.480 * (.054) |
| <i>SpecxMarket</i> | .016 (.936) | .107 (.602) | .569 ** (.015) | .047 (.820) | | .385 (.128) |
| <i>ImporxSpecxMarket</i> | | | -1.145 *** (.000) | | -.497 ** (.021) | -.772 ** (.021) |
| <i>LOSS</i> | -.339 ** (.015) | -.348 ** (.013) | -.330 ** (.019) | -.335 ** (.017) | -.329 ** (.019) | -.328 ** (.020) |
| <i>CFO</i> | 1.119 ** (.020) | 1.121 ** (.020) | 1.112 ** (.022) | 1.068 ** (.028) | 1.114 ** (.021) | 1.084 ** (.025) |
| <i>CA</i> | -.084 *** (.000) | -.080 *** (.000) | -.083 *** (.000) | -.083 *** (.000) | -.087 *** (.000) | -.084 *** (.000) |
| <i>TCRI</i> | -.165 *** (.000) | -.153 *** (.000) | -.159 *** (.000) | -.178 *** (.000) | -.171 *** (.000) | -.172 *** (.000) |
| Constant | 1.007 *** (.000) | 1.010 *** (.000) | .975 *** (.000) | .942 *** (.001) | .950 *** (.000) | .946 *** (.000) |
| N=1,873 | | | | | | |
| <i>Cox & Snell R</i> | .061 | .064 | .072 | .072 | .063 | .074 |
| <i>Nagelkerke R</i> | .081 | .085 | .097 | .096 | .085 | .099 |

This table shows the regression estimates of the equation (3) and equation (4).

All variables are defined in Table 2.

*, ** and *** denote significance at the 0.10, 0.05 and 0.01 levels (two-tailed), respectively.

The interactions of the three variables are no longer significant. These results

suggest that industrial specialists and auditors with larger market share can improve the information transparency and evaluation of the assets using a conservative attitude and that, after considering the client's importance, the auditor's attitude will change. The results of control variables are the same as those shown in Table 5.

4.3 Sensitivity analysis

To confirm the stability of the results, the auditor with more than average experience is incorporated into the industrial specialists for the purposes of regression. The adjusted *Cox and Snell R²* and *Nagelkerke R²* of equation 1 are 0.07 and 0.10, respectively. The coefficients for *Impor* and *Market* are significantly positive with values at 0.17 and 0.18 ($p < 0.10$, two-tailed), respectively. The results on the interaction of variables are similar to those in Table 4. The adjusted *Cox and Snell R²* and *Nagelkerke R²* of equation 3 are 0.06 and 0.08, respectively. The coefficients for *Impor* and *Market* are positive and insignificant, the coefficient for *Spec* is significantly positive with a value at 0.24 ($p < 0.05$, two-tailed), and the results on the interaction of variables and control variables are similar to those in Table 5.

To mitigate the potential for the undue influence of extreme values, we refer to DeFond and Park [22] and winsorize *EPS*, *EBIT*, *ROE*, *LEV*, *CFO*, and *CA* at the top and bottom 1 percent of their distributions. The results of the regression analysis are not affected, remaining consist with those shown in Table 4 and 5.

Using the samples with a ratio of available-financial-assets to total assets greater than the median, we obtain 937 observations and re-execute the regression. The results of equation 1 are that the coefficient for *Impor* is positively significant ($\beta = 0.30$, $p < 0.05$), the coefficient for *Spec* is negative and insignificant, the coefficient for *Market* is positive and insignificant, and the coefficients for the interaction terms are similar to those in Table 4.

Table 6: AFS Disclosure and Auditor's Attitude

| <i>Panel A</i> | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 | Model 7 |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Variables | Coefficient (p-value) | Coefficient (p-value) | Coefficient (p-value) | Coefficient (p-value) | Coefficient (p-value) | Coefficient (p-value) | Coefficient (p-value) |
| <i>Impor</i> | -.027 (.870) | .118 (.552) | .231 (.326) | .178 (.458) | .157 (.480) | .177 (.429) | .175 (.435) |
| <i>Spec</i> | .198 (.223) | .388 * (.079) | .347 (.125) | .346 (.126) | .194 (.232) | .385 (.129) | .384 (.130) |
| <i>Market</i> | .253 (.122) | .257 (.257) | .404 * (.080) | .404 * (.080) | .444 ** (.050) | .577 ** (.029) | .455 (.107) |
| <i>ImporxSpec</i> | | -.398 (.202) | -.317 (.330) | -.039 (.923) | | | |
| <i>ImporxMarket</i> | | | -.293 (.364) | -.104 (.775) | -.380 (.221) | -.407 (.192) | -.140 (.717) |
| <i>SpecxMarket</i> | | | | | | -.324 (.324) | -.110 (.770) |
| <i>ImporxSpecxMarket</i> | | | | -.541 (.244) | | | -.508 (.235) |
| <i>LOSS</i> | -.401 * (.056) | -.363 * (.088) | -.358 * (.093) | -.376 * (.079) | -.385 * (.068) | -.396 * (.061) | -.384 * (.071) |
| <i>CFO</i> | 1.394 * (.060) | 1.317 * (.076) | 1.351 * (.071) | 1.354 * (.070) | 1.419 * (.057) | 1.428 * (.056) | 1.369 * (.067) |
| <i>CA</i> | -.051 ** (.034) | -.052 ** (.033) | -.051 ** (.037) | -.051 ** (.037) | -.050 ** (.039) | -.052 ** (.032) | -.051 ** (.036) |
| <i>TCRI</i> | -.134 ** (.012) | -.143 *** (.008) | -.150 *** (.006) | -.147 *** (.007) | -.146 *** (.007) | -.142 *** (.010) | -.145 *** (.008) |
| Constant | .824 ** (.034) | .788 ** (.043) | .749 * (.057) | .734 * (.062) | .765 * (.051) | .692 * (.083) | .714 * (.075) |
| N=794 | | | | | | | |
| <i>Cox & Snell R</i> | .062 | .064 | .065 | .067 | .064 | .065 | .067 |
| <i>Nagelkerke R</i> | .083 | .086 | .087 | .089 | .086 | .087 | .089 |

(This table is continued on next page.)

| Panel B | Model 8 | Model 9 | Model 10 | Model 11 | Model 12 | Model 13 |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Variables | Coefficient (p-value) | Coefficient (p-value) | Coefficient (p-value) | Coefficient (p-value) | Coefficient (p-value) | Coefficient (p-value) |
| <i>Impor</i> | -.022 (.895) | .149 (.459) | .147 (.467) | .267 (.262) | .134 (.466) | .219 (.395) |
| <i>Spec</i> | .367 (.146) | .637 ** (.043) | .439 (.241) | .599 * (.058) | .347 * (.055) | .486 (.211) |
| <i>Market</i> | .359 * (.078) | .395 * (.055) | .390 * (.059) | .551 ** (.038) | .366 ** (.036) | .486 * (.100) |
| <i>ImporxSpec</i> | | -.461 (.146) | -.106 (.828) | -.374 (.257) | | -.179 (.727) |
| <i>ImporxMarket</i> | | | | -.305 (.348) | | -.184 (.650) |
| <i>SpecxMarket</i> | -.287 (.380) | -.372 (.263) | -.115 (.786) | -.380 (.253) | | -.211 (.657) |
| <i>ImporxSpecxMarket</i> | | | -.511 (.337) | | -.622 * (.053) | -.330 (.620) |
| <i>LOSS</i> | -.412 * (.051) | -.371 * (.082) | -.379 * (.076) | -.366 * (.086) | -.382 * (.071) | -.374 * (.081) |
| <i>CFO</i> | 1.401 * (.059) | 1.315 * (.077) | 1.340 * (.073) | 1.351 * (.071) | 1.349 * (.070) | 1.353 * (.071) |
| <i>CA</i> | -.053 ** (.029) | -.055 ** (.026) | -.052 ** (.035) | -.054 ** (.029) | -.051 ** (.036) | -.052 ** (.034) |
| <i>TCRI</i> | -.130 ** (.016) | -.139 *** (.010) | -.143 *** (.009) | -.146 *** (.008) | -.144 *** (.007) | -.146 *** (.008) |
| Constant | .764 * (.053) | .705 * (.076) | .724 * (.069) | .661 * (.099) | .744 * (.058) | .691 * (.088) |
| N=794 | | | | | | |
| <i>Cox & Snell R</i> | .063 | .066 | .067 | .067 | .067 | .067 |
| <i>Nagelkerke R</i> | .084 | .088 | .089 | .089 | .089 | .090 |

This table shows the regression estimates of the equation (3) and equation (4).

All variables are defined in Table 2.

*, ** and *** denote significance at the 0.10, 0.05 and 0.01 levels (two-tailed), respectively.

The results of equation 3 are that the coefficient for *Spec* is positively significant ($\beta=0.62, p<0.00$), the coefficient for *Impor* is negative and insignificant, the coefficient for *Market* is positive and insignificant, and the coefficients for the interaction variables are similar to those in Table 5. These results suggest that higher client importance is associated with higher information disclosure and that industrial specialist and auditors with larger market share can improve the information transparency and be more prudent in evaluating financial assets.

5 Conclusions

This paper explores the impact of industrial specialization, the auditor-client relationship, and auditor market competition on the measurement and disclosure of AFS financial assets after the implementation of SFAS No. 34 and No. 36 in Taiwan. At present, the listed companies measure AFS financial assets based on market price on the balance sheet date. However, the accounting for financial instruments at fair value has triggered controversy concerning whether the accounting basis is overoptimistic or conservative, that is, whether more gains and fewer losses will be recognized. This paper employs the free cash flow hypothesis to measure the company value according to the maximum cash that can be distributed to shareholders and creditors without endangering the survival of the company. Measurement of AFS financial assets at the market value on the balance sheet date indicates that the company recognizes the possibility of generating values in the future. Whether the market value basis is over-optimistic or conservative and the auditor's attitude toward such measurement is also addressed in this paper.

SFAS No. 34 and No. 36 have been effective for nearly five years, but this study finds that more than half of the companies still provide incomplete information regarding the financial instrument measurement, so auditors seem to

be failing in ensuring information quality. The empirical results show that financial statements audited by industrial specialists and auditors with a market advantage have a higher level of information disclosure and that the auditors' attitude toward the measurement of asset value has become more prudent. However, after including the factor of client importance, the results indicate that the auditors' attitude changes, as economic considerations interfere with the auditor's attitude toward financial information disclosure.

The results can provide a reference for investors and regulators in making relevant decisions. However, neither SFAS No. 34 and No. 36 nor the auditor rotation system has been implemented for a sufficiently long period, which is a limitation to this study. Follow-up studies may discuss the effect of these regulations over a longer time span and may take into consideration other control variables to supplement the findings of this study.

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