ผลกระทบของประเภทของธุรกรรมนอกงบดุลและสถานะการลงทุนที่มีต่อดุลยพินิจของนักลงทุน
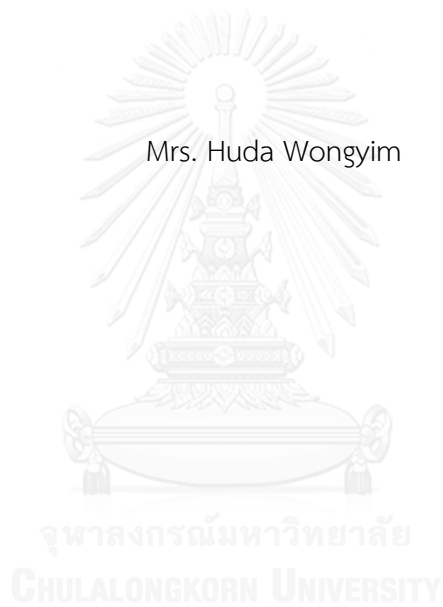
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THE IMPACTS OF OFF BALANCE SHEET TYPES AND INVESTMENT POSITIONS

ON INVESTORS' JUDGMENTS

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A Dissertation Submitted in Partial Fulfillment of the Requirements

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งานวิจัยนี้ศึกษาผลกระทบของประเภทของการทำธุรกรรมนอกงบดุลและสถานะการลงทุนที่มีต่อ ความน่าเชื่อถือของงบการเงินที่รับรู้ได้ของนักลงทุนและ ความสามารถในการตรวจพบการทำธุรกรรมนอกงบดุล และความสามารถในการปรับปรุงรายการการทำธุรกิจนอกงบดุลให้ถูกต้อง ผลลัพธ์จากการวิจัยเชิงทดลองพบว่าในกลุ่มนักลงทุนที่มีความรู้เกี่ยวกับการตกแต่งตัวเลขบัญชี ความเอนเอียงตามเป้าหมาย(Directional preference) ส่งผลกระทบต่อความน่าเชื่อถือของงบการเงินที่รับรู้ได้ของนักลงทุนและความสามารถในการตรวจพบการทำธุรกรรมนอกงบดุล โดยนักลงทุนที่มีสถานะแบบซื้อก่อนขาย(Long) มีอคติจากเป้าหมายที่มีทิศทางต่อผลการดำเนินงานของกิจการที่เป็นบวกมากกว่านักลงทุนสถานะเป็นกลาง(Neutral) หรือ นักลงทุนที่มีคาดหวัง(Prospective Investor)

อย่างไรก็ตาม งานวิจัยนี้ไม่พบความแตกต่างอย่างมีนัยสำคัญระหว่างดุลยพินิจของนักลงทุนที่มีสถานะแบบขายก่อนซื้อ(Short) และนักลงทุนสถานะแบบซื้อก่อนขาย(Long) นอกจากนี้ ผลงานวิจัยพบว่าประเภทของการทำธุรกรรมนอกงบดุลส่งผลกระทบอย่างมีนัยสำคัญต่อความสามารถของนักลงทุนในการ ตรวจพบ และความสามารถในการปรับปรุงรายการบัญชีในงบการเงินให้ถูกต้อง ในกลุ่มนักลงทุนที่มีความรู้เกี่ยวกับการตกแต่งตัวเลขบัญชี นักลงทุนที่เผชิญกับการทำธุรกรรมนอกงบดุลประเภทวิธีส่วนได้เสีย (Equity method) มีแนวโน้มในการตรวจพบการทำธุรกรรมนอกงบดุล และมีความสามารถในการปรับปรุงรายการบัญชีเชิงวิเคราะห์ น้อยกว่านักลงทุนที่เผชิญกับการทำธุรกรรมนอกงบดุลประเภทสัญญาเช่าดำเนินงาน (Operating lease) อย่างมีนัยสำคัญ

ผลการวิจัยนี้คาดว่าจะเป็นประโยชน์ต่อผู้กำหนดมาตรฐานบัญชีในการพิจารณารูปแบบการเปิดเผยข้อมูลที่เกี่ยวข้องกับการทำธุรกรรมนอกงบดุลที่ซับซ้อนเพื่อลดอุปสรรคที่นักลงทุนต้องเผชิญในการใช้ข้อมูล นอกจากนี้ งานวิจัยนี้คาดว่าจะช่วยเพิ่มการตระหนักรู้ของนักลงทุนถึงประโยชน์ของการเปิดเผยข้อมูลในหมายเหตุประกอบงบการเงิน

ภาควิชา การบัญชี	ลายมือชื่อนิสิต	---
สาขาวิชา การบัญชี	ลายมือชื่อ อ.ที่ปรึกษาหลัก	-------------------------------------
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KEYWORDS: OFF-BALANCE SHEET FINANCING / INVESTMENT POSITIONS / DIRECTIONAL PREFERENCE / INVESTORS'JUDGEMENTS / PERCEIVED CREDIBILITY / DETECTION AND CORRECTION ABILITY

HUDA WONGYIM: THE IMPACTS OF OFF BALANCE SHEET TYPES AND INVESTMENT POSITIONS ON INVESTORS' JUDGMENTS. ADVISOR: ASST. PROF. SOMPONG PORNUPATHAM, Ph.D., 111 pp.

This study investigated the impact of off-balance sheet (OBS) types and investment positions on investors' perceived credibility of financial statements and their ability to detect and correct the OBS financing arrangements. Through an experimental approach, given the investors' knowledge of creative accounting, the research provide evidence that the directional preferences influence the investors' perceived credibility of the financial statements and also their detection ability of off-balance sheet financing. Specifically, long investors were biased from their directional goal for the firm's positive performance as compared to neutral investor, i.e. prospective investor.

However, no significant difference was found between the short and long investors' judgements. Further, it was found that off-balance sheet types significantly influenced the investors' ability to detect and correct the off-balance sheet financing transactions. Given their knowledge of creative accounting, the investors facing with equity method were less likely to detect OBS and possessed a lower ability to make analytical adjustments than those facing with operating lease.

The implication of the findings is for the relevant regulatory bodies to revisit the disclosure format related to complex OBS so as to reduce the complexity burden borne by the investors. Moreover, this research is expected to raise investors' awareness on the usefulness of disclosure information in the footnote section.

Department:	Accountancy	Student's Signature	....
Field of Study:	Accountancy	Advisor's Signature	....
Academic Year:	2015		

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CHAPTER I

INTRODUCTION

1.1 Motivation of the study

Off-balance sheet financing (OBS) arrangements have long been tools employed by management to conceal financial risks. Through loopholes in the accounting standards, financial managers and financial consultants unscrupulously structure the financial transactions such that liabilities do not appear on the financial statements without violating of generally accepted accounting principles. The unscrupulous behavior is detrimental to the investment community at large as investors have been misled by the manipulated financial reports that were supposedly in full compliance with GAAP (Ball, 2009).

Enron, which was found to create over 3,000 off-balance sheet special-purpose entities (SPEs), was one of the most notorious examples involved in such a dishonest practice (Klee & Butler, 2002). Following the collapse of Enron, investors' trust in the publicly available financial reports has eroded and the stock markets plunged due to accounting manipulation. Auditors were criticized for failing to perform their duty of blowing the whistle on those managers who were complicit in the fraudulent financial statements. In addition, an ensuing wave of corporate accounting scandals has led to a major push for regulatory changes. As such, GAAP has been changed from rules-based to more principles-based accounting standards to curb managers' propensity to structure the financial transactions as off-balance sheet items.

Unethical accounting is however still practiced by corporate managers as they have an array of tools and techniques by which they can conceal the liabilities of their firms. Examples of the conventional concealing methods are the equity method and lease accounting; nevertheless, even with employment of these accounting manipulative techniques the users of the financial statements can refer to the

accounting footnote for verification even though the investors sometimes met with limited disclosure. Newer schemes, including asset securitizations, synthetic leases, and other borrowings, are employed to conceal debts through creation of special-purpose entities (SPEs) or funds. The newly engineered schemes are of highly complex structure and are not required by law to disclose the scheme details, thus making the off-balance sheet arrangements even more incomprehensible to investors. Moreover, although auditors know that firms are concealing debts using these techniques, the former hardly mention in their professional opinions as the action taken by the firms is viewed as not in violation of GAAP.

The biggest problem with off-balance sheet finance is its lack of visibility. Although firms are required by regulations to disclose information about their activities on leasing or related parties in the footnote, investors oftentimes find it difficult to make proper judgment of a company's underlying economic circumstances because firms often provide obscure and limited disclosure. For example, Enron formed several limited partnerships to hide the activities but its disclosure about these related-party transactions were cryptic and obscure, thereby making it very difficult, if not impossible, for a reader of the financial statements to discern their true nature (Ketz, 2003). The disclosures made by Enron did not give any indication of the problems they had been experiencing until 2002.

Extensive research suggested that investors relied on footnote information for off-balance sheet transactions. Davis-Friday, Folami, Liu, and Mittelstaedt (1999) examined the value relevance of pension obligation, which is a form of off-balance sheet financing, recognized on balance sheet vis-à-vis disclosed in the footnote section of the financial statement. Using archival data, they documented that both contributed to the stock price valuations although investors likely attached more weight to the pension liability recognized on balance sheet than to the disclosed liability in the footnote. The finding suggests that, as far as the investors are concerned, the value of obligation information contained in the footnote is a less ideal substitute for the obligation recognized on balance sheet.

In response to this issue, Lander and Auger (2008) reviewed the impacts of various off-balance sheet techniques and subsequently encouraged more transparency in financial reporting. They noted that off-balance sheet accounting could mislead users of financial statements and thereby urged the relevant regulatory bodies to ensure more transparency related to off-balance sheet accounting. Specifically, the usefulness of disclosure with regard to off-balance sheet transactions is of particular interest in this research paper. In the study, two types of OBS arrangements, i.e. operating lease and equity method, were respectively used as proxies for less complex and more complex OBS. The rationales behind this selection are provided in Chapter two.

The inability to detect hidden financial risk could misdirect investment and thus incur great costs on investors. If investors underestimated the risk of a company, the company's stock would likely be overvalued. Bardos, Golec, and Harding (2012) provided evidence that investors had been misled by mistakes in the reported earnings at the time of initial earnings announcements of the incorrect earnings which were subsequently restated. In response to this problem, this study is concerned with the ability of non-professional investors to recognize and deal with off-balance sheet accounting in both less complex structure and more complex structure cases.

In addition, this research work investigates the effect of directional preference on investors' judgment in the context of off-balance sheet accounting. Directional preference has been discussed in literature on psychology whereby skepticism is induced and scrutiny to information processing of decision makers ensues when they are faced with preference inconsistency but skepticism is reduced when faced with preference consistency (Ditto & Lopez, 1992; Ditto, Munro, Apanovitch, Scepansky, & Lockhart, 2003; Ditto, Scepansky, Munro, Apanovitch, & Lockhart, 1998). The research aims to explore how this mechanism affects investors' perceived credibility and

investors' ability to detect and rectify the accounting information when dealing with off-balance sheet accounting.

This research study experimentally examined the main effect of off-balance sheet financing types and investment positions and the interaction effect of directional preference and the types of off-balance sheet financing on investors' judgment. The study samples were MBA students who served as proxy for non-professional investors. The research work was of 2 x 2 +2 between-subject design that manipulates the types of off-balance sheet financing (operating lease vs. equity method) and the participants' investment positions (short vs. long) including two neutral conditions served as the control group.

1.2 Research Objectives

The purposes of this study are to examine the main effect of types of off-balance sheet financing and investment position; and their interaction effect on investors' perceived credibility of financial statements and investors' detection and correction ability of off-balance sheet financing.

1.3 Research questions

The research questions of this paper are as follows:

1. Do the types of off-balance sheet financing impact investors' perceived credibility and investors' ability to detect and correct off-balance sheet financing?

2. Do the investment positions impact investors' perceived credibility and investors' ability to detect and correct off-balance sheet financing?

3. Do the effects of investment positions on investors' ability to detect and correct off-balance sheet financing depend on types of off-balance sheet financing?

Figure 1 The conceptual framework
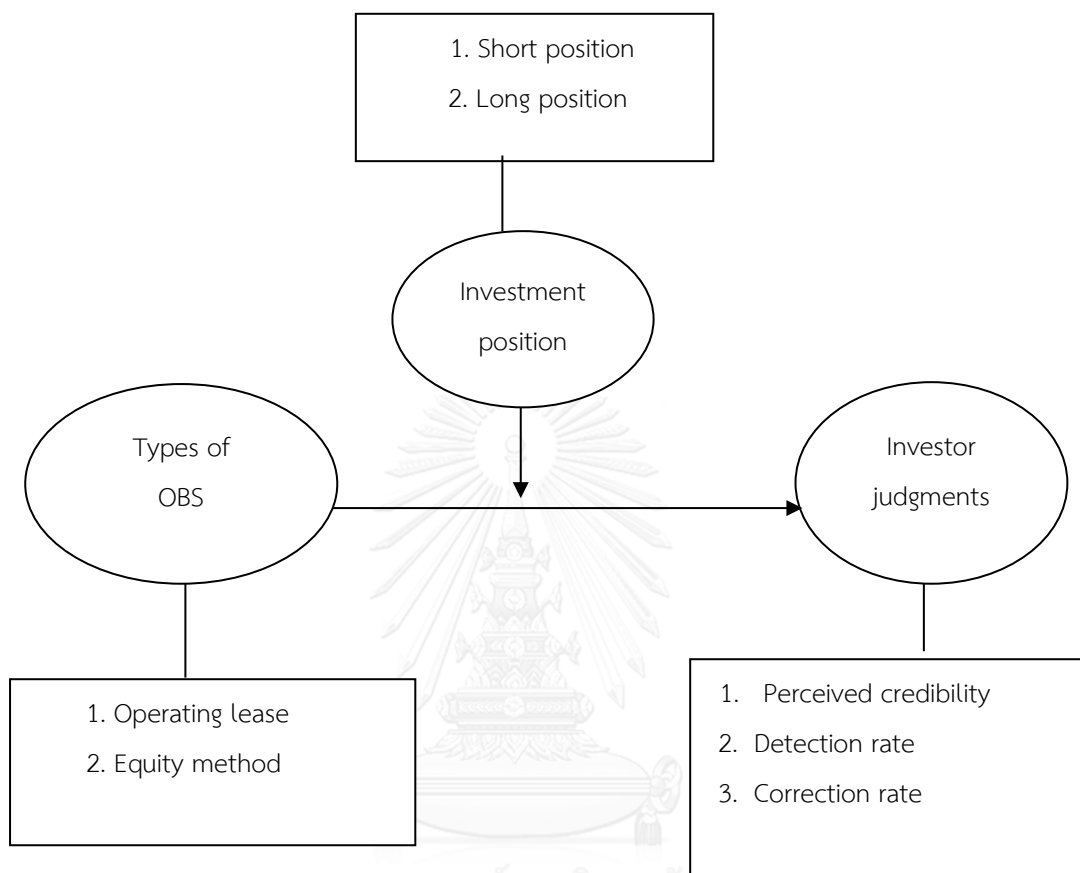
1.4 Contributions

First, this research is expected to offer academic insights into two research fields of off-balance sheet financing and directional preference. Specifically, the research findings revealed that investors' detection ability of off-balance sheet financing is influenced by their directional goal which in turn is dictated by their previously chosen investment position. The research result is consistent with Thayer (2011), who reported that investors optimistically gave higher credibility to the financial information that is more aligned with their directional goal. In addition, this current research found that this directional preference bias influences the investors'

subsequent detection of OBS contained in the financial statement. Thus, the long investors are less likely to detect OBS vis-à-vis the neutral investors (i.e. prospective investors) who hold no particular preference. The implication is that an investment position could engender a bias which could inadvertently lead to a deficiency in the ability to identify irregularities in the financial statement.

Second, it is expected that this research would contribute to the existing research body on the comparative benefits of information disclosed in the footnote vis-à-vis that recognized on the financial statement. In contrast to Maines and Macdaniel (2000), this current research found that, conditional upon their knowledge of creative accounting, non-professional investors could make use of relevant disclosures in the footnote to account for the off-balance sheet financing arrangements. On the other hand, Maines and Macdaniel (2000) argued that footnote disclosure was inadequate and of less use in relation to the recognition. Their finding suggests that a certain level of accounting knowledge is a necessary condition that dictates the investors' willingness to reconcile the information in the footnote of a financial statement.

Furthermore, the current research has discovered that the complexity of OBS type plays a significant role in the investors' detection and correction abilities. Specifically, investors facing the more complex OBS (equity method) exhibit a significantly lower correction rate than those facing the less complex one (operating lease). The results suggest that the complex OBS transactions require more effortful use of knowledge and calculation in making analytical adjustments. Thus, this current research is anticipated to provide the standard setters with insights for consideration with regard to the comparative benefits of recognition and disclosure and the investors' decision-making. Moreover, an understanding of the impact of different types of off-balance sheet financing (i.e. less complex versus more complex) would

offer useful information to the regulatory bodies on revision of the current standards on OBS disclosure, especially on the complex OBS (i.e. equity method).

Third, the research results are also believed to contribute to the existing literature on the assessment of financial statement credibility. This research showed that investors with more knowledge of creative accounting are more likely to give a lower credibility rating to the financial statement in comparison with those with less knowledge. Furthermore, it was found that the investors' ability to identify and rectify the accounting manipulation in the financial statement is conditional upon their levels of accounting knowledge and expertise. Thus, the knowledge should be treated as a control variable.

The organization of the rest of the dissertation is as follows: Chapter two deals with literature review and the development of research hypotheses. Chapter three details the research design, and chapter four discusses the research results. The last chapter offers the conclusions, discussions, and limitations of the dissertation including future research.

CHAPTER II

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1 Off-balance sheet financing

2.1.1 Definition of off-balance sheet financing

Off-balance sheet financing is a form of financing in which large capital expenditures are kept off of a company's balance sheet through various accounting methods. Companies often use off-balance-sheet financing to artificially lower their debt to equity (D/E) and leverage ratios. These methods generally include operating lease, equity method, utilization of special-purpose entities (SPEs) and asset securitization. Definitions of off-balance sheet financing vary, examples of which are given below:

'Off-balance sheet financing refers to transactions that give rise to obligations not reflected on the company's balance sheet. Sometimes these transactions correspond to justified operations performed by the company to take advantage of good economic opportunities.' (de la Torre, 2009)

'The practical effect of off-balance sheet finance is that they do not result in full representation of the underlying activity in the accounts of the reporting company...the result will be that the balance sheet suggests less exposure to asset and liabilities than really exists.' (Paterson, 1993)

'The most effective creative accounting is that which is not detected by the independent user of company accounts. . .This branch of creative accounting is known as off-balance sheet financing. As the name suggests, this refers to the ways of raising funds for a business without reflecting those borrowings in the balance sheet.'(Griffith, 1996)

In this research study, off-balance sheet financing is defined as a transformation of balance sheet accounts using transaction structuring, special purpose entities (SPEs) and other financing arrangements pursuant to the accounting standards.

2.1.2 Reasons for off-balance sheet financing

Previous studies have suggested several reasons why firms engage in off-balance sheet accounting. Firstly, debt covenants or financial constraints motivate firms to engage in off-balance sheet financing. Mills and Newberry (2005) supported this idea and reported that credit-constrained firms were more likely to use this accounting technique because it gave them lower cost financing sources or enhanced their balance sheet. They examined hybrid debt financing, which is one form of off-balance sheet arrangement, because hybrid debt securities are reported in the mezzanine section (between liabilities and shareholders' equity) rather than as debt.

In their study, the differences between book and tax reporting on interest expenses were used as a proxy for firms' use of off-balance sheet financing because this technique allows firms to treat interest as dividend for financial reporting purpose but as interest deductions for tax reporting purpose. Thus, the greater the difference in book-tax interest reporting, the greater the amount of off-balance sheet financing. Additional tests also indicated that contractual loan agreement motivated firms to use more structured financing arrangement. These findings showed that debt covenants influenced firms' use of off-balance sheet financing.

Secondly, high agency cost and information asymmetry provide incentives for firms to use off-balance sheet financing. Zhang (2007) empirically studied the determinants of the decision to undertake the equity method as a way to put debt off-balance sheet. Equity method can reduce agency cost of debt by allowing managers to invest in risky projects without posting debt on the company's financial report, which would satisfy existing debt holders (John & John, 1991; Shah & Thakor, 1987). The managers could do so by allocating the debt between the parent

company and the off-balance sheet financed venture. The results showed that firms were more likely to use this accounting scheme when they were met with more severe adverse selection problem, higher agency cost and higher risk-shifting incentive.

Thirdly, tax shelter motivates firms to resort to some form of off-balance sheet financing. Shevlin (1987) suggested that lower marginal taxes, lower interest coverage ratios and management bonus plan were related to a decision to establish an off-balance sheet R&D limited partnership.

Finally, off-balance sheet financing allows firms to "window-dress" their performance in several ways. Oriol and Gowthorpe (2004) suggested that creative accounting, such as off-balance sheet accounting, can make company exposed to less risk and thereby create a good profit trend. With this accounting scheme, it would be easier for the company to raise capital from new share issues and reduce a chance to be taken over by other companies.

Zhang (2007) also found that equity method investments led to improvement in subsequent operating performance and firms' value as underinvestment problem and adverse selection problem could be resolved. As stated earlier, this occurs because under the equity method, managers can invest in some risky projects without posting debt on the company's financial statement and thus please debt holders at the same time.

Lim, Mann, and Mihov (2003) investigated market valuation of operating lease, the most common form of off-balance sheet financing. The results suggested that using operating leases allowed firms to maintain high credit rating; however, the cost of debt still reflected the off-balance sheet obligation. The findings indicate that firms may able to manage debt rating through operating lease arrangement but it is unlikely for firms to deceive the market with regard to the bond yields.

Taken together, firms are motivated from various economic reasons to engage in off-balance sheet financing as these tools provide them with high debt rating, tax shelter, and impressive financial performance. Besides, off-balance sheet financing

sometimes even resolves underinvestment problems arising from agency cost of debt.

2.1.3 Types of off-balance sheet financing

Corporate managers have a variety of tools and techniques by which they can use to conceal debts. Griffith (1996) suggested in his book that off-balance sheet financing has grown rapidly over the last decade not just in size but also in sophistication. He noted that recent developments of these accounting techniques were more likely to be initiated from the fund providers, such as merchant banks and financial advisers, rather than the company itself. Besides such conventional techniques as the equity method, lease accounting and pension accounting, more recent techniques encompass loan securitizations, synthetic leases, and other borrowings whereby special-purpose entities (SPEs) are established to hide their debts.

Ketz (2003) categorized off-balance sheet techniques into two groups according to their available disclosures. The first group consists of those methods by which users of financial statements could use relevant footnote disclosures to reconcile the accounting numbers by reintroducing debts to the balance sheet (e.g. making analytical adjustment). The accounting techniques under this group are the equity method and lease accounting since it is compulsory that disclosures pertinent to these accounting items be provided in the footnote and this information in turn enables the investors to make adjustments to the reported numbers. The second group comprises those methods without disclosures to assist users of financial statements with analytical adjustment. The accounting techniques belonging to the second group include debt hiding through asset securitization, special purpose entity (SPE) borrowing and synthetic lease since firms employing these complicated techniques rarely make available adequate information to aid investors in analytical adjustment.

This research focuses on two types of off-balance sheet financing belonging to the first group (i.e. operating lease and equity method) since the disclosures

pertinent to both OBS types are available for users of financial statements to make analytical adjustment but vary in the complexity of the disclosure content. In general, the information in operating lease disclosure is easier to understand than that relevant to the equity method. Thus, in this research, operating lease is regarded as a proxy for less complex off-balance sheet financing and the equity method for more complex off-balance sheet financing. Existing relevant research studies are detailed below.

2.1.4 Research on operating lease

Operating lease is the most common path by which firms use to avoid posting debt on the balance sheet and has been a loophole in the accounting standards that allows corporate managers to exploit for a very long time. Corporate managers could deceive investors and creditors by reporting leases as operating leases and pretending that the firms had no lease obligations (Ketz, 2003). Corporate managers use operating lease as a tool to hide debt off-balance sheet because of its legitimate advantages (Edman, 2011). When a company acquires an asset through debt financing, a liability present in its financial statements tells investors of the claims against the company's future revenue. However, if the asset is leased, no debt is posted on balance sheet even though the company has entered into lease contract and is committed to making lease payments in the future.

Although SFAS No.13 Accounting for lease provides clear guidance on the detailed list of criteria for lease classification containing several bright-line thresholds, corporate managers have sought to use the test as an avoidance opportunity by constructing leases which manage to fail the test, thereby leaving the leases to be classified as operating leases and the leased assets off the balance sheet of the lessee (Paterson, 1993).

As such, regulators have been attempting to move forward the standards from rule-based to principle-based to curb opportunistic behavior of corporate managers. With the adoption of principle-based standards, there is no bright line test for lease classification but application of the concept of substance over form which

looks at the real economic substance of the transaction and considers whether the major parts of risk and reward are transferred to the lessee.

In response to this change, Jamal and Tan (2010) conducted an experimental study and found that the benefit of the proposed lease accounting standard could only be realized if an auditor who focused on the substance of the business transaction, i.e. principle-based auditor, was present. In their experiment, they gave financial managers an incentive to structure a lease transaction off balance sheet and manipulated the latter to encounter different kinds of auditors (i.e., principles-oriented, rules-oriented, and client-oriented) and types of accounting standards (i.e., principles-based and rules-based).

The results showed that when the accounting standard was rules-based, type of auditor had no influence on the managers' decision to take the lease off balance sheet. Under the principles-based standard, managers were less likely to take lease off balance sheet when they were faced with principles-oriented auditors in comparison to with rules-oriented and client-oriented auditors. These results suggest that the desirable outcome of principles-based standard will be achieved only when the auditor is also of principles-based type. In addition, it is found that the possibility of anticipated negotiation with an auditor could influence the client's decision to take lease off balance sheet. In other words, less guidance increases the need to apply professional judgment consistent with the intent of the standard.

Similar results were reported by Agoglia, Doupnik, and Tsakumis (2011), who conducted an experimental investigation on this topic and discovered that financial statement preparers were less likely to take lease off balance sheet when a more principles-based standard was applied than when was a more rules-based standard. They also provided evidence that the effect of audit committee on manager opportunistic behavior diminished under principles-based standard.

Moreover, there exist many research studies that investigated the impact of operating lease on the debt market. Sengupta and Wang (2011) empirically examined whether the market priced information on off-balance sheet debt arising from operating lease. They tested the relation between operating lease commitments and

credit risk surrogated by bond ratings and bond yields. The result showed a strong coefficient on operating lease debt, similar to that of capital lease on the balance sheet. This suggests that bond-rating agencies do price such lease obligation disclosed in the footnotes. Consistent with Lim et al. (2003), their work suggested that the cost of debt reflected the off-balance sheet obligation.

Operating lease has long been legitimately used as a tool by firms to conceal debt. Both financing and operating leases were an important source of finance to carriers in the airline industry (Gritta & Lippman, 2010). The high cost of purchasing aircraft will post a huge debt on firms' balance sheet and thus firms are more willing to lease the equipment than to purchase. Lyon (2010) expressed her viewpoints on operating lease that leasing real estate or expensive equipment is better than owning it. However, if the airline leases an aircraft on an operating lease and does not report the aircraft on its financial statements, it surely means that accounting fail to represent the whole story of the business. She also noted that the off-balance sheet treatment of operating lease leads to a dramatic improvement in return on capital employed. Consistent with Gritta and Lippman (2010), they compared the ratios before and after lease capitalization and reported that debt to equity ratios for many of the airlines were significantly affected by capitalization of operating lease.

There is much concern under the current lease standard that lessees do not properly report assets and liabilities on the balance sheet and that the footnote in the financial statement is too little to be of use. The omission of lease liability from the company's book has frustrated investors and other financial statement users for long time (Grossmann & Grossmann, 2010). In response, in March 2009 the International Accounting Standard Board and the FASB issued a discussion paper on lease, "Lease: Preliminary Views", to address the problem inherent in the lease accounting. According to the discussion paper, the purpose of the new standard is that all assets and liabilities arising from lease contract have to be recorded on the balance sheet.

In May 2013, the IASB and the FASB issued an exposure draft of proposed lease standard, "Proposed Accounting Standard Update (Revised): Leases

(Topic842)". The proposal required companies to recognize most leases on their balance sheets as assets and liabilities with corresponding right-of-use assets. Under the proposal, all leases with a maximum possible term more than 12 months will be treated similar to capital leases under the current standard, resulting in lease debt and asset appearing on the book. Regulators expect that the new standard will reduce firms' opportunities to use operating lease as off-balance sheet financing.

However, lessees and lessors could make an accounting policy election to apply a method similar to current operating lease accounting using a lease term of 12 months or less, thereby circumventing the new rules by not including lease renewal option. Taken together, even under the proposed new lease standard, corporate managers could still structure the lease contract such that they can circumvent the rules by exploiting the short term lease exemption. The lessee and the lessor could collude in signing a short term contract that, in fact, is intended to continue in the future but does not contain renewal option in the contract. Therefore, using operating lease as a tool for off-balance sheet financing can exist even after the implementation of the new accounting standard. Moreover, research works on operating lease issues could thus still benefit the standard setters and financial statement users.

2.1.5 Research on equity method

Equity method is one of several accounting mechanisms that firms employ to hide liabilities. When a company has a significant control over the operation of another entity, it tends to structure the voting power or percentage of shareholding in ways that avoid consolidation and at the same time resort to the equity method of accounting. Under the equity method, firms would report the investment in an affiliated company as a single-line item in the balance sheet, net debts of the investee with its assets in the parent's investment account. Since assets are typically greater than liabilities, this net amount results in a balance on the left-hand side, thus excluding the investee's debts from analysis.

Zhang (2007) empirically investigated the determinants of the decision to undertake the equity method as a means of keeping debts off the balance sheet. The equity method of accounting can reduce the agency cost of debt by allowing managers to invest in risky projects without posting the debt on the company's financial report, which would satisfy the existing debt holders (John & John, 1991; Shah & Thakor, 1987). The managers could do so by allocating the debt between the parent company and the off-balance sheet financed venture. The results showed that firms are more likely to adopt this accounting scheme when faced with more severe adverse selection problem, higher agency cost and higher risk-shifting incentive.

Previous studies suggested that users of financial statements experience difficulty making analytical adjustment on their own since the information related to equity method provided in the footnote section is mostly obscure and inadequate. Wiedman and Wier (1999) provided empirical evidence that disclosures related to unconsolidated subsidiaries are insufficient for users to form an accurate picture of consolidated leverage. Bauman (2003) reviewed footnote disclosures related to off-balance sheet activities concealed by the equity method of accounting and found that financial statement users could use footnote information to consolidate investee on a pro forma basis. At present, available disclosures however are insufficient for investors to make accurate and useful analytical adjustment.

Insufficiency of disclosure pertinent to equity method is also supported by Breton and Taffler (1995), who investigated investment analysts' ability to recognize and deal with various kinds of creative accounting, including hiding debt through non-consolidated subsidiary (e.g. using equity method instead of consolidation). In their study, the analysts examined a set of window-dressed items and then were asked to adjust the ratio calculations. They reported a very low overall correction rate. Specifically, the correction rate for hiding debt with non-consolidated subsidiary was a mere 6.7%. An implication drawn from this result is that equity method is difficult to be rectified even by sophisticated financial statement users, e.g. investment analysts.

2.1.6 Relation of OBS types to the predicted detection and correction ability

The following hypotheses relate to the differences in detection and correction rates for differing types of OBS. Craig and Walsh (1989) suggested that different window-dressing schemes were different in their visibility. For instance, a misclassified extraordinary item is more likely to be identified than an off-balance sheet financing arrangement as the latter is kept off the balance sheet. Breton and Taffler (1995) supported this idea and reported that analysts facing the practice of hiding debt with non-consolidated subsidiary, a form of off-balance sheet technique, had a lower correction rate than creating profit via asset disposal. Based on the aforesaid, it should be easier for investors to detect and rectify a less complex off-balance sheet practice than a more complex one.

In addition, disclosure levels of different kinds of off-balance sheet accounts are diverse. Operating lease is required by law to provide greater details of its transaction and provide information that easier to understand than is the equity method. As a result, it is anticipated that more complex schemes (equity method) are less likely to be identified and corrected than are less complex schemes (operating lease). I thus posit the following hypothesis:

H2a: Investors faced with operating lease have greater propensity to detect off-balance sheet financing than those faced with equity method.

Figure 2 Predicted effect of OBS types on detection rate
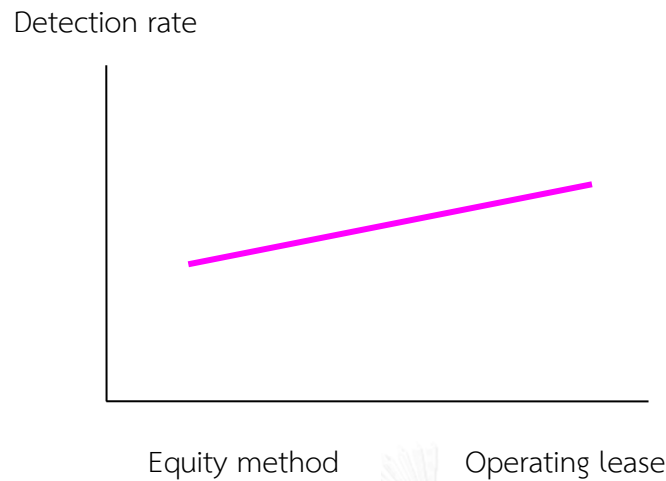
Detection rate

Equity method   Operating lease

H3a: Investors facing operating lease have greater propensity to correct off-balance sheet financing than those facing equity method.

Figure 3 Predicted effect of OBS types on correction rate

Correction rate

Equity method   Operating lease
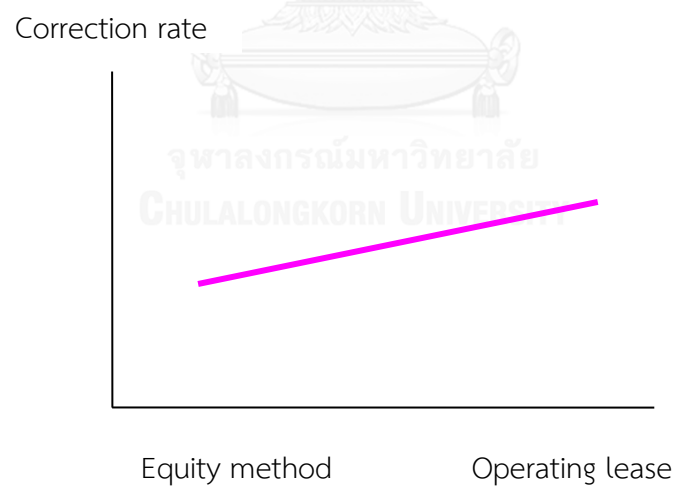
2.2 Investment positions and directional preferences

Research studies on psychology conclude that decision makers' preference or directional incentives influence the manner in which they process information (Kunda, 1990). Kunda (1990) explored the possibility that motivation, desire or preference may affect the thought process of a decision maker. According to the

study, motivated reasoning is divided into two major categories. The first category is reasoning driven by accuracy goal whereby people are motivated to be accurate by manipulating the importance of the task. The second category is reasoning driven by directional goal, which is of interest in this paper. Directional goal has been shown to bias reasoning of decision makers in many psychological studies. A large body of research suggests that people tend to give higher weight to information that favors their preference outcome, exhibit more skepticism on information that contradicts their desired goal, and do not realize that their process is biased by their goals.

An experimental investigation by Ditto and Lopez (1992) provided some support for these ideas. They showed that people examined information less critically when the information was consistent with their preferred conclusion than when the information was opposed to the preferred conclusion. In their experiment, they manipulated subjects' motivation to be directional by manipulating them to have a priori preference (favorable vs. non-favorable) of their prospect partner and then measuring the amount of information they required to make a decision in selection of the most intelligent student to work with them in the future (Experiment 1). Ditto and Lopez (1992) found that the subjects required less information to decide that unfavorable student was less intelligent than favorable student.

The results from other two clinical experiments showed the similar impact of directional preference (Experiments 2 and 3). Ditto and Lopez (1992) found that subjects receiving unfavorable diagnoses took longer time to accept their test result and were more likely to retest the validity of their result than did subjects receiving more favorable diagnoses. However, Ditto and Lopez's studies did not control for participants' expectations about the diagnostic information, which may lead to confounding problem. It is unclear whether participants took more time to accept the test result because of skeptical reaction or unexpectedness.

Ditto et al. (2003) revisited the study and redesigned the experiment by equating all participants' expectation about the likelihood of receiving favorable and unfavorable test results. The result was consistent with the prior studies whereby participants in the unfavorable test result condition exhibited more spontaneous

rechecking behavior than those in the favorable condition. In short, these studies suggest that directional preference can either reduce or induce motivated skepticism of human judgment.

More interestingly, Ditto et al. (1998) (Experiment1) provided evidence that preference-inconsistent information created more cognitive analysis than did preference-consistent information. They demonstrated that people would be more sensitive processors of information in which they do not want to believe than of information in which they do want to believe. In their experiment, they gave male participants a female's written impression about them, which was manipulated to be positive and negative feelings; and measured how they inferred the writer's true feeling about them. The results showed that participants receiving unfavorable comments from the female confederate were more sensitive to her constraint in writing comments and were more likely to adjust their attitude toward the writer after knowing the constraint than participants receiving favorable comment. The results supported the claim that directional preference could increase cognitive effort in decision making process.

In the context of investment, more direct evidence that directional preference leads to more biased outcome comes from three studies in which the researchers attempted to examine the effects of preferences on decision making of investors. In these studies, directional preferences are established by assigning an investment position (long vs. short) to investors and link their investment position to compensation to reinforce directional incentive from investment.

Short position is an investment strategy that produces investors a profit when stock price of the company is lower in the future, whereas long position is an investment strategy that yields investors a profit when stock price of the company is higher in the future. In these experiments, researchers assigned investment position and pay-off function to the subjects at the beginning of the experiments to initiate directional goals in their minds.

Hales (2007) was the first study that investigated directional preference mechanism in the investment setting. He showed that subjects were induced to

discredit the impact of preference-inconsistent analysts' forecasts about company's earnings and then make adjustment that biased their forecasts. He manipulated subjects' motivation to be directional by informing them that they had a stake in the firm's earnings (positive function for long position and negative function for short position) and their investment position would affect their compensation at the end of experiment. Consistent with motivated reasoning theories, the results showed that directional preference induced by investment position influenced how investors forecast future earnings of the company.

In a similar manner, Han and Tan (2010) provided further evidence that the effect of investment position on investors' earnings forecast and investment related judgments was conditional on the news valence (positive vs. negative) and management guidance form (point vs. range). The result showed that the effect of investment position exerted more influence in the case of management guidance containing good news than guidance containing bad news. The study also showed that the effects of guidance form on investors' earnings estimate matter, conditional upon directional preference.

More recently, Thayer (2011) found that when investors received initial information that cast doubt on their previous chosen investment position, they would selectively seek additional information that supported their position and gave higher credibility on preference-consistent information than information that contradicted their position. In his experiment, he gave the subjects four analysts' forecasts that embedded different credibility levels and preference consistency. A web-based experiment enabled researcher to measure the amount of time participants spent viewing each analyst' report such that researchers could infer what information participants relied on the most. Consistent with the cognitive dissonance theory, participants chose to view and give more credibility to information that confirmed their previous decision than preference-inconsistent information.

Taken together, these studies suggest that evaluation of financial information may be biased by investment position. The amount of scrutiny given to information depends on whether the information is seen as preference consistent or not, given

the investor's preferences. Investors, whether long or short, will be quick to accept information that implies a gain on their investment and will take more time and more skepticism to accept information that implies a loss on their investment.

2.2.1 Relation of investment position to the predicted perceived credibility

This hypothesis relates to the effects of investment positions on the perceived credibility of the financial statement. As previously described, when evaluating information that appears to be preference-consistent, investors are motivated to accept the information without attempting to justify information. In contrast, when investors are presented with information that runs counter to their directional preferences, they are motivated to interpret it skeptically (Hales, 2007).

The results from Thayer (2011) provided direct evidence on how investors assessed credibility of financial information. In her experiment, investors receiving analysts' reports that cast doubt on the profitability of their investment position were more likely to give low credibility to the reports than those receiving favorable news.

These results are consistent with cognitive dissonance theory (Festinger, 1962). The theory proposes that when people experience psychological discomfort (dissonance), they strive to reduce it through either changing behaviors and cognitions or adding new cognitive elements. People faced with this predicament will try to search for information that supports their priori decision and tend to discredit information that opposes their chosen choice.

Festinger (1962) suggested that dissonance arises after a choice has been made. In my research study, participants will be informed that an investment position (either short or long) has already been assigned to each of them; and then all participants will receive current and prospective financial results of the company. As the financial results are impressive, dissonance is created in some participants. Participants in short condition will perceive the information as unfavorable because it casts doubt on their future profitability and thereby is faced with a dissonance

situation. In contrast, participants in long condition will perceive the information as favorable because it reinforces their future profitability.

Taken together, I thus expect that participants in short condition will give lower credibility to a company's financial result than those in long condition because short investors are expected to discredit unfavorable information. I posit the following hypothesis:

H1: Investors holding short position make lower perceived credibility assessments than those holding long position.

Figure 4 Predicted effects of investment positions on perceived credibility

Perceived credibility

Short   Long
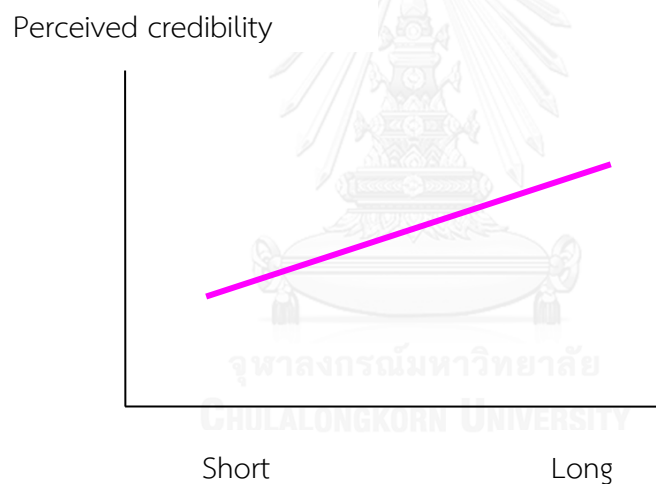
2.2.2 Relation of investment position to the predicted detection and correction ability

The following hypotheses relate to the effects of investment position on the ability of investors to detect accounting irregularities embedded in the financial statement and the extent to which they can correct the irregularities. As stated earlier, investors are motivated to hold directional preference according to their investment positions (Hales, 2007; Han & Tan, 2010; Thayer, 2011) and directional preference could either reduce or induce situational skepticism in their decision making process (Ditto & Lopez, 1992; Ditto et al., 2003; Ditto et al., 1998). In this

study, I explore how this mechanism affects investors' ability to detect and correct the manipulated financial statements.

Several studies indicate that skepticism or suspicion affects individuals' ability to detect fraud and creative accounting. Fathil and Schmidtke (2010) suggested that conscientiousness, suspicion and integrity are related to individuals' ability to detect fraud. By conducting a small survey in a seminar of CPAs, they gave 25 professional accountants a manipulated financial statement which was embedded with an increase income accounting scheme; and asked them to issue an opinion. They also looked into the personality traits of participants to examine the relationship between traits and fraud detection ability. The results showed that suspicious participants exhibited higher ability to detect fraud in the manipulated financial statements.

Similar results were obtained by Popova (2013), who conducted an experimental study with 82 audit students and found that participants who were more skeptical were more sensitive to fraud evidence in the evidence evaluation stage. The result is consistent with the work of Rose (2007), who suggested that more-skeptical auditors had higher sensitivity to aggressive reporting than did less-skeptical auditors.

Besides studies relating skepticism to auditors' ability to detect fraud, Demerens, Paré, and Redis (2013) examined whether skepticism could lead investors to cast doubt on the manipulated financial statements and to make analytical adjustment. They employed a live case methodology, using a real company which was suspected of managing accounting data to illustrate the implementation of an ex-ante detection approach. They concluded that standards and rules alone were insufficient to stop creative accounting and thus ex-ante detection and skepticism could help investors detect and correct these accounting manipulations.

Thus, I expect that participants holding short condition will have higher skepticism and will better detect and correct off-balance sheet financing than those holding long position as the short investors are faced with preference-inconsistent information and thus exhibit more cognitive analysis of financial information than do the long investors. I posit the following hypothesis:

H2b: Investors holding short position have greater propensity to detect off-balance sheet financing than do those holding long position.

Figure 5 Predicted effects of investment positions on detection rate

Detection rate

Short   Long
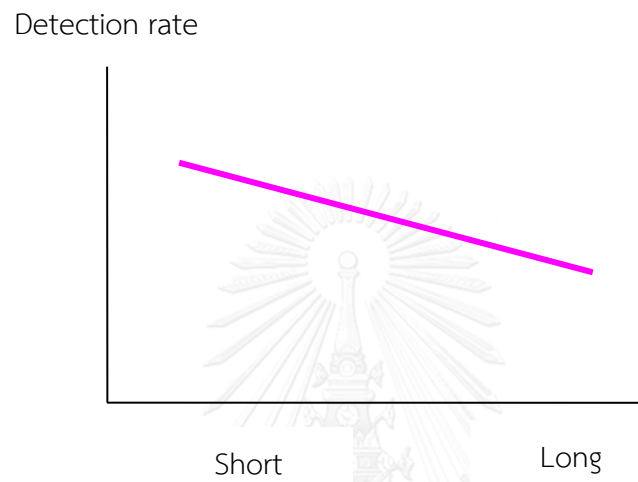
H3b: Investors holding short position have greater propensity to correct financial ratios than those holding long position.

Figure 6 Predicted effect of investment positions on correction rate

Correction rate

Short   Long
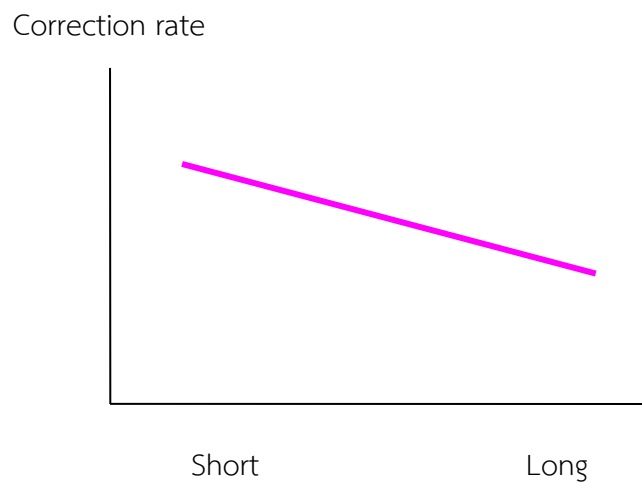
2.3 Interaction between off-balance sheet financing types and investment positions

According to existing literature, directional preferences could induce skepticism and scrutiny to the information processing of decision makers when faced with preference-inconsistent situations but would reduce skepticism under preference-consistent situations (Ditto & Lopez, 1992; Ditto et al., 2003; Ditto et al., 1998).

The ability to scrutinize information, when individuals are faced with preference consistence or inconsistence, is subject to the characteristics of available information. Dissimilarity of the disclosures pertinent to operating lease and equity method could differently influence the investors' ability to scrutinize information. Thus, it is expected that the effects of investment positions on investors' detection and correction ability are dependent upon off-balance sheet types. Hence, I posit the following hypotheses:

H2c: The effect of investment position on investors' detection ability is conditional upon off-balance-sheet types.

H3c: The effect of investment position on investors' correction ability is conditional upon off-balance-sheet types.

2.4 Summary of hypotheses

Hypothesis related to investor' perceived credibility

H1: Investors holding long position make higher perceived credibility than those holding short position.

Hypothesis related to investor' detection ability

H2a: Investors facing operating lease have greater propensity to detect off-balance sheet financing than those facing equity method.

H2b: Investors holding short position have greater propensity to detect off-balance sheet financing than those holding long position.

H2c: The effect of investment position on investor' detection ability is conditional upon off-balance sheet types.

Hypothesis related to investor' correction ability

H3a: Investors facing operating lease have greater propensity to correct off-balance sheet financing than those facing equity method.

H3b: Investors holding short position have greater propensity to correct off-balance sheet financing than those holding long position.

H3c: The effect of investment position on investor' correction ability is conditional upon off-balance sheet types.
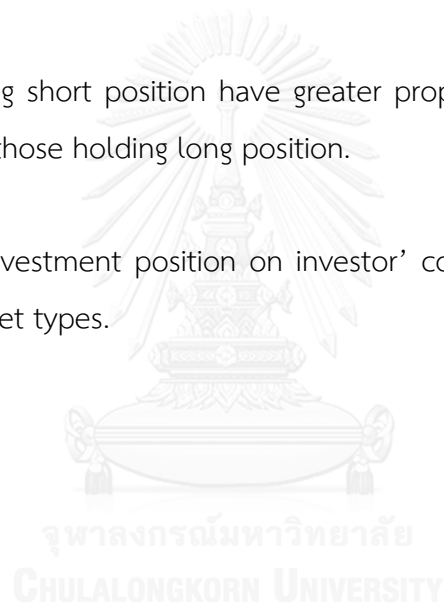
CHAPTER III

RESEARCH DESIGN

3.1 Participants

Participants were 106 MBA students and 80 Master of accounting students of a Thai leading university. Elliott et al (2007) suggested that MBA students were able to detect different accounting policies which consequently led to different financial performance and that they also adjusted key financial ratios according to their findings. Participants reported taking an average of 1.4 accounting classes, as well as having an average of 5.9 years of total work experience. Their mean investment experience was 0.6 years and 28% had invested in the stock market. The experiment was conducted in four sessions. Results are not affected by session (p =0.97).

In total, 199 participants completed the experiments, but 13 were removed from the analysis because they provided incorrect response to manipulation check question[1]. Thus, final sample is equal to 186 participants. See table 1 for a reconciliation.

Table 1 Reconciliation of the Total Sample to the Sample Used for Analysis

Condition	SEQ	LEQ	SOL	LOL	NEQ	NOL	Total
Total submission	41	40	42	42	17	17	199
Less : Failed manipulation	(1)	(9)	(1)	(2)	-	-	(13)
Final sample[2]	40	31	41	40	17	17	186

Definition of abbreviations in table is as follows:

SEQ = Short position and Equity method   *LEQ = Long position and Equity method*

SOL = Short position and Operating lease   *LOL = Long position and Operating lease*

NEQ = Neutral position and Equity method   *NOL = Neutral position and Operating lease*

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[1]All results do not change when responses from those who failed the manipulation check are included.

[2]Priori sample size determination were calculated by statistical computer program, G*Power3 (Faul, Erdfelder, Lang, & Buchner, 2007). Based on result from pilot study, researcher set effect size equal to 0.30, power of the experiment equal to 0.90, and significance level equal to 0.05. Results showed that total sample size needed for the main analysis of this study equal to 119 samples, as a result, this study required 30 samples per cell approximately.

3.2 Research methodology

3.2.1 Experimental procedure

The experiment is designed to test whether types of off-balance sheet financing (OBS) and investment positions influence how investors assess credibility of the financial statement and to what extent they can detect and correct accounting schemes embedded in the financial statement. To test, the participants will be randomly assigned to a long, a short or a neutral position and to face either equity method or operating lease accounting. More details of manipulation are provided in the next section. Participants will be randomly assigned to each of the six groups as follows:

Table 2 Classification of groups by types of OBS and investment positions

Types of OBS / Investment Position	Equity method	Operating lease
Short (S)	SEQ (G1)	SOL (G3)
Long (L)	LEQ (G2)	LOL (G4)
Neutral (N)	NEQ (G5)	NOL (G6)

Group 1 (SEQ) represents participants who are given the short investment position and faced with equity method when performing task.

Group 2 (LEQ) represents participants who are given the long investment position and faced with equity method when performing task.

Group 3 (SOL) represents participants who are given the short investment position and faced with operating lease when performing task.

Group 4 (LOL) represents participants who are given the long investment position and faced with operating lease when performing task.

Group 5 (NEQ) represents participants who are given the neutral investment position and faced with equity method when performing task.

Group 6 (NOL) represents participants who are given the neutral investment position and faced with operating lease when performing task.

Prior to the experiment, researcher obtained informed consent from participants to ensure voluntarily participating, then, the participants were required to read a set of instructions to acquaint themselves with the nature of the task and compensation criteria. In addition, they were required to undergo a pre-experimental training session with respect to investment positions. In the training, the participating students were given self-study material related the investment criteria of short and long positions and required to do the end-chapter multiple-choices exercise. The exercise solutions were then distributed to the participants. The researcher provided affirmative feedback for correct answers and corrective clarifications otherwise so that the participating subjects developed a correct understanding of the short and long positions prior to the experiment (refer to Appendix A for the training procedure). Nonetheless, no training session was provided for the participants of neutral position. Participants then reviewed basic background information about the firm. In general, the information includes overview of the company, financial statements (i.e., both statement of financial position and statement of comprehensive income), key financial ratios, analysts' report containing analysts' consensus of EPS forecast and some analysts' comments. All participants will be presented with the same information about the firm except for information related to OBS transaction and investment position which would vary.

All the participating subjects, except for those belonging to groups 5 and 6, were asked to determine the likelihood that they would profit or lose from the investment, based on the available financial information. The purpose of this question is to reinforce the participants' preference-consistent and preference-

inconsistent preconceptions, as noted in Hales (2007). The participants then replied to a set of dependent measures (discussed below). The experiment ended with the participants completing their demographic profiles and answering additional questions on their use of financial statements and their opinions on creative accounting. The participants were finally asked to answer the manipulation check questions (refer to Appendix A for the full experimental case)[3].

3.2.2 Experimental treatments

This research employed a 2 x 2 + 2 between-subjects design that manipulates: (1) the types of off-balance sheet financing (operating lease vs. equity method) and (2) the participants' investment positions (short vs. long). In addition, this research deliberately created two neutral investment conditions, i.e. one for operating lease and the other for equity method. The participants in the neutral group represented prospective investors (i.e. investors without directional preference on the company performance) and were used as the control group for comparison with the short and long investors to determine the effect of directional preference on the investors' judgment in both negative and positive directions.

3.2.2.1 Investment position

The first manipulation is investment position. As discussed in Chapter II, long investor makes money when the company performs well, while short investor makes money when the company performs poorly (Hales, 2007). The manipulation of investment position is intended to determine whether the information provided about the company's predicted future performance were viewed as preference-consistent or preference-inconsistent.

The manipulation approach of short and long position is based on previous studies on the investment positions ((Hales, 2007; Han & Tan, 2010; Thayer, 2011). The participants assigned with short position (i.e., groups 1 and 3) were informed that

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[3] The experiment case in this study was validated by two financial analysts and was tested with 30 MBA students in pilot test before launching a real experiment.

lower earnings would leave them with more points and compensation, so the lower the firm's performance, the better off they are. While the participants with long position (i.e., groups 2 and 4) were supplied with the information that higher earnings would leave them with more points and compensation, so the higher the firm's performance, the better off they are. In this research study, all participants were presented with a good sign of firm' performance in the upcoming year so that long investors were induced to have preference-consistent with the information while short investor have preference-inconsistent. For participants in neutral condition (i.e., groups 5 and 6), their compensation did not ties to firm's performance because they did not invest in the company, thus, received only a flat payment for participation.

3.2.2.2 Types of off-balance sheet financing

The second manipulation is the types of off-balance sheet financing. The participants faced two kinds of off-balance sheet techniques: equity method and operating lease. The accounting policy as well as footnote disclosure related to each off-balance sheet transaction were presented following the company overview and analyst forecast. Nevertheless, this research study does not label this information as company' footnote but rather ties it to the company overview. This is to examine the usefulness of content in the footnote section; in other words, whether the footnote is adequate to help investors detect and correct off-balance sheet debts and assets. With this approach, investigation of the information content of footnote on off-balance sheet financing is possible.

The participants faced with equity method transactions (i.e., groups 1 and 2) received information that

"Firm has XYZ company, an associate company..............Firm hold 40 percent of shares in XYZ company and also have right to buy (call option) the rest of shares in XYZ company. Firm record investment in XYZ company by using equity method."

Meanwhile, the participants facing operating lease transactions (i.e., groups 3 and 4) were informed that

"Firm has lease agreements on fives office buildings for period of 1 to 25 years, which has useful life about 35 years. The firm chooses to record the leases as operating leases, and records rental payment as expense on due date annually. ....firm has minimum non-cancellable commitment for rental payment totaling of 15,000 million Baht"

3.2.3 Measurement of dependent variables

There are three dependent variables in this study: perceived credibility of financial statement (Y1), detection ability of off-balance sheet financing (Y2) and correction ability of off-balance sheet financing (Y3). Thus, there are three tasks to measure the dependent variables.

After receiving information that is either favorable or unfavorable regarding their investment position, participants were asked to assess credibility of accounting numbers presented in the firm's financial statements (Y1), which is measured on a scale that varies from 1 (not at all credible) to 7 (very credible).

Participants' ability to detect off-balance sheet financing (Y2) is next examined whereby the participants were presented with various creative accounting techniques (e.g., income smoothing, take a big bath), including off-balance sheet financing, and were asked to estimate probability that the company is using one of the accounting scheme. The estimated probability is measured on a scale that varies from 1 (extremely unlikely) to 7 (extremely likely). The participants were presented with a set of alternative creative accounting techniques so as to avoid a situation that participants overly focus on the off-balance sheet accounting issue and consequently bias the result.

Afterward, the participants were asked to adjust key financial ratios to determine the participants' ability to correct off-balance sheet financing (Y3). The ratios consist of return on asset and debt to equity ratios. As this research study mainly focuses on off-balance sheet accounting, two ratios most likely influenced by this accounting scheme are of special interest, i.e., return on asset and debt to equity ratios (see Appendix A for measurements).

3.2.4 Compensation

Compensation in this study is consisted of 2 parts. First, Starbucks gift card with stored-value of 700, 500 and 300 Baht were given to participants who gave the top three accurate answers on ratio correction task, respectively. This component of the compensation scheme provides all participants with an incentive to make as accurate as possible the ratios, and to do so they need to thoroughly study the financial information in the case.

Second, participants in short and long condition receive compensation based on the number of points earned from the experiment (1 points equal to 10 Baht). This compensation scheme is designed based on the work of Thayer (2011). All participants initially receive 20 points each and the additional or subtracting points depends on their assigned investment position and company's performance. Those holding a long position earn (lose) five points for every Baht that actual earnings-per-share (EPS) exceeds (falls below) their EPS benchmark. Similarly, participants holding a short position earn (lose) five points for every baht that actual earnings-per-share falls below (exceeds) their EPS benchmark. This component of the compensation scheme captures investors' incentive to hold a profitable investment. Participants in neutral condition received only a flat payment and do not have this part of compensation.

The details of the compensation scheme are given in the instructions at the start of the experiment.

CHAPTER IV

RESULTS

4.1 Manipulation Checks

The participants were asked a post-experimental question with regard to their investment schemes to determine their understanding of the long versus short manipulation. The investors with long (short) position would pass the manipulation check if their answer on the investment return was a gain (loss) in the event of higher actual earnings the following year according to analysts' consensus. Overall, 92.1% of the participants answered correctly, indicating good comprehension of the manipulation of investment positions.

With regard to the types of off-balance sheet financing manipulation, the participants under the operating lease (equity method) condition were asked to rate the complexity of the company's disclosure relevant to an office building lease (investment in subsidiary) on a scale of 1 (not at all complex) to 7 (extremely complex). The mean score (mean = 4.43) of the participants under the equity method condition was insignificantly different from that under the operating lease condition (mean = 4.44; p = 0.97). This suggests that the participants perceived no difference in disclosure between the operating lease and equity method conditions.

However, the post-experimental answers revealed that a greater number of operating-lease participants were able to state the underlying reason of the off-balance sheet financing arrangement (i.e. to avoid recording debt in the financial statement) than the equity-method participants. Pearson's chi-square test showed that the proportion of the operating-lease participants with the correct reason (83.95%) was significantly larger in comparison with that under the equity method condition (63.38%; two-tailed p=0.004). Thus, this evidence points to the fact that an operating lease transaction is typically less complex and easier for investors to understand its true nature than the equity method, suggesting that the manipulation of off-balance sheet types is successful.

4.2 Test of hypothesis

This research manipulated the types of off-balance sheet financing through two different accounting schemes: operating lease and equity method; and also manipulated the participants' investment preferences: long versus short position, through the investment return. It was anticipated that types of off-balance sheet financing and investment preferences likely influence the participants' perceived credibility of financial statements, detection ability and correction ability, all of which are the dependent variables of this research.

The testing of hypotheses was carried out using analysis of variance (ANOVA) and planned contrast comparisons. As an additional control for testing of hypotheses related to the investment position, this research also collected data for the operating lease and equity method conditions under which the participants had no preference for investment position and received a flat compensation (i.e. a neutral investment position). In the analysis, the neutral participants were removed from all analysis of variance (ANOVA) to avoid mixed results but were included in the contrast analysis to test the effect of treatments in comparison with the control group. The analysis process began with testing of the hypotheses related to the perceived credibility of financial statements, followed by those related to the detection ability and the correction ability.

4.2.1 Test related to perceived credibility

Table 3 presents the descriptive statistics for the participants' perceived credibility of the financial statement.

Table 3 Descriptive statistics for perceived credibility

Mean of perceived credibility (standard deviation in parentheses)

Condition	Equity method	Operating lease	Row mean
Short	3.37	3.63	3.50
	(1.42)	(1.21)	(1.32)
	N = 40	N = 41	N = 81
Long	3.48	3.62	3.56
	(1.31)	(1.39)	(1.34)
	N = 31	N = 40	N = 71
Neutral	2.88	3.11	3.00
	(1.40)	(1.31)	(1.34)
	N = 17	N = 17	N = 34
Column	3.31	3.54	3.43
	(1.38)	(1.30)	(1.34)
	N = 88	N = 98	N = 186

It was found that the *investors' knowledge of creative accounting*[4] is negatively correlated with the investors' perceived credibility (Pearson's correlation = -0.191, p = 0.02). In addition, the level of accounting knowledge of the participants belonging to the MBA program (mean = 4.33) is significantly lower than those belonging to the masters of accounting program (mean = 4.81; p = 0.03). This suggests that the academic background of investors plays a part in their assessment with regard to the credibility of financial statements. In other words, investors with more knowledgeable in creative accounting tend to attach lower credibility to the manipulated financial statement than do less knowledgeable investors. Thus, to control for the academic background of the participants, the participating subjects were divided into the highly knowledgeable and low knowledgeable groups using the mean knowledge level as the cut-off point (mean = 4.61) when performing the ANOVA test. The descriptive statistics of split sample are tabulated in Table 4.

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[4] In the post-experimental session, the participants were asked to rate their knowledge of creative accounting on a scale of 1 (not at all knowledgeable) to 7 (highly knowledgeable)

Table 4 Descriptive statistics for perceived credibility (split sample)

Panel A : For high knowledge group (N=106)[a]

Condition	Equity method	Operating lease	Row mean
Short	3.10	3.51	3.34
	(1.58)	(1.08)	(1.32)
	N=20	N=27	N=47
Long	3.61	3.42	3.51
	(1.28)	(1.12)	(1.18)
	N=18	N=21	N=39
Neutral	2.54	2.77	2.65
	(1.50)	(1.39)	(1.42)
	N=11	N=9	N=20
	3.16	3.36	3.27
Column Mean	(1.49)	(1.15)	(1.32)
	N=49	N=57	N=106

Panel B : For low knowledge group (N=80)[a]

Condition	Equity method	Operating lease	Row mean
Short	3.65	3.85	3.73
	(1.22)	(1.46)	(1.30)
	N=20	N=14	N=34
Long	3.30	3.84	3.62
	(1.37)	(1.64)	(1.53)
	N=13	N=19	N=32
Neutral	3.50	3.50	3.50
	(1.04)	(1.19)	(1.09)
	N=6	N=8	N=14
Column Mean	3.51	3.78	3.65
	(1.23)	(1.47)	(1.36)
	N=39	N=41	N=80

[a] participating subjects were divided into the highly knowledgeable and low knowledgeable groups using the mean knowledge level as the cut-off point (mean = 4.61)

Panels A, B and C of Table 5 respectively present the results of the participants in *all conditions,* those in the *high knowledge group* and those in the *low knowledge group.*

Table 5 ANOVA results for perceived credibility

Panel A: ANOVA Results for all conditions

Source of variation	SS	df	MS	F	p
Model	1898.99	4	474.74	264.14	0.00
OBS	1.50	1	1.50	0.84	0.36
Position	0.09	1	0.09	0.05	0.82
OBS * Position	0.13	1	0.13	0.07	0.78
Error	266.00	148	1.79		
Total	2165.00	152			

Panel B: ANOVA Results for High knowledge group[a]

Source of variation	SS	df	MS	F	p
Model	1008.03	4	252.01	156.59	0.00
OBS	0.29	1	0.29	0.18	0.67
Position	0.93	1	0.93	0.57	0.45
OBS * Position	1.89	1	1.89	1.18	0.28
Error	131.96	82	1.60		
Total	1140.00	86			

Panel C: ANOVA Results for Low knowledge group[a]

Source of variation	SS	df	MS	F	p
Model	897.44	4	224.36	109.05	0.00
OBS	2.19	1	2.19	1.07	0.30
Position	0.51	1	0.51	0.25	0.62
OBS * Position	0.43	1	0.43	0.21	0.65
Error	127.56	62	2.05		
Total	1025.00	66			

The ANOVA results in this table exclude the two conditions with neutral investment position.

[a] In the post-experimental session, the participants rated their knowledge in creative accounting on a scale of 1 (not know at all) to 7 (know well). The samples were divided by the mean level of knowledge in creative accounting (4.6).

H1 expects that investors holding short position would give a lower rating to the perceived credibility than would those holding long position. In Table 5, the overall ANOVA results nevertheless indicate that the investment position is insignificant both in the all sample (p = 0.36), the high (p = 0.45) and low knowledge groups (p = 0.62). The finding is in contrast to the researcher's prediction in which the short and long investors assess the credibility of financial statements in a similar fashion. Thus, the results do not support H1.

The impact of investment positions (short and long) on the perceived creditability against the control group (neutral) was determined using contrast analysis. The neutral participants were included in this analysis (refer to Table 3 and 4 for the neutral participants' descriptive statistics) and all participants were divided by the mean level of knowledge in creative accounting (mean = 4.67) to control for the participants' academic background. The contrast analysis results for the participants' perceived credibility are presented in Table 6. Panels A, B and C of Table 6 respectively present the contrast results of the participants in *all conditions*, those in the *high knowledge group* and those in the *low knowledge group*.

First, the researcher speculated that a difference existed between the perceived credibility levels rated by the short and long investors and by the neutral group (i.e. the investors with position versus without position). To test this presumption, the researcher employed the planned comparisons with the following contrast weights: SEQ [1], LEQ [1], SOL [1], LOL [1], NEQ [-2], NOL [-2], where S, L, N, OL and EQ denote short, long, neutral, operating lease and equity method, respectively. In the high knowledge (highly knowledgeable) group, investors with position (long or short) statistically differed from those without position (p=0.02). Panel B of Table 6 shows that, given high knowledge investors, the participants with position give higher credibility to the financial statement than those without position with a contrast value of 3.01. Since the financial statement in this research was deliberately manipulated, the lower the participants rated the financial statement's credibility, the better they performed on this task. This suggests that the participants without position perform better than those with position.

Table 6 Planned contrast of perceived credibility

Panel A: For all conditions (N=186)

Contrast [a]	Value of contrast	Std. error	t	p
1. Position – No position	2.11	1.02	2.07	0.04
2. Short – Neutral	0.54	0.54	1.83	0.06
3. Long – Neutral	0.56	0.56	1.97	0.05

Panel B: For High knowledge group (N=106)[b]

Contrast [a]	Value of contrast	Std. error	t	p
1. Position – No position	3.01	1.30	2.31	0.02
2. Short – Neutral	1.29	0.70	1.84	0.06
3. Long – Neutral	1.71	0.72	2.38	0.01

Panel C: For Low knowledge group (N = 80)[b]

Contrast [a]	Value of contrast	Std. error	t	p
1. Position – No position	0.66	1.65	0.3	0.69
2. Short – Neutral	0.51	0.89	0.5	0.57
3. Long – Neutral	1.50	0.90	0.1	0.86

[a] The contrast codes above are as follows:

Contrast 1 is: SEQ[1], LEQ[1], SOL[1], LOL[1], NEQ[-2], NOL[-2]

Contrast 2 is: SEQ[1], LEQ[0], SOL[1], LOL[0], NEQ[-1], NOL[-1]

Contrast 3 is: SEQ[0], LEQ[1], SOL[0], LOL[1], NEQ[-1], NOL[-1]

[b] Participating subjects were divided into the highly knowledgeable and low knowledgeable groups

using the mean knowledge level as the cut-off point (mean = 4.67)

In Figure 8 the level of credibility perceived by the neutral group is markedly lower than those belonging to the short and long position groups. A plausible explanation is that investors with no stake in the company would adopt a more neutral stance than those taking either a short or long position because the former have no directional preference attributable to the compensation scheme tied to the firm's performance but instead receive a flat payment.

Figure 7 Means of investors' perceived credibility by condition
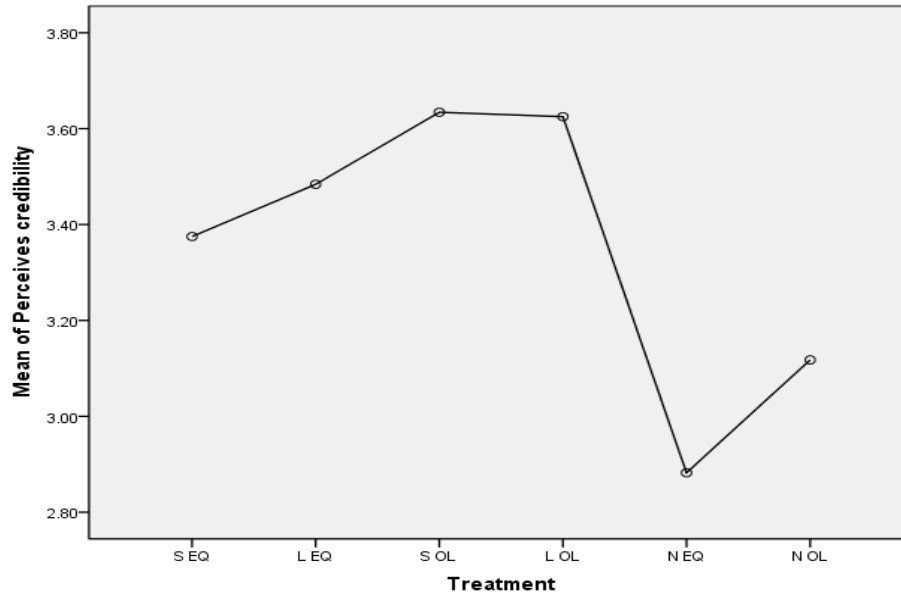
Thus, the neutral investors were more likely to give a lower credibility rating than did the short and long investors. On the other hand, the investors with either short or long position in the company are less inclined to notice the manipulated items in the financial statement due to the investment preference biases incorporated in their decision. However, this result is inapplicable to the participants in the low knowledge group (p =0.69), as indicated in Panel C of Table 6.

Second, the researcher compared the perceived credibility level rated by the *short investors* with that of the *neutral investors*. The short investors facing a preference-inconsistence situation were normally expected to be more skeptical and do better than the neutral investors without any preference. Thus, it was expected that the short investors would give a lower credibility score to the information than would the neutral investors. The following contrast codes were used to test this presumption: SEQ [1], LEQ [0], SOL [1], LOL [0], NEQ [-1], NOL [-1]. Panel B of Table 6 shows that, for the participants in the high knowledge group, the contrast is marginally significant but in the opposite direction to the researcher's prediction (p =0.06; value of contrast = 1.29). However, the contrast is insignificant for the participants in the low knowledge group (p = 0.57), as shown in Panel C of Table 6.

Third, the researcher further compared the perceived credibility level rated by the *long investors* with that of the *neutral investors*. As posited in the hypothesis development section, the investors with long position facing a preference-consistence situation were expected to promptly accept and agree with the information contained in the financial statement. Thus, the assumption is that the long investors would give a higher credibility score to the financial statement than would the neutral investors. The following contrast codes were utilized to test the assumption: SEQ [0], LEQ [1], SOL [0], LOL [1], NEQ [-1], NOL [-1]. Panel B of Table 6 shows that, for the participants in the high knowledge group, the contrast is statistically significant and in accordance with the researcher's prediction (p =0.01; value of contrast = 1.71). Nevertheless, the contrast is insignificant for the participants in the low knowledge group (p = 0.86), as shown in Panel C of Table 5.

Overall, significant results for perceived credibility were driven by highly knowledgeable participants. The result of the high knowledge group indicates that the long investors who favor positive firm's performance gave a higher credibility score to the manipulated financial statement than did the neutral investors. This is consistent with prior research in which investors have a tendency to give high credibility to information which is more aligned with their previously chosen investment position even though the credibility of the information is relatively low (Thayer, 2011). In addition, the result is supported by a recent study by Elliott, Rennekamp, and White (2015) who reported that current investors (long investors) view a firm's risk more optimistically than prospective investors (neutral investors). Their finding also showed that long investors with the directional goal for positive performance view risk from impairment of land as more symmetric (i.e. assessing the potential for loss and gain equally) than prospective investors who are more inclined to focus on the negative side of risk.

In short, the investors with preference-consistence (i.e. long investors) were found to be driven by motivated reasoning. According to the researcher's prediction, the long investors optimistically gave higher credibility to the financial statement as compared to the neutral investors. However, there is no evidence of motivated

reasoning for investors with preference-inconsistence (i.e. short investors). Interestingly, the short investors were not more skeptic nor gave a lower credibility rating to the financial statement in comparison with the neutral investors as having predicted by the researcher.

4.2.2 Test related to detection ability

Table 7 presents the descriptive statistics on the investors' detection ability.

Table 7 Descriptive statistics for detection ability

Mean investors' detection ability (standard deviation in

Condition	Equity method	Operating	Row mean
Short	5.42	5.58	5.50
	(1.29)	(1.34)	(1.31)
	N = 40	N = 41	N = 81
Long	5.35	5.87	5.64
	(1.62)	(1.26)	(1.44)
	N = 31	N = 40	N = 71
Neutral	5.76	6.00	5.88
	(1.20)	(0.86)	(1.03)
	N = 17	N = 17	N = 34
Column Mean	5.46	5.77	5.62
	(1.39)	(1.23)	(1.32)
	N = 88	N = 98	N = 186

It was found that the *investors' knowledge* of creative accounting is positively correlated with the investors' detection ability (Pearson's correlation = 0.132, p = 0.10). This suggests that the investors' accounting knowledge influences their detection ability. The investors with highly knowledgeable of creative accounting were able to readily detect off-balance sheet financing relative to those less knowledgeable. To control for the participants' knowledge background, the participants were thus divided into the high and low knowledge groups using the mean knowledge level as the cut-off point (mean = 4.61) when performing the ANOVA test. The descriptive statistics of split sample are tabulated in Table 8.

Table 8 Descriptive statistics for detection ability (split sample)

Panel A : For high knowledge group (N=106)[a]

Condition	Equity method	Operating lease	Row mean
Short	5.4	5.48	5.44
	(1.39)	(1.34)	(1.34)
	N=20	N=27	N=47
Long	5.00	6.23	5.66
	(1.68)	(0.70)	(1.38)
	N=18	N=21	N=39
Neutral	5.90	6.44	6.15
	(1.44)	(0.72)	(1.18)
	N=11	N=9	N=20
	5.36	5.91	5.66
Column Mean	(1.52)	(1.12)	(1.34)
	N=49	N=57	N=106

Panel B : For low knowledge group (N=80)[a]

Condition	Equity method	Operating lease	Row mean
Short	5.45	5.78	5.58
	(1.23)	(1.36)	(1.28)
	N=20	N=14	N=34
Long	5.84	5.47	5.62
	(1.46)	(1.61)	(1.53)
	N=13	N=19	N=32
Neutral	5.50	5.50	5.50
	(0.54)	(0.75)	(0.65)
	N=6	N=8	N=14
Column Mean	5.58	5.58	5.58
	(1.22)	(1.37)	(1.29)
	N=39	N=41	N=80

[a] *Participating subjects were divided into the highly knowledgeable and low knowledgeable groups using the mean knowledge level as the cut-off point (mean = 4.61)*

Panels A, B and C of Table 9 respectively present the ANOVA results of the participants in *all conditions*, those in the *high knowledge group* and those in the *low knowledge group*.

Table 9 ANOVA results for detection ability

Panel A: ANOVA results for all conditions

Source of variation	SS	df	MS	F	p
Model	4725.80	4	1181.4	626.27	0.00
OBS	4.34	1	4.34	2.30	0.13
Position	0.45	1	0.45	0.23	0.62
OBS * Position	1.21	1	1.21	0.64	0.42
Error	279.19	148	1.88		
Total	5005.00	152			

Panel B: ANOVA Results for High knowledge group [a]

Source of variation	SS	df	MS	F	p
Model	2661.65	4	665.41	386.01	0.00
OBS	9.15	1	9.15	5.31	0.02
Position	0.67	1	0.67	0.38	0.54
OBS * Position	7.03	1	7.03	4.08	0.04
Error	141.35	82	1.72		
Total	2803.00	86			

Panel C: ANOVA results for low knowledge group [a]

Source of variation	SS	df	MS	F	p
Model	2076.27	4	519.06	255.94	0.00
OBS	0.01	1	0.01	0.00	0.96
Position	0.03	1	0.03	0.01	0.91
OBS * Position	2.00	1	2.00	0.98	0.33
Error	125.74	62	2.03		
Total	2202.00	66			

The ANOVA results in this table exclude the two conditions with neutral investment position.

[a] In the post-experimental session, the participants rated their knowledge of creative accounting on a scale of 1 (not know at all) to 7 (know well). The samples were divided by the mean knowledge level in creative accounting (4.61).

H2a posits that the investors under the operating lease condition are better able to detect off-balance sheet financing than are those under the equity method condition. As shown in Panel B of Table 9, the off-balance sheet types are significant for the high knowledge group (p = 0.02). Independent sample t-test shows that the investors under the operating lease condition (mean = 5.91) were better able to detect off-balance sheet financing than those under the equity method condition (mean = 5.36; one–tailed p = 0.02). However, the result does not hold true for the low knowledge group (p = 0.96), as shown in Panel C of Table 9.

According to Cornaggia, Franzen, and Simin (2012), operating lease is more transparent than other OBS arrangements since the mandatory disclosure of the operating lease allows the users of financial statements to make analytical adjustments. On the other hand, disclosure related to equity method is inadequate for users of financial statements to make analytical adjustment on their own (Bauman, 2003). Thus, equity method is more difficult for investors to discern the true nature of transaction than operating lease, resulting in investors facing operating lease were better able to detect OBS than those facing equity method.

H2b expects that the short investors have a greater propensity to detect off-balance sheet financing than do the long investors. Table 9 however indicate that investment positions are of insignificance in all sample (p = 0.62), the high (p = 0.54) and low knowledge groups (p = 0.91). The findings revealed that both the short and long investors performed similarly on the detection task. Thus, H2b is not supported.

H2c predicts that the effect of investment preference on detection ability is conditional upon off-balance sheet types. Panel B of Table 9 shows a significant two-way interaction effect of off-balance sheet types and investment positions for the high knowledge group (p = 0.04). However, this result does not hold true for the low knowledge group (p = 0.33), as shown in Panel C of Table 9. Figure 9 shows the interaction effect between off-balance sheet types and investment positions on the detection ability

Figure 8 Interaction effect of off-balance sheet type and investment position
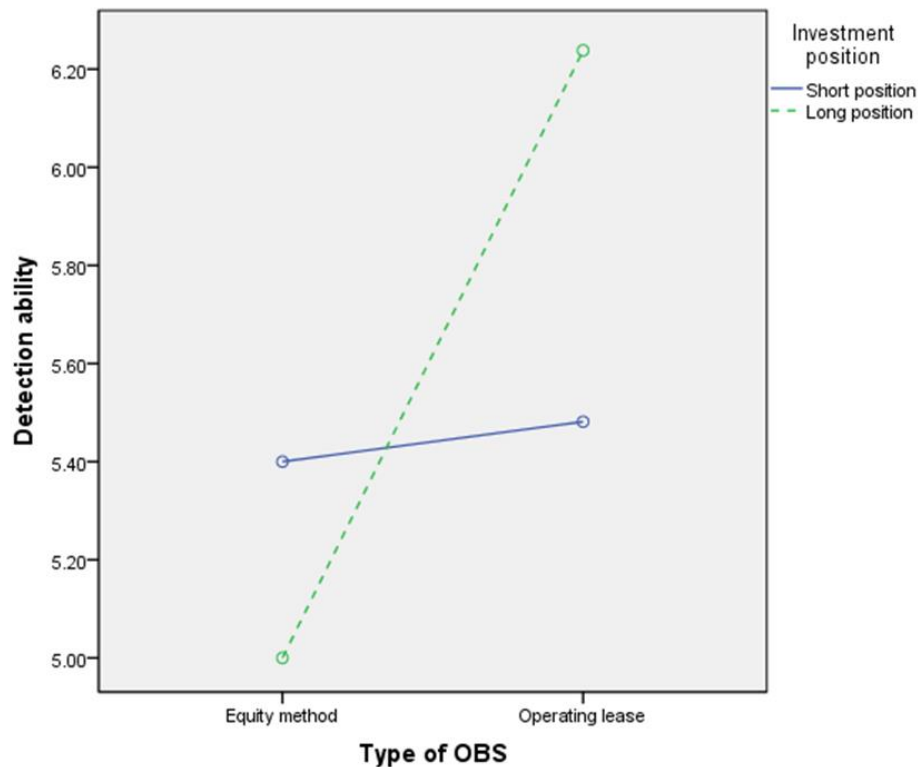
Overall, results for detection ability were driven by high knowledge participants. A plausible explanation is that the participants in the low and high knowledge groups possess unequal knowledge of creative accounting. In other words, the investors less knowledgeable of creative accounting might lack an understanding of what an off-balance sheet financing transaction is or have minimal idea of what accounting manipulation is. Thus, even though they are able to detect irregularities in the financial statement, the distinction in their answers would be diminutive between different types of accounting manipulation. The effect of knowledge on investors' judgments was also documented in Krische, Sanders, and Smith (2013), who found that, in a lease obligation setting, users' understanding of the implication of accounting choice (e.g. structuring transaction to meet condition of recording lease as operating lease or financial lease) and the manager's incentive about the choice influenced the perceived credibility of management and

investment risk judgments. Thus, this suggests that different levels of knowledge contribute to differences in the investors' judgment.

Further, the impact of investment positions (short and long) on the detection ability against the control group (neutral) was determined using contrast analysis. The neutral-position participants were included in this analysis (refer to the neutral participants' descriptive statistics in Table 7 and 8) and all the participants were divided by the mean knowledge level in creative accounting (mean = 4.67) to control for the participants' knowledge background. Table 10 presents the contrast analysis results for the investors' detection ability of OBS financing. Panels A, B and C of Table 10 respectively present the contrast results of the participants in *all conditions*, those in the *high knowledge group* and those in the *low knowledge group*. Results in Panel A show that all contrast is insignificant before subsample by level of knowledge.

First, it was speculated that a difference in the detection ability existed between the *short and long investors* and the *neutral investors* (i.e. investors with versus without position). To test this assumption, the planned comparisons with the following contrast weights were used: SEQ [1], LEQ [1], SOL [1], LOL [1], NEQ [-2], NOL [-2], where S, L, N, OL and EQ denote short, long, neutral, operating lease and equity method, respectively. For the high knowledge group, Panel A of Table 10 shows a difference in the detection ability between the investors with position and without position (p = 0.03). The participants without position (i.e. neutral investors) exhibited a higher detection ability in relation to those with position (value of contrast = -2.59).

Table 10 Planned contrast of detection ability

Panel A: For all conditions (N=186)

Contrast [a]	Value of contrast	Std. error	t	p
1. Position – No position	-1.28	0.85	-1.51	0.13
2. Short – Neutral	-0.75	0.46	-1.62	0.10
3. Long – Neutral	-0.53	0.50	-1.06	0.29

Panel B: For High knowledge group (N=106)[b]

Contrast [a]	Value of contrast	Std. error	t	p
1. Position – No position	-2.59	1.16	-2.23	0.03
2. Short - Neutral	-1.47	0.64	-2.29	0.02
3. Long - Neutral	-1.12	0.65	-1.70	0.09

Panel C: For Low knowledge group (N = 80)[b]

Contrast [a]	Value of contrast	Std.error	t	p
1. Position – No position	0.55	1.58	0.35	0.72
2. Short - Neutral	0.23	0.85	0.27	0.78
3. Long - Neutral	0.31	0.86	0.37	0.71

[a] *The contrast codes above are as follows:*

Contrast 1 is: SEQ[1], LEQ[1], SOL[1], LOL[1], NEQ[-2], NOL[-2]

Contrast 2 is: SEQ[1], LEQ[0], SOL[1], LOL[0], NEQ[-1], NOL[-1]

Contrast 3 is: SEQ[0], LEQ[1], SOL[0], LOL[1], NEQ[-1], NOL[-1]

[b] *Participating subjects were divided into the highly knowledgeable and low knowledgeable groups using the mean knowledge level as the cut-off point (mean = 4.67)*

In Figure 10, the level of the neutral group's detection ability is markedly higher than that of both the short and long position groups. A possible reason is that the investors who hold a stake in a company are more optimistic about the company's information, have less skepticism and thus exhibit lower detection ability than the neutral investors who have no preference.

Figure 9 Means of investors' detection ability by investment position
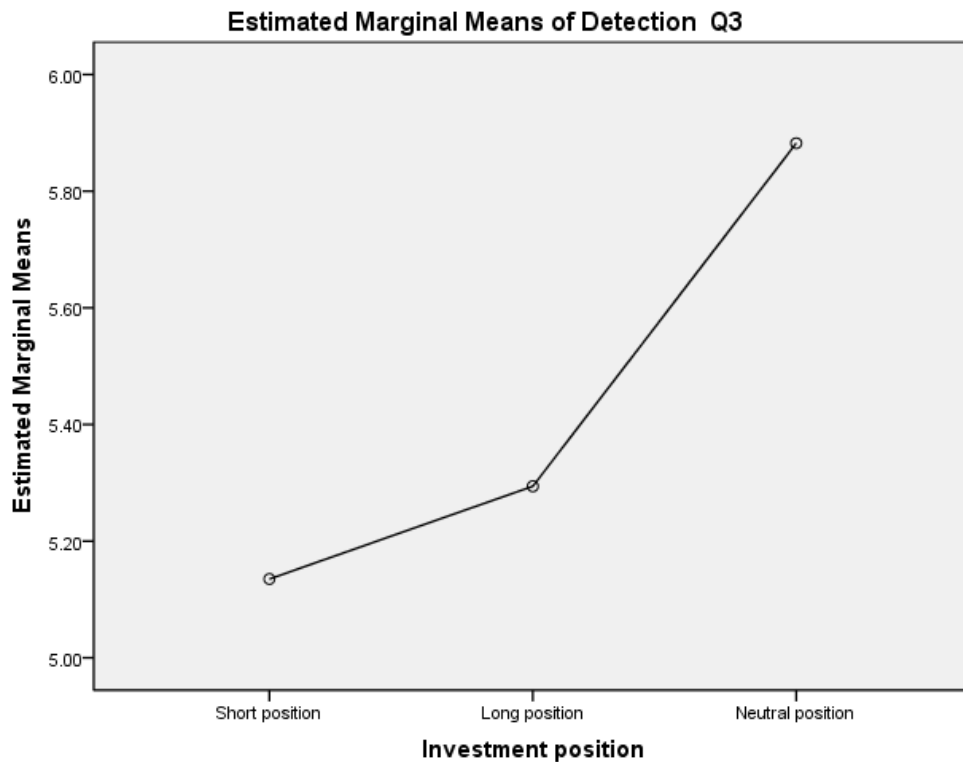
Second, a comparison was made between the detection ability of the *short investors* and the *neutral investors*. It was expected that the short investors would do better on the detection task than would the neutral investors, and the following contrast codes were deployed to test the assumption: SEQ [1], LEQ [0], SOL [1], LOL [0], NEQ [-1], NOL [-1]. In the high knowledge group, Panel A of Table 10 shows that the contrast is significant but in the opposite direction to the researcher's prediction ($p = 0.02$). In other words, the neutral investors exhibited a higher detection ability than did the short investors (value of contrast = -1.47). This implies that the short investors' preference-inconsistence failed to induce skepticism and help them with the detection task.

Third, another comparison was made between the detection ability of the *long investors* and the *neutral investors*. The initial assumption was that the investors with neutral position would have higher detection ability than would the long investors. The following contrast codes were used to test the assumption: SEQ [0],

LEQ [1], SOL [0], LOL [1], NEQ [-1], NOL [-1]. In the high knowledge group, Panel A of Table 10 shows that the neutral investors' detection ability is significantly different from that of the long investors (p = 0.09). Consistent with the researcher's prediction, the neutral investors exhibit a higher detection ability than do the long investors (value of contrast = -1.12).

According to Harris, Hobson, and Jackson (2015), long investors are more sensitive to earnings fixation than prospective investors (i.e. the neutral investors in this research study). They found that the prospective investors would incorporate all information in their assessment of the firm's investment opportunity while the long investors would focus exclusively on the firm's earnings due to their fear of loss. Taken together, this could be the reason why the neutral investors are better able to detect irregularities in the financial statement than are the long investors. In the low knowledge group, no contrast is statistically significant, as shown in Panel B of Table 10.

In short, given high knowledge investors, the contrast analysis has revealed that the presence of investment preference could contribute to a decrease in an investor's detection ability of accounting manipulations vis-à-vis a condition where the investment preference is absent (i.e. neutral position).

4.2.3 Test related to correction ability (D/E ratio)

Table 11 presents the descriptive statistics for the investors' correction ability.

Table 11 Descriptive statistics for correction ability (D/E ratio)

Mean investors' correction ability (D/E) (standard deviation in

Condition	Equity method	Operating lease	Row mean
Short	35.89	53.10	44.60
	(39.31)	(42.37)	(41.55)
	N = 40	N =41	N = 81
Long	33.16	41.07	37.62
	(37.56)	(41.74)	(39.89)
	N = 31	N = 40	N = 71

Condition	Equity method	Operating lease	Row mean
Neutral	34.72	35.46	35.09
	(38.56)	(32.22)	(34.99)
	N = 17	N = 17	N = 34
Column Mean	34.77	45.13	40.23
	(38.08)	(40.77)	(39.75)
	N = 88	N = 98	N = 186

Similar to the earlier analysis result, it was found that the *investors'* *knowledge* of creative accounting is positively correlated with their correction ability (Pearson's correlation = 0.137, p = 0.09). The MBA participants' correction ability (mean = 34.25) is significantly lower than that of the masters of accounting participants (mean = 47.73; p = 0.04). By comparison, those highly knowledgeable of creative accounting exhibit a higher ability to correct off-balance sheet financing than those less knowledgeable. Thus, to control for the participants' knowledge background, the participants were divided into the high and low knowledge groups using the mean knowledge level as the cut-off point (mean = 4.61) when performing the ANOVA test. The descriptive statistics of split sample are tabulated in Table 12.

Table 12 Descriptive statistics for correction ability (split sample)

Panel A : For high knowledge group (N=106)[a]

Condition	Equity method	Operating lease	Row mean
Short	30.48	61.20	48.13
	(38.84)	(42.91)	(43.58)
	N=20	N=27	N=47
Long	34.35	52.33	44.03
	(38.62)	(42.83)	(41.41)
	N=18	N=21	N=39
Neutral	44.66	32.52	39.20
	(43.34)	(31.05)	(37.85)
	N=11	N=9	N=20
	35.08	53.40	44.93
Column Mean	(39.33)	(41.80)	(41.51)
	N=49	N=57	N=106

Panel B : For low knowledge group (N=80)[a]

Condition	Equity method	Operating lease	Row mean
Short	41.31	37.48	39.73
	(40.03)	(37.99)	(38.66)
	N=20	N=14	N=34
Long	31.50	28.63	29.79
	(37.52)	(37.77)	(37.08)
	N=13	N=19	N=32
Neutral	17.42	38.76	29.61
	(18.81)	(35.32)	(30.46)
	N=6	N=8	N=14
Column Mean	34.36	33.63	33.99
	(36.95)	(36.76)	(36.63)
	N=39	N=41	N=80

[a] *participating subjects were divided into the highly knowledgeable and low knowledgeable*

groups using the mean knowledge level as the cut-off point (mean = 4.61)

Panels A, B and C of Table 13 respectively present the ANOVA results of the participants in *all conditions,* those in the *high knowledge group* and those in the *low knowledge group*.

Table 13 ANOVA results for correction ability (D/E ratio)

Panel A: ANOVA results for all conditions

Source of variation	SS	df	MS	F	p
Model	268747.90	4	67186.97	41.01	0.00
OBS	5915.95	1	5915.95	3.612	0.05
Position	2043.80	1	2043.80	1.24	0.26
OBS * Position	810.54	1	810.54	0.49	0.48
Error	242434.86	148	1638.07		
Total	511182.77	152			

Panel B: ANOVA results for high knowledge group [a]

Source of variation	SS	df	MS	F	p
Model	198489.24	4	49622.31	29.36	0.00
OBS	12467.51	1	12467.51	7.38	<0.01
Position	131.06	1	131.06	0.08	0.78
OBS * Position	854.63	1	854.63	0.51	0.48
Error	138612.70	82	854.63		
Total	337101.94	86	1690.40		

Panel C: ANOVA results for low knowledge group [a]

Source of variation	SS	df	MS	F	p
Model	83600.22	4	20571.39	13.89	0.00
OBS	290.92	1	179.28	0.12	0.73
Position	1663.49	1	1387.04	0.94	0.34
OBS * Position	31.64	1	3.60	0.00	0.96
Error	90449.70	61	1480.57		
Total	174049.92	65			

The ANOVA results in this table exclude the two conditions with neutral investment position.

[a] In the post-experimental session, the participants rated their knowledge of creative accounting on a scale of 1 (not know at all) to 7 (know well). The samples were divided by the mean knowledge of creative accounting (4.61).

H3a posits that the investors under the operating lease condition are better able to correct off-balance sheet financing than those under the equity method condition. Panel A and B of Table 13 indicates that the type of off-balance sheet financing is statistically significant in the case of all sample (p= 0.05) and the high knowledge group (p < 0.01). Independent sample t-test also shows that the investors under the operating lease condition (mean = 53.40) exhibit a higher correction ability than those under the equity method condition (mean = 35.08; one–tailed p = 0.01). However, the result is inapplicable to the low knowledge group (p = 0.73), as shown in Panel C of Table 13. Thus, the findings are conditioned on knowledge level of participants. This is consistent with Nelson and Tayler (2007), who provided evidence that only relatively more knowledgeable users likely attempt the reconciliation and adjust lease obligation amounts in the footnote. Thus, this could be the reason that the investors with high degree of knowledge in creative accounting in this research exhibit a higher correction ability in comparison with those with relatively low knowledge.

H3b expects that the short investors are better able to correct off-balance sheet financing than are the long investors. Table 13 indicate that the investment position is insignificant in all sample (p = 0.26), the high (p = 0.78) and low knowledge groups (p = 0.34). The results suggest that the short investors' correction ability is not statistically significant in relation to the long investors'. Thus, H3b is not supported.

H3c predicts that the effect of investment preference on the correction ability is conditional upon types of off-balance sheet financing. Table 13 show that the interaction effect is insignificant both in all sample (p = 0.48), the high (p = 0.48) and low knowledge groups (p = 0.96). Thus, H3c is not supported.

Further, the impact of investment positions (short and long) on the correction ability against the control group (neutral) were determined using contrast analysis. The neutral participants were included in the analysis (refer to Table 11 and 12 for the descriptive statistics pertinent to the neutral participants) and all the participants were divided by the mean knowledge level in creative accounting (mean = 4.67) to

control for the participants' knowledge background. The contrast analysis results with regard to the investors' correction ability are presented in Table 14. Panels A, B and C of Table 14 respectively present the contrast results of the participants in *all conditions,* those in the *high knowledge group* and those in the *low knowledge group*.

Table 14 Planned contrast of correction ability (D/E ratio)

Panel A: For all conditions (N=186)

Contrast [a]	Value of contrast	Std. error	t	p
1. Position – No position	22.22	27.57	0.80	0.42
2. Short – Neutral	18.49	15.15	1.22	0.22
3. Long – Neutral	3.72	15.37	0.24	0.80

Panel B: For High knowledge group (N=106)[b]

Contrast [a]	Value of contrast	Std. error	t	p
1. Position – No position	24.00	37.76	0.64	0.53
2. Short - Neutral	14.50	20.53	0.71	0.48
3. Long - Neutral	9.50	21.17	0.45	0.65

Panel C: For Low knowledge group (N = 80)[b]

Contrast [a]	Value of contrast	Std. error	t	p
1. Position – No position	26.56	44.26	0.60	0.55
2. Short - Neutral	22.60	23.89	0.94	0.34
3. Long - Neutral	3.95	24.13	0.16	0.87

[a] The contrast codes above are as follows:

Contrast 1 is: SEQ[1], LEQ[1], SOL[1], LOL[1], NEQ[-2], NOL[-2]

Contrast 2 is: SEQ[1], LEQ[0], SOL[1], LOL[0], NEQ[-1], NOL[-1]

Contrast 3 is: SEQ[0], LEQ[1], SOL[0], LOL[1], NEQ[-1], NOL[-1]

[b] Participating subjects were divided into the highly knowledgeable and low knowledgeable groups using the mean knowledge level as the cut-off point (mean = 4.67)

Figure 10 Means of investors' correction ability by condition
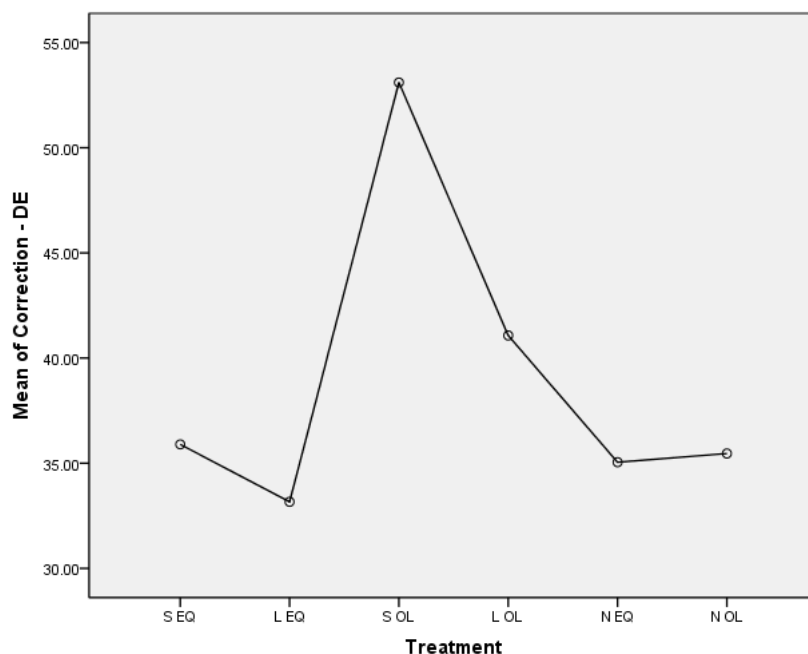
In Table 14, the contrasts between the short, long and neutral investors with regard to the correction ability are statistically insignificant both in overall and split sample e.g. the high and low knowledge groups. Figure 11 shows that the investors facing operating lease have a higher correction ability than those under the equity method condition. However, the correction ability of the short and long investors is not significantly different. This suggests that although the directional preference driven by the investment position influences the investors' perceived credibility and detection ability, that is not the case in the correction ability. To be able to correct the financial ratios, the investors are required to be able to not only detect irregularities in the financial statement but also possess a background in accounting.

In addition, a post hoc analysis and multiple comparison contrast show that the mean correction ability of the long investors under the equity method (LEQ) condition (mean = 34.35) is significantly lower than that of the short investors with operating lease (SOL) (mean = 61.20; one–tailed $p = 0.015$). In other words, although the ANOVA test shows that the main effect of investment preference on the correction ability is insignificant, there is evidence to confirm that investors with preference-consistence and complex accounting scheme (long position-equity

method) exhibit a significantly lower ability to correct off-balance sheet financing than those with preference-inconsistence and simple accounting scheme (short position-operating lease).

4.3 Additional analysis

In this research, the participants were also asked to adjust the return on assets (ROA) ratio during the undertaking of correction task. The descriptive statistics for the investors' correction ability on ROA are presented in Table 15.

Table 15 Descriptive statistics for investors' correction ability (ROA)

Mean investor' correction ability (ROA) (Standard deviation in parentheses)

Condition	Equity method	Operating lease	Row mean
Short	53.14	43.01	48.01
	(35.90)	(44.22)	(40.40)
	N = 40	N = 41	N = 81
Long	65.13	35.56	48.47
	(28.29)	(42.64)	(39.68)
	N = 31	N = 40	N = 71
Neutral	66.52	36.06	51.29
	(25.14)	(37.11)	(34.83)
	N = 17	N = 17	N = 34
Column Mean	59.95	38.76	48.79
	(31.77)	(42.16)	(38.98)
	N = 88	N = 98	N = 186

Unlike previously, the ROA correction ability is unaffected by either the *investors' knowledge* of creative accounting ($p = 0.11$) or the program type (i.e. MBA vs accounting) ($p = 0.12$). Thus, there was no control for the participants' knowledge background in this analysis. The ANOVA results are tabulated in Table 16.

Table 16 ANOVA results for investors' correction ability (ROA)

Source of variation [a]	SS	df	MS	F	p
Model	370948.17	4	92737.04	61.42	0.00
OBS	14781.44	1	14781.44	9.79	<0.01
Position	193.02	1	193.02	0.12	0.72
OBS * Position	3543.99	1	3543.99	2.34	0.12
Error	223462.12	148	1509.87		
Total	594410.29	152			

[a] *The ANOVA results exclude the two conditions with neutral investment position.*

Table 16 indicates that the type of off-balance sheet financing is statistically significant ($p < 0.01$). However, independent sample t-test shows that the investors with operating lease (mean = 39.33) exhibit a lower correction ability than those with equity method (mean = 58.38; one–tailed $p < 0.01$), which is in contrast to the correction ability on the debt-to-equity (D/E) ratio. This may be due to the differences in the relations between the off-balance sheet type and the debt-to-equity ratio; and the return on assets ratio. In addition, lease commitment is more related to debt than to asset, while unconsolidated subsidiary or equity method is more related to asset. Thus, the investors under the operating lease condition tend to be better able to adjust the debt-to-equity ratio (D/E) than the return on assets ratio (ROA).

Table 17 Planned contrast of correction ability (ROA)

| Contrast [a]	Value of contrast	Std. error	t	p
1. Position – No position	-8.32	24.98	-0.33	0.74
2. Short - Neutral	-6.43	14.07	-0.45	0.64
3. Long - Neutral	-1.89	13.76	-0.13	0.89

[a] *The contrast codes above are as follows:*
Contrast 1 is: SEQ[1], LEQ[1], SOL[1], LOL[1], NEQ[-2], NOL[-2]
Contrast 2 is: SEQ[1], LEQ[0], SOL[1], LOL[0], NEQ[-1], NOL[-1]
Contrast 3 is: SEQ[0], LEQ[1], SOL[0], LOL[1], NEQ[-1], NOL[-1]

Similar to the result of the D/E ratio correction ability, the effect of investment position on the ROA ratio correction ability is insignificant (p =0.72), and neither is the contrast between the experimental groups' (long and short investors) correction ability of ROA and the control group's (neutral investors) significant, as seen in Table 17.

CHAPTER V

CONCLUSION AND IMPLICATION

5.1 Conclusion

This research has investigated the impact of off-balance sheet (OBS) types and investment positions on investors' perceived credibility of financial statements and their ability to detect and correct the OBS financing arrangements. Through an experimental approach, the research findings evidently showed that the directional preferences influence the investors' perceived credibility of the financial statements and also their detection ability of off-balance sheet financing. Specifically, it was found that the investors with long position optimistically attached greater credibility to the manipulated financial statements and exhibited a lower ability to detect OBS vis-à-vis the neutral investors (i.e. the prospective investors). This phenomenon could be attributed to the long investors' directional goal bias for the firm's positive performance. By comparison, the neutral investors outperformed the long investors with regard to the detection ability, but statistically no significant difference was found between the long and neutral investors' correction ability, suggesting that the investors' correction ability is influenced more by their knowledge of creative accounting than by their investment preferences. However, the significant results for detection ability were driven by investors with high knowledge in creative accounting and not hold true for those with relatively low knowledge.

Contrary to the researcher's prediction, no significant difference was found in the perceived credibility, detection and correction ability between the short and long investors. The results indicated that preference-inconsistence failed to make the short investors more skeptical nor led them to outperform the long and neutral investors.

It was found that off-balance sheet types significantly influenced the investors' ability to detect and correct the off-balance sheet financing transactions,

consistent with the researcher's prediction. Given their knowledge of creative accounting, the investors under equity method condition were less likely to detect OBS and possessed a lower ability to make analytical adjustments than those under the operating lease condition since an equity-method transaction is typically more complex in terms of both the nature of the transaction and the relevant disclosures in comparison with that of operating lease.

Finally, the findings also validate the prediction on the interaction effect between off-balance sheet types and investment preference on the detection ability in high knowledge condition. This suggests that the effect of investment position on OBS detection ability is conditional upon off-balance sheet types. Nevertheless, no interaction effect exists with regard to the investors' correction ability.

5.2 Contribution and Implications

This research is expected to offer useful insights to accounting researchers, investors and regulators. First, this study has concurrently explored two research areas (i.e. off-balance sheet management and investment position) and documented their collective implications for investors' judgment. The finding that the investors' detection ability of the off-balance sheet financing arrangements is influenced by their investment positions contributes the existing body of research on directional preference (Elliott et al., 2015; Hales, 2007; Han & Tan, 2010; Harris et al., 2015; Thayer, 2011).Thayer (2011) reported that investors' directional goal subjects them to investment bias and the subsequent attachment of greater credibility to preference-consistence information; however, this current research has further proved that this particular bias is capable of impairing the investors' ability to detect creative accounting in the financial statements. This finding could serve as a caution for financial investors that investment preference could undermine their rationale.

Second, this research also offers new evidence with regard to the effect of the placement (i.e. position) of disclosure information, i.e. in the footnote section or recognized in the financial statement. While previous research documented that footnote disclosure is insufficient and less useful than the recognized information

(Bauman, 2003; Maines & McDaniel, 2000), this current research findings indicated that, given the investors' knowledge of creative accounting, even the non-professional investors could avail themselves of disclosure information pertaining to the OBS transactions whereby the concealed debts are re-introduced into the balance sheet. Furthermore, it was determined that the level of correction ability is subject to the complexity of OBS transactions (i.e. OBS types). Specifically, the investors with less complex OBS (operating lease) exhibited a higher correction rate than those with the complex one (equity method). To standard setters, the implication of the findings is for the relevant regulatory bodies to revisit the disclosure format related to complex OBS (i.e. equity method) so as to lessen the complexity burden borne by the investors. Moreover, this research is expected to raise investors' awareness on the usefulness of disclosure information in the footnote section.

Third, this study is also anticipated to contribute to existing research on the assessment of financial statement credibility by identifying the area and level of knowledge necessary for users of financial statements to make an informed assessment with regard to the credibility of the financial reports. The research results showed that the investors' knowledge of creative accounting is inversely correlated to their perceived credibility of financial statements. Furthermore, it was observed that the investors' ability to detect and correct the accounting manipulations in the financial statements is positively associated with their accounting knowledge level. To accounting researchers, the implication of the findings is that investors' knowledge of creative accounting should be treated as a control variable in accounting research on investors' perceived credibility of financial statements, detection and correction abilities of accounting manipulations.

5.3 Limitations and Suggestion for Future Research

This experimental research nonetheless contains certain limitations. First, no measurement of investors' skepticism was taken following their being presented with favorable (unfavorable) financial information for the long (short) investors. Future

research should thus seek to gauge investors' skepticism and incorporate it as a mediating variable to examine the influence of directional preference on their ability to detect creative accounting.

Second, unlike other studies on investment position, no participating subject in this current research was offered a choice of investment decision in the hypothetical firm at the beginning of the experiment. In other words, no participants made their own investment choice, a condition which is contradictory to the real world. A minimal power of the investment choice could lower the participants' directional preference driven by their previous decision. However, a more robust effect would be observed in the real-world setting.

Third, this research deliberately used a positive performance setting to manipulate the long investors facing favorable information and short investors facing unfavorable information. However, future research could investigate these effects in a negative performance setting to see the significance of the firm's poor performance.

Fourth, in this current research, the participating MBA and Master of accounting students were proxies of non-professional investors, rendering the research findings less applicable to more experienced investors, e.g. investment analysts. Future research should endeavor to generalize the results through more experienced analysts or other groups of financial practitioners.

Finally, future research should attempt to identify mechanisms that could potentially lower the directional preference bias in the long and short investors. In addition, other than the operating lease and equity method, there exist several other contexts pertinent to the financial statements that could be the focus of future research, e.g. revenue recognition management and asset securitization.

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Appendix A - Experimental material

Name..

Document no. 1

> The following experiment is a hypothetical situation of trading ABC stock in the market. Participants will be assumed to be short investor or long investor. Please remind that your investment position, short or long, and the accuracy of your answer in this experiment will affect your investment points and compensation.

Experiment instruction

1. Please read the following compensation and reward criteria which is consisted of 2 parts as follow:

      1. Participation compensation: 100 Baht per person

      2. Reward:

         1) Reward calculated from your investment points (1 points equal to 10 Baht). Your point start at 20 points. At the end, your points will increase or decrease depends on your assigned investment position and company's performance. [5]

         2) Starbucks card with stored-value of 700 , 500 and 300 Baht will be given to participants who gave the most three accurate answer from the experiment respectively.

2. Please study your investment criteria in page 2 – 3 carefully to achieve maximum benefit in participating this experiment. Please raise your hand when you finish a test in page 3. Researcher will come to you and give you a key and then you can continue to document no.2.

3. Please read document no.2 which is contained financial information of firm ABC carefully and then answer questions at the end of documents.

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[5] Participants in neutral condition were not informed about this compensation.

4. Please return document no.2 to researcher when you finish it and then open an attached envelope to answer additional questions. (Do not open an envelope before you return document no.2 to researcher)

_____

Pre-experiment practice

Please study following investment types and do the test in page 3 to make sure that you understand investment criteria in this experiment well. Investment position in this experiment are as follow:

1. Long position is the investment position that you buy stock first and then sale it when stock price goes up. If you are long investor, when the EPS of a company is **higher** than EPS benchmark in the future, you will gain from this investment and your investment point will increase proportionally. In contrast, when the EPS is lower, you will lose from this investment and your investment point will decrease proportionally.

2. Short position is the investment position that you sale the borrowed stocks of a company first and then purchase it back when stock price fall down. If you are short investor, when the EPS of a company is **lower** than EPS benchmark in the future, you will gain from this investment and your investment point will increase proportionally. In contrast, when the EPS is higher, you will lose from this investment and your investment point will decrease proportionally.

** In this experiment, EPS and stock price are changing along in same direction.

Example   If next year EPS increase from EPS benchmark, then

1. Long investor will **gain** from this investment

2. Short investor will **loss** from this investment

Please answer the following questions to test your understanding of investment position in this experiment

1. If you are short investor you will gain and get more investment points when next year EPS of the company……………from EPS benchmark

a. increase   b. decrease   c. not change   d. not sure

2. If you are long investor you will gain and get more investment points when next year EPS of the company……………from EPS benchmark

a. increase   b. decrease   c. not change   d. not sure

3. If you are short investor, how would you like to see the performance of the company?

a. good performance, rising EPS   b. bad performance, falling EPS

c. normal performance   d. not sure

4. If you are long investor, how would you like to see the performance of the company?

a. good performance, rising EPS   b. bad performance, falling EPS

c. normal performance   d. not sure

_____

➢ Please raise your hand when you finish the test, you will receive the key from researcher.

➢ Please check your answer with the key before you continue to document no.2

<u>Answer Key</u>

1. b

2. a

3. b

4. a

** If you have any further questions, please raise your hand to inform

researcher. Otherwise, please continue to document no.2. **
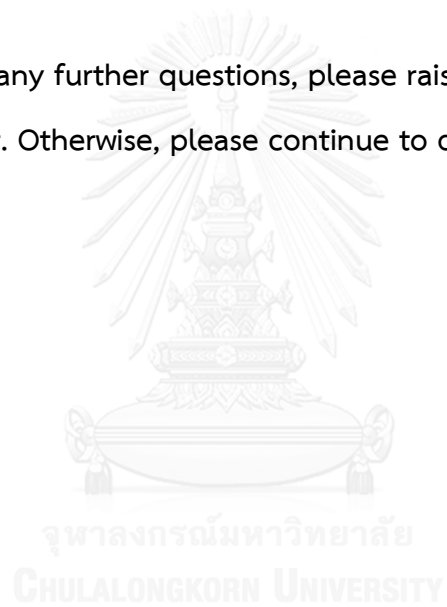
Name..

Document no. 2

You can start your experiment if you are well understanding investment position and compensation criteria in this experiment.

Please enter the time you begin this study ……………………

Assume that you are an investor in the stock market. You are interested to invest in real estate industry and do research about this for more than one month. Based on your research, you concluded that ABC stock is one of the most attractiveness to invest.[6] Consequently, you decided to take a short (long) position in ABC stock to earn profit in the future. **Therefore your investment position is short (long) position.**

You chose a short (long) strategy in firm ABC. The price of firm ABC stock at that time of your investment was 50 Baht per share. Using the firm's forward price-to-earnings (P/E) ratio of 2, the implied EPS for the upcoming fiscal year end is 25 baht. **Therefore, your EPS benchmark in 2014 is 25 baht.**

<u>Points criteria</u> Your point start at 20 points. Your points will increase or decrease depends on these criteria:

1. An additional 5 points will be added to your total points for every baht by which actual annual EPS is below (above) EPS benchmark (25 Baht).

2. Your total points will be reduced by 5 points for every baht by which actual annual EPS is above (below) EPS benchmark (25 Baht).

3. If the firm's actual EPS in 2014 is 25 Baht, you will either earn or lose any points.

---

[6] In this section, the information available for participants in neutral condition are; "Assume that you are an investor in the stock market. You are interested to invest in real estate industry and do research about this for more than one month. Based on your research, you concluded that ABC stock is one of the most attractiveness to invest ". In other word, they will not see information about investment condition which is tied to the compensation as participants in short and long condition.

Therefore, the lower (higher) the firm's relative performance, the more chance for you to get the higher points and compensation.

Next, please read the following company overview, financial information of firm ABC, important accounting policies and analyst forecast on company performance in 2014.

Company overview in 2013

ABC Co., Ltd. develops property in warehousing and factory business sector. The company constructs properties for rent and also sale investment property. The properties include ready-made factories, warehouse, distribution center, office building, and other real estate. The company has been operated for more than 30 years. The main revenue come from rental and service revenue 80%, gain on sale of investment property 15% and other revenues 5%

The major customers mainly come from foreign firms investing in Thailand. The company's rental area growth increases steadily since Thailand remains attractive for investment in the aspect of more qualified labor and wage rate. Despite the economic uncertainty in last year, the overall investment in Thailand is able to grow. The uncertainty of economic conditions turned out to have positive effect on companies' business. Since most companies need to reduce their operation cost, they do not want to invest in construction of factory or warehouse but rather decide to lease or outsource their non-core activities as good alternative in such circumstance. Consequently, firm get continuously improvement in bidding a project.

Analyst forecast for firm ABC

Analysts from various brokers, following firm ABC closely suggest that there would be a drastic increase in firm ABC performance this year due to increasing demand of multinational manufacturing companies that has tendency to use more ready-made factories and warehouse in Thailand. Recently, firm has just signed in a contract of renting factories and warehouse worth 8,000 million Baht which customer has put down a deposit already. Consequently, analyst expects 60% increase in rental

revenue of firm in 2014. Based on this basic information, analyst consensus forecast next year EPS of the firm is equal to 30 baht.

 [For Equity method condition: group1, 2 and 5]

<u>Accounting policies</u>

a) Subsidiary company – use consolidation method

Subsidiary company is an entity that firm can control its financial and operating policy decisions-making process both direct and indirect.

The existence of control by an investor is usually evidenced in a holding of 50% or more of the voting power (directly or through subsidiaries) in other entity.

In this case, firm must prepare consolidated financial statements of a group in which the assets, liabilities, equity, income, expenses and cash flows of the parent and its subsidiaries are presented as those of a single economic entity.

b) Associate company – use equity method

Associate company is an entity in which investor has significant influence or has power to participate in the financial and operating policy decisions but not control them.

The existence of significant influence by an investor is usually evidenced in a holding of 20-50% or more of the voting power (directly or through subsidiaries) in other entity. Investor must include possible voting right and the effect of convertible stock option in consideration of voting power also.

In this case, firm must use equity method by which an equity investment is initially recorded at cost and subsequently adjusted to reflect the investor's share of the net assets of the associate (investee).

<u>Summary</u>

Control	→	Consolidation	

Significant influence	→	Equity method	
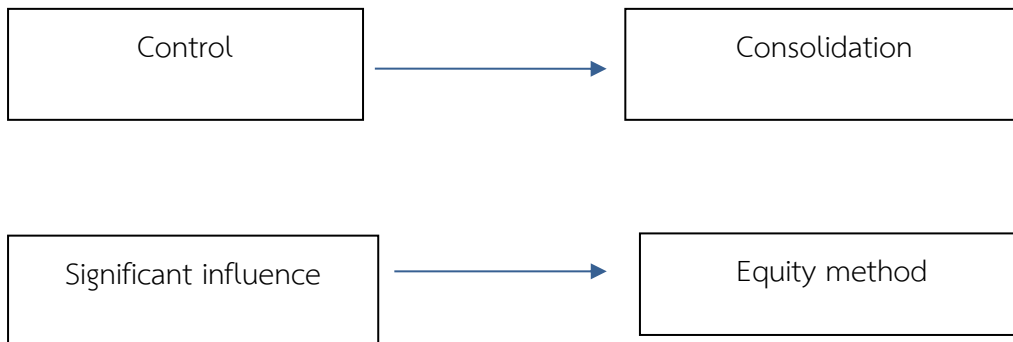
[For Operating lease condition : group 3, 4 and 6]

<u>Accounting policies</u>: **Long-term lease where a company is the lessee**

a) Operating lease

Operating lease is a lease in which a significant portion of the risks and rewards of ownership are retained by the lessor. Payments made under operating leases (net of any incentives received from the lessor) are charged to profit or loss on a straight-line basis over the period of the lease.

b) Financial lease

Financial lease is a lease in which lessee take substantial risks and rewards of ownership of leased asset. Lessee will record lease obligation as asset and liabilities in financial statement at the lower of the fair value of the leased assets or the present value of the minimum lease payments.

Summary

Lease types		Record rental payment as

Operating lease	→	Expense

Financial lease	→	Asset and Liabilities
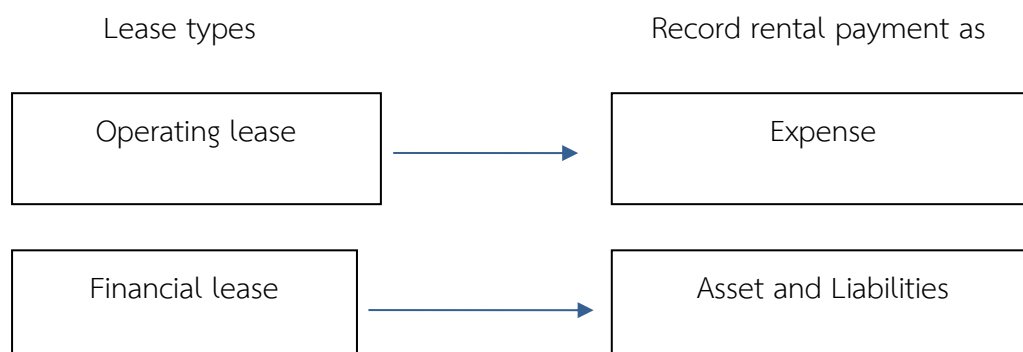
[For Equity method condition: group1, 2 and 5]

Firm is the first mover in Thailand who initiates construction innovation by standard precast concrete (ready-made concrete) which made firm's construction easier and save the cost of construction. Firm has XYZ company, an associate company, as a main provider of precast concrete to construct ready-made factories, warehouse, distribution center, office building, and other real estate for the firm.

Firm hold 40 percent of shares in XYZ company and also have right to buy (call option) the rest of shares in XYZ company. Firm record investment in XYZ company by using equity method. Movements during the years ended 31 December 2013 and 2012 of XYZ investment account were as follows:

Unit : Baht million

	2013	2012
Investment in associate XYZ company		
At 1 January	1,300	1,400
Plus Purchases during the year	50	40
Less Dividends received	(150)	(140)
At 31 December	1,200	1,300

Financial information of firm XYZ in 2013 are presented below:

| | XYZ company |
	Unit: Baht million
Assets	5,000
Liabilities	15,000
Revenue	125
Net profit	50

[For Operating lease condition : group 3,4 and 6]

Firm has lease agreements on fives office buildings for period of 1 to 25 years, which has useful life about 35 years. The firm chooses to the leases as operating leases, and records rental payment as expense on due date annually. Currently, firm has non-cancellable lease commitment. At the end of 31 December 2013, firm has minimum non-cancellable commitment for rental payment totaling of 15,000 million Baht as follow:

| | **Operating lease commitments** |
	Unit : Baht million
Within one year	1,000
After one year but within five years	5,000
After five years	9,000
Total	15,000

Financial information of firm ABC in 2013 and 2012 are presented below:

Statements of Financial Position		(Unit: Baht million)
Year	2013	2012
Cash and cash equivalents	300	150
Trade and other receivables	100	50
Total Current assets	400	200
Investment in associates, equity method	1,200	1,300
Investment properties - net	5,800	5,000
Property, plant and equipment - net	1,450	1,300
Total non-current assets	8,450	7,600
Total assets	8,850	7,800
Short-term borrowings	150	100
Trade and other payables	300	200
Total current liabilities	450	300
Long-term borrowings	400	500
Total non-current liabilities	400	500
Total liabilities	850	800
Common stock	5,000	5,000
Retained earnings	3,000	2,000
Total shareholders' equity	8,000	7,000
Total liabilities and shareholders' equity	8,850	7,800

Statements of Comprehensive income			(Unit: Baht million)
Year		2013	2012
Rental and service income		14,000	7,300
Share of profit (loss) from investments in			
associated company		50	40
Total revenue		14,050	7,340
Cost of rental and service		7,000	4,000
Administrative expenses		1,500	500
Other expenses		1,000	1,000
Total expenses		9,500	5,500
Net income		4,550	1,840
EPS(Baht)		16.00	8.00

Key financial ratios	2013	2012
Return on asset (ROA)	51%	24%
Gross profit margin (GP)	50%	45%
Net profit margin (NPM)	32%	25%
Debt to equity ratio (D/E ratio)	0.11	0.11

According to the case, please rate the possibility that the higher expected forecast EPS of firm ABC will make you **loss (gain)** from this investment. Please circle the choice that fit your feeling/opinion the most. [7]

```
   1        2        3        4        5        6        7
   |--------|--------|--------|--------|--------|--------|

Not at all possible         Moderate possible         Strong possible
```

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[7]
This question were not included in the experimental material of participants in neutral condition.

Questions

Based on information of firm ABC above, please answer the following questions or fill in the gap below according to your judgment.

> ** Please remind that your points and compensation depend upon your chosen investment strategy and the accuracy of your answers. Participants who give the most three accurate answer will received Starbucks card with stored value of 700, 500 and 300 Baht respectively**

1. According to the case, please rate the credibility level of financial information of firm ABC. Please circle the choice that fit your feeling/opinion the most.

1	2	3	4	5	6	7

Not at all credible   Moderate credible   Very credible

2. According to the case, indicate the likelihood that the firm ABC has used following accounting schemes. Please mark ✓ in the column that most fits your feeling/opinion.

1= Extremely unlikely   2 = unlikely   3 =somewhat unlikely   4= Neutral
5= somewhat likely   6 = likely   7 = Extremely likely

Type of accounting schemes				Possibility level						
				1	2	3	4	5	6	7
1.Smoothing income each year (Income Smoothing)										
2.Accelerating expense recording in bad year to show betterprofit										
trend in future (Take A Big Bath)										
3.Hiding debt from financial report (Off-balance Sheet financing)										

3. According to the case, please correct the following financial ratios of firm ABC as you think it would better reflect firm performance. Please adjust ratios increase or decrease in the table below according to your judgment. (Calculator is permitted)

** Special reward will be considered from the answer in last column and will be given to Participants who give the most three accurate answer**

Financial ratios	Formula	Unadjusted amount	Adjust (increase/ decrease)	Adjusted amount	Answer
		ROA (old)= **51%**			ROA (new) =
1.Return on asset (ROA)	Net profit ——— Total asset	4,550 ——— 8,850			
		D/E (old) = **0.11**			D/E (new) =
2. Debt to equity (D/E ratio)	Liabilities ——— Owner's equity	850 ——— 8,000			

Please indicate the time when you complete the case ....

....

Personal information

Please mark ✔ in the ☐ according to your information.

1. Gender: ☐ Female   ☐ Male

2. Age _____ year

3. Working experience _____ year

4. Occupation

☐ Governor   ☐ Private company employee   ☐ Entrepreneur

☐ Analyst   ☐ Bank employee   ☐ Student

☐ Others please indicates ....

5. Undergraduate education background

☐ Accounting   ☐ Finance/Banking   ☐ Marketing

☐ Engineering   ☐ Other (please specify) ....

6. How many accounting or financing course have you taken before? _____

Please indicate the subject (You can answer more than one choice)

(   ) Financial accounting   (   ) Managerial accounting

(   ) Others ....

7. Do you have experience in investing in the stock market?

☐ No

☐ Yes   _____year(s) _____month(s)

8. How much do you use financial statement of company to support your investment decision? Please circle the choice that fit your feeling/opinion the most.

```
   1          2          3          4          5          6          7
   |----------|----------|----------|----------|----------|----------|

Never use                   Sometimes                  Frequently
```

9. How much do you know about accounting manipulation in financial statement of companies? Please circle the choice that fit your feeling/opinion the most.

```
   1          2          3          4          5          6          7
   |----------|----------|----------|----------|----------|----------|

Not at all                  Somewhat                   Highly
knowledgeable               knowledgeable              knowledgeable
```

10. How much do you aware of the effect from accounting manipulation used by management of companies when you make decision on your investment? Please circle the choice that fit your feeling/opinion the most.

```
   1          2          3          4          5          6          7
   |----------|----------|----------|----------|----------|----------|

Not at all aware            Somewhat aware             Extremely aware
```

Manipulation check

1. According to the case, if the next year's actual earning of the company is higher as the suggestion of consensus analysts forecast, your investment return would be _____?[8]

☐ Gain   ☐ Loss   ☐ Not sure

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[8] This question were not included in the experimental material of participants in neutral condition.

2. According to the case, for what reason do you think that firm ABC decide to use equity method instead of consolidation method in recording investment in XYZ company [*for operating lease condition: for what reason do you think that firm ABC decide to lease office buildings instead of building their own office*]? (You can answer more than one choice)

☐ to increase revenue

☐ to manage earning

☐ to avoid record asset or liabilities on financial statement

☐ to reduce operating cost

3. According to the case, how complex is disclosure related to investment in XYZ company [*operating lease*] transaction of firm ABC? Please circle the choice that fit your feeling/opinion the most.

1	2	3	4	5	6	7

Not at all   Moderately   Extremely

4. According to the case, please rate the management forthright level of firm ABC Please circle the choice that fit our feeling/opinion the most.

1	2	3	4	5	6	7

Not at all   Moderately   Extremely

5. According to the case, please rate the management competence level of firm ABC Please circle the choice that fit our feeling/opinion the most.

1	2	3	4	5	6	7

Not at all   Moderately   Extremely

_____

ชื่อ-นามสกุล ....

เอกสารชุดที่ 1

การทดลองต่อไปนี้เป็นการจำลองสถานการณ์การลงทุนซื้อ-ขายหุ้น ABC ในตลาดหลักทรัพย์ โดยผู้เข้าร่วมการทดลองจะได้รับบทบาทสมมุติในการเป็นนักลงทุนประเภท Short position หรือ Long position (อย่างใดอย่างหนึ่ง) ซึ่งประเภทในการลงทุนของท่านและความถูกต้อง ในการตอบคำถามของท่านจะมีผลต่อคะแนนการลงทุนและเงินรางวัลของท่านในการเข้าร่วม การทดลอง

ขั้นตอนการทดลอง

1. กรุณาทำความเข้าใจเกณฑ์ในการให้ค่าตอบแทนและเงินรางวัลจากการทดลอง ซึ่งแบ่งได้เป็น 2 ส่วน ดังนี้

    1. ค่าตอบแทนในการเข้าร่วมการทดลอง: ท่านละ 100 บาท

    2. เงินรางวัลพิเศษ: แบ่งเป็น 2 ส่วน

        1) เงินรางวัลที่คำนวณจากคะแนนการลงทุน (1 คะแนน มีมูลค่า 10 บาท) โดยท่าน จะได้รับคะแนนการลงทุนเริ่มต้นจำนวน 20 คะแนน เมื่อจบการทดลอง คะแนนของท่านอาจ <u>เพิ่มขึ้น หรือ ลดลง</u> ขึ้นกับประเภทการลงทุนของท่านและผลประกอบการของบริษัท[9]

        2) บัตรสตาร์บัคส์ (Starbucks card) 3 รางวัล มูลค่า 700 บาท 500 บาท และ 300 บาทตามลำดับ ให้แก่ผู้ที่ตอบคำถามจากการทดลองได้ใกล้เคียงคำตอบที่ถูกต้องมากที่สุด 3 ท่าน

2. ให้ท่านศึกษาบทบาทในการลงทุนของท่านในหน้าที่ 2 - 3 ให้เข้าใจเพื่อประโยชน์สูงสุดของท่านใน การเข้าร่วมการทดลอง <u>เมื่อท่านทำแบบทดสอบเรียบร้อยแล้ว กรุณายกมือแจ้งผู้วิจัย เพื่อรับเฉลย แบบทดสอบ และเอกสารชุดที่ 2</u>

3. ท่านจะได้รับเอกสารชุดที่ 2 ซึ่งเป็นข้อมูลทางการเงินต่างๆที่สำคัญของบริษัทจำลอง ABC ขอให้ ท่านศึกษาข้อมูลในเอกสารโดยละเอียดตามข้อมูลที่กำหนดให้ และ ตอบคำถามให้ครบถ้วน

4. เมื่อท่านตอบคำถามในเอกสารชุดที่ 2 เรียบร้อยแล้ว **กรุณายกมือแจ้งผู้วิจัยเพื่อส่งคืนเอกสาร** และเปิดซองคำถามที่แนบมาเพื่อกรอกข้อมูลทั่วไปเกี่ยวกับตัวท่านและตอบคำถามสั้นๆหลังการ ทดลองเพิ่มเติม **(กรุณาเปิดซองคำถามหลังจากท่านส่งคืนเอกสารชุดที่ 2 แล้วเท่านั้น)**

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[9] ผู้เข้าร่วมการทดลองในกลุ่ม neutral condition จะไม่ได้รับการแจ้งข้อมูลเกี่ยวกับค่าตอบแทนพิเศษที่คำนวณจากคะแนนการลงทุน

<u>แบบทดสอบความเข้าใจก่อนเข้าร่วมการทดลอง</u>[10]

ขอให้ท่านทำความเข้าใจรูปแบบการลงทุนต่อไปนี้ และทำแบบทดสอบความเข้าใจในหน้า 3 เพื่อให้
ท่านมั่นใจว่าเข้าใจเงื่อนไขในการลงทุนของท่านเป็นอย่างดีแล้ว ข้อมูลการลงทุนทั้ง 2 ประเภท มีดังนี้

1. Long position คือ การซื้อหุ้นในวันนี้ เพื่อรอขายในอนาคตเมื่อราคาหุ้นดังกล่าวสูงขึ้น

ในการลงทุนแบบ long position หากกำไรต่อหุ้น (EPS) ในอนาคต **<u>สูงขึ้น</u>** จากกำไรต่อหุ้นเป้าหมาย
ท่านจะได้รับกำไรจากการลงทุนนี้ และคะแนนการลงทุนของท่านจะเพิ่มขึ้นตามสัดส่วนของกำไรต่อ
หุ้น (EPS) ที่เพิ่มขึ้น แต่หากกำไรต่อหุ้น (EPS) ในอนาคตลดลง ท่านจะขาดทุนจากการการลงทุนนี้
และทำให้คะแนนการลงทุนของท่านลดลง

2. Short position คือ การยืมหุ้นมาขายในวันนี้ และรอชำระเงินในอนาคตเมื่อราคาหุ้นดังกล่าว ต่ำลง

ในการลงทุนแบบ short position หากกำไรต่อหุ้น (EPS) ในอนาคต **<u>ลดลง</u>** จากกำไรต่อหุ้นเป้าหมาย
ท่านจะได้รับกำไรจากการลงทุนนี้ และคะแนนการลงทุนของท่านจะเพิ่มขึ้นตามสัดส่วนของกำไรต่อ
หุ้น (EPS) ที่ลดลง แต่หากกำไรต่อหุ้น (EPS) ในอนาคตเพิ่มขึ้นท่านจะต้องขาดทุนจากการลงทุนนี้
และ ทำให้คะแนนการลงทุนของท่านลดลง

** ในการทดลองนี้กำหนดให้ราคาหุ้น และ กำไรต่อหุ้น (EPS) เป็นไปในทิศทางเดียวกัน

<u>ตัวอย่าง</u>   หากกำไรต่อหุ้น (EPS) ในปีหน้า **<u>เพิ่มขึ้น</u>** จากกำไรต่อหุ้นเป้าหมาย จะส่งผลให้นักลงทุน
ประเภท

1. Long position   ได้รับ <u>**กำไร**</u> จากการลงทุนนี้

2. Short position   ได้รับ <u>**ผลขาดทุน**</u> จากการลงทุนนี้

_____

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[10] ผู้เข้าร่วมการทดลองในกลุ่ม neutral condition จะไม่มีแบบทดสอบความเข้าใจเกี่ยวกับสถานะการลงทุนในส่วนนี้

กรุณาอ่านและตอบคำถามต่อไปนี้เพื่อทดสอบความเข้าใจของท่าน

1. ในการทดลองนี้ หากท่านลงทุนแบบ **short position** ท่านจะได้รับกำไร และคะแนนการลงทุนเพิ่มขึ้นเมื่อกำไรต่อหุ้น (EPS) ของบริษัทในปีหน้า ....จากกำไรต่อหุ้นเป้าหมาย

ก. เพิ่มขึ้น   ข. ลดลง   ค. คงที่   ง.ไม่แน่ใจ

2. ในการทดลองนี้ หากท่านลงทุนแบบ **long position** ท่านจะได้รับกำไร และคะแนนการลงทุนเพิ่มขึ้นเมื่อกำไรต่อหุ้น (EPS) ของบริษัทในปีหน้า ....จากกำไรต่อหุ้นเป้าหมาย

ก. เพิ่มขึ้น   ข. ลดลง   ค. คงที่   ง. ไม่แน่ใจ

3. หากท่านเป็นนักลงทุนประเภท **Short position** ท่านต้องการเห็นบริษัทที่ท่านลงทุนมีผลประกอบการและกำไรต่อหุ้น (EPS) เป็นอย่างไร

ก. ผลประกอบการดี กำไรต่อหุ้นมีแนวโน้มสูงขึ้น   ค. ผลประกอบการคงที่

ข. ผลประกอบการไม่ดี กำไรต่อหุ้นมีแนวโน้มลดลง   ง.ไม่แน่ใจ

4. หากท่านเป็นนักลงทุนประเภท **Long position** ท่านต้องการเห็นบริษัทที่ท่านลงทุนมีผลประกอบการและกำไรต่อหุ้น (EPS) เป็นอย่างไร

ก. ผลประกอบการดี กำไรต่อหุ้นมีแนวโน้มสูงขึ้น   ค. ผลประกอบการคงที่

ข. ผลประกอบการไม่ดี กำไรต่อหุ้นมีแนวโน้มลดลง   ง.ไม่แน่ใจ

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➢ **เมื่อท่านตอบคำถามครบแล้ว กรุณายกมือแจ้งผู้วิจัยเพื่อรับเฉลยสำหรับแบบทดสอบ**

➢ **กรุณาตรวจคำตอบกับเฉลยให้เรียบร้อย ก่อนเริ่มทำเอกสารชุดที่ 2 ค่ะ**

<u>**เฉลยแบบทดสอบความเข้าใจ**</u>

1. ข

2. ก

3. ข

4. ก

** หากท่านมีข้อสงสัยกรุณายกมือแจ้งผู้วิจัย

หากท่านเข้าใจดีแล้ว กรุณาเปิดเอกสารชุดที่ 2 เพื่อเริ่มการทดลองค่ะ **

ชื่อ-นามสกุล ....

เอกสารชุดที่ 2

เมื่อท่านเข้าใจประเภทในการลงทุน และเกณฑ์การให้คะแนนเงินรางวัลในการทดลองนี้ดีแล้ว กรุณา
เริ่มทำการทดลองได้

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กรุณาระบุเวลาขณะที่เริ่มทำ ....

สมมุติให้ท่านเป็นนักลงทุนในตลาดหลักทรัพย์ ท่านมีความสนใจในธุรกิจอสังหาริมทรัพย์และ
ทำการศึกษาค้นคว้าข้อมูลการลงทุนในธุรกิจนี้มาเป็นระยะเวลามากกว่า 1 เดือน จากข้อมูลที่ท่าน
รวบรวมได้ ท่านพบว่าหนึ่งในหุ้นที่น่าลงทุนอย่างยิ่งในธุรกิจนี้ คือ หุ้นของบริษัท ABC จำกัด[11] และ
ท่านได้ตัดสินใจเลือกใช้กลยุทธ์การลงทุนแบบ Short (Long) position ในหุ้น ABC เพื่อทำกำไรใน
อนาคต ดังนั้น ประเภทการลงทุนของท่านคือ Short (Long) position

ท่านได้เลือกกลยุทธ์การลงทุนแบบ Short (Long) ในหุ้น ABC และ ราคาหุ้นของบริษัท ABC ในเวลา
ที่ท่านทำการลงทุน คือ 50 บาทต่อหุ้น จากข้อมูลอัตราส่วนราคาปิดต่อกำไร (P/E Ratio) ที่บริษัท
คาดการณ์ไว้สำหรับปี 2557 เท่ากับ 2 เท่า ดังนั้น กำไรต่อหุ้น (EPS) เป้าหมายของท่านในปี 2557
คือ 25 บาทต่อหุ้น

<u>เกณฑ์การให้คะแนนการลงทุน</u> คะแนนตั้งต้นของท่านเท่ากับ 20 คะแนน โดยคะแนนของท่านจะ
เพิ่มขึ้นหรือลดลง ตามเงื่อนไข ดังต่อไปนี้

1. คะแนนการลงทุนของท่านจะเพิ่มขึ้น 5 คะแนนสำหรับทุกๆ 1 บาทที่กำไรต่อหุ้นในปี 2557
(actual EPS) ออกมา <u>ต่ำกว่า</u> (สูงกว่า) กำไรต่อหุ้นเป้าหมาย (25 บาท)

2. คะแนนการลงทุนของท่านจะถูกหักออก 5 คะแนนสำหรับทุกๆ 1 บาทที่กำไรต่อหุ้นในปี 2557
(actual EPS) ออกมา <u>สูงกว่า</u> (ต่ำกว่า) กำไรต่อหุ้นเป้าหมาย (25 บาท)

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[11] ข้อมูลที่ผู้เข้าร่วมการทดลองในกลุ่ม neutral condition จะได้รับในส่วนนี้ คือ *"สมมุติให้ท่านเป็นนักลงทุนในตลาดหลักทรัพย์*
ท่านมีความสนใจในธุรกิจอสังหาริมทรัพย์ และทำการศึกษาค้นคว้าข้อมูลการลงทุนในธุรกิจนี้มาเป็นระยะเวลามากกว่า 1 เดือน จาก
ข้อมูลที่ท่านรวบรวมได้ ท่านพบว่าหนึ่งในหุ้นที่น่าลงทุนอย่างยิ่งในธุรกิจนี้ คือ หุ้นของบริษัท ABC จำกัด" เท่านั้น กล่าวคือ จะไม่ได้รับ
ข้อมูลเกี่ยวกับเงื่อนไขการลงทุนที่ผูกกับค่าตอบแทนของผู้เข้าร่วมการทดลองเช่นในกรณีของ short และ long condition

3. หากกำไรต่อหุ้นในปี 2557 (actual EPS) ออกมาเท่ากับ 25 บาท ซึ่งเท่ากับกำไรต่อหุ้นเป้าหมาย พอดี ท่านจะไม่ได้รับคะแนนเพิ่มและไม่เสียคะแนนแต่อย่างใด

ดังนั้น ยิ่งผลประกอบการของบริษัทฯในปีหน้าออกมา <u>ต่ำ</u> (สูง) เท่าใด ท่านจะมีโอกาสได้รับคะแนน และเงินรางวัลสูงมากขึ้นเท่านั้น

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ข้อมูลต่อไปนี้เป็นภาพรวมในการประกอบธุรกิจของบริษัทในปีปัจจุบัน(2556) ข้อมูลทางการเงินต่างๆ ของบริษัท นโยบายบัญชีที่สำคัญ และการคาดหมายของนักวิเคราะห์หลักทรัพย์เกี่ยวกับผล ประกอบการของบริษัทในปี 2557

<u>ภาพรวมการประกอบธุรกิจของบริษัทในปี 2556</u>

บริษัท ABC ดำเนินธุรกิจให้เช่าโรงงานสำเร็จรูป คลังสินค้า ศูนย์กระจายสินค้า และอสังหาริมทรัพย์ อื่น ๆแก่บริษัททั่วไป รวมทั้งการขายอสังหาริมทรัพย์เพื่อการลงทุน บริษัทฯเปิดดำเนินการมากว่า 30 ปี โดยโครงสร้างรายได้หลักของบริษัทมาจากรายได้ค่าเช่าและบริการ 80%   รายได้จากการขาย สินทรัพย์ 15% และรายได้อื่นๆ 5%

บริษัทฯมีกลุ่มลูกค้าหลักเป็นบริษัทต่างชาติที่เข้ามาลงทุนในประเทศไทย และมีอัตราการเติบโตของ พื้นที่ให้เช่าอย่างต่อเนื่องในช่วง10ปีที่ผ่านมา เนื่องจากประเทศไทยมีความน่าลงทุนในด้านแรงงานที่มี คุณภาพและราคาถูก นอกจากนี้สภาวะความไม่แน่นอนทางเศรษฐกิจในช่วงปีที่ผ่านมา ทำให้ ผู้ประกอบการไม่ต้องการลงทุนสร้างโรงงานผลิตด้วยตนเองเพื่อลดภาระต้นทุนในการดำเนินงานและ ตัดสินใจเช่าโรงงานสำเร็จรูปแทน ซึ่งกลายเป็นผลดีต่อบริษัทและส่งผลให้บริษัทฯยังคงสามารถเติบโต ได้อย่างต่อเนื่องภายใต้สภาวะเศรษฐกิจดังกล่าว

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<u>การคาดหมายของนักวิเคราะห์หลักทรัพย์</u>

นักวิเคราะห์จากโบรกเกอร์ต่างๆ ที่ติดตามข้อมูลของบริษัท ABC จำกัดอย่างใกล้ชิดมองว่าในปี 2557 รายได้หลักของบริษัทจากการให้เช่าโรงงานสำเร็จรูป คลังสินค้า และศูนย์กระจายสินค้าจะเพิ่มสูงขึ้น ต่อเนื่องจากปี2556 เนื่องจากแนวโน้มผู้ประกอบการผลิตต่างชาตินิยมเช่าโรงงานและคลังสินค้า สำเร็จรูปในไทยมากขึ้น ทั้งนี้บริษัท ABC มียอดการทำสัญญาเช่าโรงงานและคลังสินค้าในปี 2557 ที่

ได้เซ็นสัญญาและวางเงินมัดจำเรียบร้อยแล้วมูลค่า 8,000   ล้านบาท นักวิเคราะห์จึงคาดการณ์ว่า
รายได้ค่าเช่าของบริษัทจะเติบโตถึง 60% ในปี 2557   ภายใต้ข้อมูลพื้นฐานดังกล่าว จึงประเมินกำไร
ต่อหุ้น(EPS) ของบริษัทในปีหน้าไว้ที่ 30 บาท

[สำหรับกรณี Equity method: กลุ่มที่ 1, 2 และ 5]

<u>นโยบายการบัญชีที่สำคัญ</u>

ก) บริษัทย่อย – จัดทำงบการเงินรวม (Consolidation)

บริษัทย่อยเป็นกิจการที่กลุ่มบริษัท <u>มีอำนาจควบคุม</u> (Control) กล่าวคือ มีอำนาจควบคุมทั้งทางตรง
หรือทางอ้อม ในการกำหนดนโยบายทางการเงินและการดำเนินงานในกิจการอื่น

การมีอำนาจควบคุมถูกสันนิษฐานว่ามีอยู่เมื่อกลุ่มบริษัทมีอำนาจในการออกเสียงในกิจการอื่นตั้งแต่
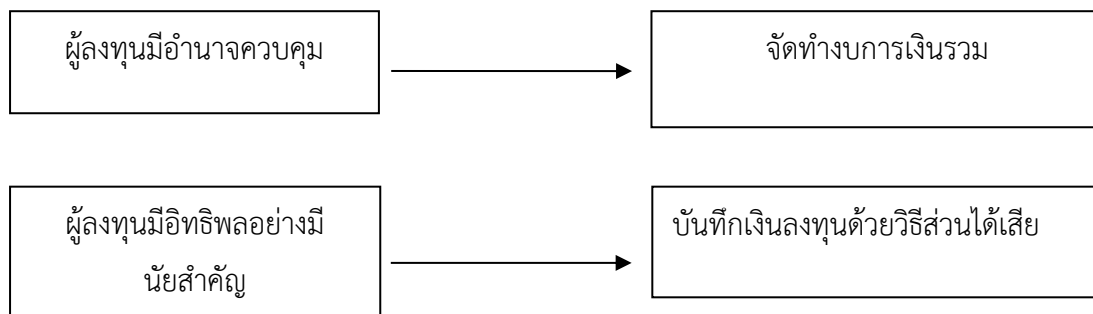ร้อยละ 50 ขึ้นไป

บริษัทจะต้องใช้วิธีจัดทำงบการเงินรวม (Consolidation) ของบริษัทกับบริษัทย่อย โดยรายการที่อยู่
ในงบรวมต้องแสดงจำนวนเงินรวมของทุกรายการที่เป็นของบริษัทใหญ่บวกรายการเดียวกันที่เป็นของ
บริษัทย่อยทีละบรรทัด

ข) บริษัทร่วม – บันทึกเงินลงทุนด้วยวิธีส่วนได้เสีย (Equity method)

บริษัทร่วมเป็นกิจการที่กลุ่มบริษัท <u>มีอิทธิพลอย่างมีนัยสำคัญ</u> (Significant influence) กล่าวคือ มี
ส่วนร่วมในการตัดสินใจเกี่ยวกับนโยบายทางการเงินและการดำเนินงานแต่ไม่ถึงระดับที่จะควบคุม
นโยบายดังกล่าว

การมีอิทธิพลอย่างมีนัยสำคัญถูกสันนิษฐานว่ามีอยู่เมื่อกลุ่มบริษัทมีอำนาจในการออกเสียงในกิจการ
อื่นตั้งแต่ร้อยละ 20 ถึงร้อยละ 50   โดยกิจการต้องพิจารณาถึงสิทธิในการออกเสียงที่เป็นไปได้ ณ
ปัจจุบันที่กิจการถืออยู่ และผลกระทบจากการใช้สิทธิหรือแปลงสภาพสิทธิ

บริษัทจะต้องใช้วิธีส่วนได้เสีย(Equity   method) โดยบันทึกเงินลงทุนเริ่มแรกด้วยราคาทุน และ
ปรับปรุงด้วยการเปลี่ยนแปลงที่เกิดขึ้นภายหลังการลงทุนตามสัดส่วนที่ผู้ลงทุนมีสิทธิในสินทรัพย์สุทธิ
(Net asset) ของกิจการที่ถูกลงทุน

<u>สรุป</u>

ผู้ลงทุนมีอำนาจควบคุม	→		จัดทำงบการเงินรวม

ผู้ลงทุนมีอิทธิพลอย่างมีนัยสำคัญ	→		บันทึกเงินลงทุนด้วยวิธีส่วนได้เสีย

[สำหรับกรณี Operating lease: กลุ่มที่ 3, 4 และ 6]

<u>นโยบายการบัญชีที่สำคัญ:</u> สัญญาเช่าระยะยาว กรณีที่บริษัทเป็นผู้เช่า

ก) สัญญาเช่าดำเนินงาน (Operating lease)

สัญญาเช่าดำเนินงานเป็นสัญญาที่ผู้ให้เช่าเป็นผู้รับความเสี่ยงและผลตอบแทนของความเป็นเจ้าของเป็นส่วนใหญ่ เงินค่าเช่าที่ต้องจ่ายภายใต้สัญญาเช่าดังกล่าว จะบันทึกเป็นค่าใช้จ่ายในงบกำไรขาดทุนโดยใช้วิธีเส้นตรงตลอดอายุของสัญญาเช่านั้น

ข) สัญญาเช่าการเงิน (Financial lease)

สัญญาเช่าการเงินเป็นสัญญาที่ผู้เช่าเป็นผู้รับความเสี่ยงและผลตอบแทนของความเป็นเจ้าของเกือบทั้งหมด ซึ่งผู้เช่าจะบันทึกภาระผูกพันค่าเช่าเป็นสินทรัพย์และหนี้สินในงบแสดงฐานะการเงินด้วยมูลค่ายุติธรรมของสินทรัพย์ที่เช่า หรือมูลค่าปัจจุบันสุทธิของจำนวนเงินที่ต้องจ่ายตามสัญญาเช่าแล้วแต่มูลค่าใดจะต่ำกว่า

<u>สรุป</u>

ประเภทสัญญาเช่า		บันทึกค่าเช่าเป็น
สัญญาเช่าดำเนินงาน	→	ค่าใช้จ่ายในแต่ละปี
สัญญาเช่าการเงิน	→	ทรัพย์สินและหนี้สิน
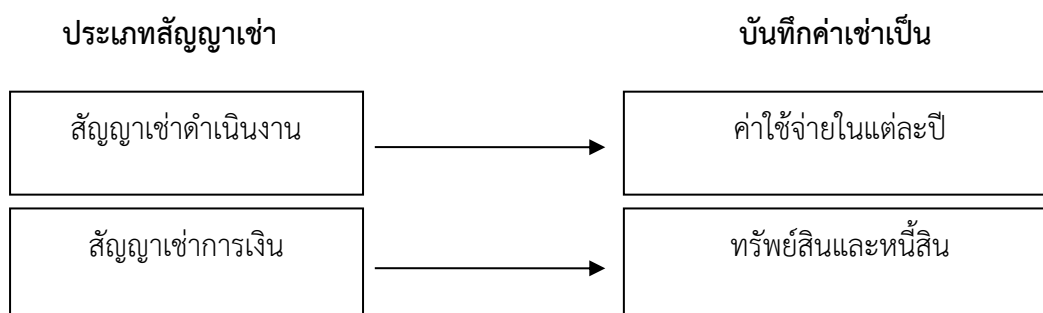
บริษัท ABC มีข้อได้เปรียบในด้านเทคโนโลยีการก่อสร้าง โดยเป็นผู้นำการใช้เทคโนโลยีการก่อสร้าง
โรงงานด้วยคอนกรีตสำเร็จรูปรายแรกในประเทศไทย ทำให้งานก่อสร้างสะดวก เสร็จรวดเร็ว
ประหยัดค่าใช้จ่าย และได้มาตรฐาน โดยมีบริษัท XYZ จำกัด ทำหน้าที่เป็นผู้ผลิตหลักของคอนกรีต
สำเร็จรูปทุกประเภทให้แก่การก่อสร้างโรงงาน คลังสินค้า ศูนย์กระจายสินค้า รวมถึงอสังหาริมทรัพย์
อื่น ๆแก่บริษัท ABC

[สำหรับกรณี Equity method: กลุ่มที่ 1, 2 และ 5]

บริษัท ABC มีสัดส่วนการถือหุ้นในบริษัท XYZ จำกัดร้อยละ 40 และมีสิทธิในการซื้อ (call option)
หุ้นส่วนที่เหลือของบริษัท XYZ ทั้งหมด บริษัท ABC เลือกบันทึกเงินลงทุนในบริษัท XYZ จำกัดด้วย
วิธีส่วนได้เสีย (Equity method) โดยมีรายละเอียดการเปลี่ยนแปลงในบัญชีเงินลงทุน ดังนี้

(หน่วย: ล้านบาท)

	2556	2555
เงินลงทุนในบริษัทร่วม XYZ จำกัด		
ยอดยกมาต้นปี	1,300	1,400
<u>บวก</u> ส่วนแบ่งกำไรในเงินลงทุน	50	40
<u>หัก</u> เงินปันผลรับ	(150)	(140)
ยอดคงเหลือปลายปี	1,200	1,300

ข้อมูลทางการเงินที่สำคัญของบริษัท XYZ จำกัด ณ วันที่ 31 ธันวาคม 2556 มีดังนี้

	บริษัท XYZ จำกัด (หน่วย : ล้านบาท)
สินทรัพย์รวม	5,000
หนี้สินรวม	15,000
รายได้รวม	125
กำไรสุทธิรวม	50

[สำหรับกรณี Operating lease: กลุ่มที่ 3, 4 และ 6]

บริษัท ABC ได้ทำสัญญาเช่าอาคารสำนักงาน 5 แห่ง เป็นระยะเวลา 25 ปี ซึ่งอายุการให้ประโยชน์ของอาคารดังกล่าวประมาณ 35   ปี บริษัทเลือกบันทึกค่าเช่าเป็นรายปีเมื่อถึงกำหนดจ่ายในแต่ละปี บริษัทมีภาระผูกพันจากสัญญาเช่ารายปีที่ไม่สามารถยกเลิกได้   โดย ณ วันที่ 31 ธันวาคม   2556 บริษัทมียอดรวมของจำนวนเงินขั้นต่ำที่ต้องจ่ายในอนาคตตามสัญญาเช่าสำนักงานที่ไม่สามารถยกเลิกได้จำนวน 15,000 ล้านบาท ดังนี้

	ภาระผูกพันค่าเช่าสำนักงาน (หน่วย : ล้านบาท)
ภายใน 1 ปี	1,000
เกินกว่า 1 ปี แต่ไม่เกิน 5 ปี	5,000
มากกว่า 5 ปี	9,000
รวม	15,000

ข้อมูลทางการเงินของบริษัท ABC จำกัดเปรียบเทียบปี 2556 และ ปี 2555 มีดังนี้

งบแสดงฐานะการเงิน		(หน่วย: ล้านบาท)
ปี	2556	2555
เงินสดและรายการเทียบเท่าเงินสด	300	150
ลูกหนี้การค้าและลูกหนี้อื่น	100	50
รวมสินทรัพย์หมุนเวียน	400	200
เงินลงทุนในบริษัทร่วม(ตามวิธีส่วนได้เสีย)	1,200	1,300
อสังหาริมทรัพย์เพื่อการลงทุนให้เช่า	5,800	5,000
ที่ดิน อาคาร และอุปกรณ์	1,450	1,300
รวมสินทรัพย์ไม่หมุนเวียน	8,450	7,600
รวมสินทรัพย์	8,850	7,800
เงินกู้ระยะสั้น	150	100
เจ้าหนี้การค้าและเจ้าหนี้อื่น	300	200
รวมหนี้สินหมุนเวียน	450	300
เงินกู้ระยะยาว	400	500
รวมหนี้สินไม่หมุนเวียน	400	500
รวมหนี้สิน	850	800
หุ้นสามัญ	5,000	5,000
กำไรสะสม	3,000	2,000
รวมส่วนของผู้ถือหุ้น	8,000	7,000
รวมหนี้สินและส่วนของผู้ถือหุ้น	8,850	7,800

งบกำไรขาดทุน			(หน่วย: ล้านบาท)
ปี		2556	2555
รายได้ค่าเช่าพื้นที่		14,000	7,300
ส่วนแบ่งกำไรจากเงินลงทุนตามวิธีส่วนได้เสีย		50	40
รวมรายได้		14,050	7,340
ต้นทุนขายและบริการ		7,000	4,000
ค่าใช้จ่ายในการขายและบริหาร		1,500	500
ค่าใช้จ่ายอื่นๆ		1,000	1,000
รวมค่าใช้จ่าย		9,500	5,500
กำไรสุทธิ		4,550	1,840
กำไรต่อหุ้น		16.00	8.00

อัตราส่วนทางการเงินที่สำคัญ	2556	2555
Return on asset (ROA)	51%	24%
Gross profit margin (GP)	50%	45%
Net profit margin (NPM)	32%	25%
Debt to equity ratio (D/E ratio)	0.11	0.11

จากข้อมูลทั้งหมดของบริษัท ABC   ข้างต้น ท่านคิดว่า<u>มีความเป็นไปได้</u>มากน้อยเพียงใดที่ท่านจะ
<u>ขาดทุน(กำไร)</u> จากการลงทุนนี้   กรุณาวงกลมล้อมรอบตัวเลขที่ตรงกับความรู้สึก/ความคิดเห็นของ
ท่านมากที่สุด [12]

1	2	3	4	5	6	7

น้อยที่สุด   ปานกลาง   มากที่สุด

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[12] คำถามนี้ไม่รวมอยู่ในเอกสารประกอบการทดลองของผู้เข้าร่วมการทดลองใน neutral condition

<u>คำถาม</u>

จากข้อมูลของบริษัท ABC ข้างต้น ให้ท่านตอบคำถามหรือเติมข้อความลงในช่องว่างต่อไปนี้ตาม
ความคิดเห็นของท่าน

> ** ท่านควรระลึกไว้เสมอว่า คะแนนและเงินรางวัลของท่านขึ้นอยู่กับผลประกอบการของ
> บริษัทประเภทการลงทุนของท่าน (Short / Long) และระดับความถูกต้องในการตอบ
> คำถามของท่าน ผู้ที่ตอบคำถามได้ใกล้เคียงคำตอบที่ถูกต้องมากที่สุด 3 ท่าน จะได้รับ
> บัตรสตาร์บัคส์มูลค่า 700 500 และ 300 บาท ตามลำดับ **

1. จากกรณีศึกษา ท่านคิดว่าตัวเลขที่ปรากฏในงบการเงินของบริษท ABC จำกัด <u>มีความน่าเชื่อถืออยู่</u>
ในระดับใด กรุณาวงกลมล้อมรอบตัวเลขที่ตรงกับความรู้สึก/ความคิดเห็นของท่านมากที่สุด

1	2	3	4	5	6	7

น้อยที่สุด   ปานกลาง   มากที่สุด

2. จากข้อมูลทั้งหมดของบริษัท ABC ข้างต้น ท่านคิดว่ามีความเป็นไปได้เพียงใดที่บริษัท ABC จำกัด
จะมีการใช้วิธีการบัญชี (Accounting schemes) ดังต่อไปนี้

กรุณาทำเครื่องหมาย ✔ ลงในช่องที่ตรงกับความรู้สึก/ความคิดเห็นของท่านมากที่สุด

ประเภทของวิธีการบัญชี				ระดับความเป็นไปได้						
				1	2	3	4	5	6	7
1.การปรับกำไรให้สม่ำเสมอ / การเกลี่ยกำไรในแต่ละปี (Income Smoothing)										
2.การเร่งบันทึกค่าใช้จ่ายจำนวนมากในปีที่ขาดทุนเพื่อให้กำไรในอนาคตดีขึ้น										
(Take A Big Bath)										
3.การซ่อนหนี้สินออกจากรายงานทางการเงิน (Off-balance Sheet financing)										

1 = เป็นไปไม่ได้อย่างแน่นอน   2 = ไม่น่าเป็นไปได้   3 = เป็นไปได้น้อย   4 = ไม่แน่ใจ

5 = อาจเป็นไปได้   6 = เป็นไปได้มาก   7 = เป็นไปได้อย่างแน่นอน

3. จากข้อมูลทั้งหมดของบริษัท ABC ข้างต้น ให้ท่านทำการปรับปรุงอัตราส่วนทางการเงินของบริษัท ABC ที่คำนวณจากงบการเงินในปี 2556 ให้สะท้อนฐานะทางการเงินและผลการดำเนินงานของบริษัทได้ดีขึ้น โดยให้ท่านแสดงการคำนวณอัตราส่วนและเติมคำตอบลงในช่องว่างที่กำหนดให้   (ใช้เครื่องคำนวณได้)

รางวัลพิเศษจะพิจารณาจากคำตอบด้านขวามือ และมอบให้แก่ผู้ที่ปรับปรุงอัตราส่วนทางการเงินได้ใกล้เคียงคำตอบที่ถูกต้องมากที่สุด 3 ท่าน

อัตราส่วนทางการเงิน	สูตรคำนวณ	มูลค่าก่อนปรับปรุง	ปรับปรุง (เพิ่ม/ลด)	มูลค่าหลังปรับปรุง	คำตอบ
		ROA เดิม= **51%**			ROA ใหม่ =
1.Return on asset (ROA)	กำไรสุทธิ สินทรัพย์รวม	4,550 8,850			
		D/E เดิม = **0.11**			D/E ใหม่ =
2. Debt to equity (D/E ratio)	หนี้สิน ส่วนของผู้ถือหุ้น	850 8,000			

กรุณาระบุเวลาที่ทำเสร็จ...................................

แบบสอบถามเกี่ยวกับข้อมูลทั่วไปของท่าน

โปรดทำเครื่องหมาย ✔ ลงใน ☐ หรือเติมข้อความลงในช่องว่างตรงตามความเป็นจริง

1. เพศ   ☐ ชาย   ☐ หญิง

2. อายุ   .... ปี

3. ประสบการณ์ในการทำงาน .... ปี

4. อาชีพ   ☐ รับราชการ/รัฐสาหกิจ   ☐ พนักงานบริษัทเอกชน   ☐ ประกอบธุรกิจส่วนตัว

☐ นักวิเคราะห์หลักทรัพย์   ☐ พนักงานธนาคาร   ☐ นักเรียน/นักศึกษา

☐ อื่นๆ โปรดระบุ ....

5. ท่านสำเร็จการศึกษาระดับปริญญาตรีทางด้านใด

☐ บัญชี   ☐ การเงิน/การธนาคาร   ☐ การตลาด

☐ วิศวกรรม   ☐ อื่นๆ โปรดระบุ ....

6. ท่านผ่านการเรียนวิชาบัญชีมาก่อนกี่วิชา ....

กรุณาเลือกกลุ่มวิชาที่ท่านเรียน ตอบได้มากกว่า1ข้อ

(   ) บัญชีการเงิน   (   ) บัญชีบริหาร   (   ) อื่นๆ โปรดระบุ...

7. ท่านมีประสบการณ์ในการลงทุนในตลาดหลักทรัพย์หรือไม่

☐ ไม่มี

☐ มี กรุณาระบุระยะเวลา .... ปี .... เดือน

8. ท่านอ่าน หรือ ใช้ข้อมูลในงบการเงินของบริษัทต่างๆเพื่อประกอบการตัดสินใจลงทุนมากน้อยเพียงใดกรุณาวงกลมล้อมรอบตัวเลขที่ตรงกับความรู้สึก/ความคิดเห็นของท่านมากที่สุด

1	2	3	4	5	6	7

ไม่เคย   ใช้บางครั้ง   ใช้ทุกครั้ง
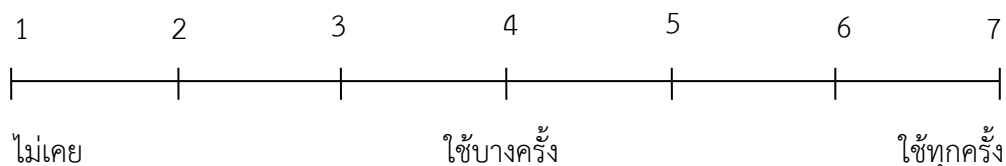
9. ท่านเคยได้ยิน หรือ ทราบข้อมูลการตกแต่งตัวเลขทางบัญชีของบริษัทต่างๆ มากน้อยเพียงใด กรุณาวงกลมล้อมรอบตัวเลขที่ตรงกับความรู้สึก/ความคิดเห็นของท่านมากที่สุด

1	2	3	4	5	6	7

ไม่ทราบเลย   ทราบปานกลาง   ทราบเป็นอย่างดี

10. ในการตัดสินใจลงทุนของท่าน ท่านพิจารณาถึงผลเสียของการตกแต่งตัวเลขทางบัญชีของผู้บริหารมากน้อยเพียงใด กรุณาวงกลมล้อมรอบตัวเลขที่ตรงกับความรู้สึก/ความคิดเห็นของท่านมากที่สุด

1	2	3	4	5	6	7

ไม่พิจารณาเลย   อาจพิจารณาบ้าง   พิจารณาอย่างแน่นอน
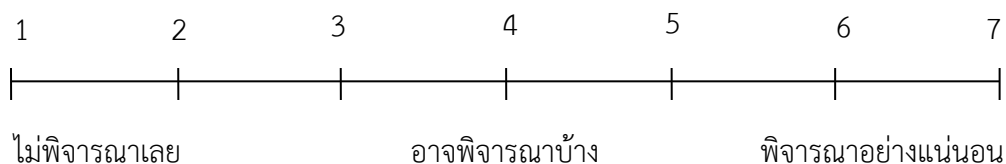
คำถามหลังการทดลอง

โปรดทำเครื่องหมาย ✔ ลงใน ☐ หรือเติมข้อความลงในช่องว่างตรงตามความเป็นจริง

1. จากข้อมูลที่กำหนดให้ หากผลกำไรของบริษัท ABC จำกัดในปี 2557 สูงขึ้นตามการคาดหมายของนักวิเคราะห์หลักทรัพย์ ผลลัพธ์จากการลงทุนของท่านจะเป็นอย่างไร [13]

☐ ท่านจะมีผลกำไร   ☐ ท่านจะมีผลขาดทุน   ☐ ไม่แน่ใจ

[13] คำถามนี้ไม่รวมอยู่ในเอกสารประกอบการทดลองของผู้เข้าร่วมการทดลองใน neutral condition

2. จากข้อมูลที่กำหนดให้ ท่านคิดว่าบริษัทเลือกบันทึกเงินลงทุนในบริษัท XYZ ด้วยวิธีส่วนได้เสียแทน
การจัดทำงบการเงินรวม   (เลือกบันทึกสัญญาเช่าอาคารสำนักงานเป็นสัญญาเช่าดำเนินงาน
(Operating lease) แทนการบันทึกเป็นสัญญาเช่าการเงิน (Financial lease)) ด้วยเหตุผลใด (ตอบ
ได้มากกว่า 1 ข้อ)

☐ เพื่อเพิ่มรายได้ให้แก่บริษัท

☐ เพื่อตกแต่งผลกำไร

☐ เพื่อหลีกเลี่ยงการบันทึกหนี้สินหรือทรัพย์สินในงบการเงิน

☐ อื่นๆ โปรดระบุ ....

☐ ไม่แน่ใจ

3.   จากข้อมูลที่กำหนดให้ ท่านคิดว่าการเปิดเผยข้อมูลของบริษัทเกี่ยวกับเงินลงทุนในบริษัท XYZ
(สัญญาเช่าอาคารสำนักงาน) มีความซับซ้อนมากน้อยเพียงใด กรุณาวงกลมล้อมรอบตัวเลขที่ตรงกับ
ความรู้สึก/ความคิดเห็นของท่านมากที่สุด

1	2	3	4	5	6	7
น้อยที่สุด			ปานกลาง			มากที่สุด
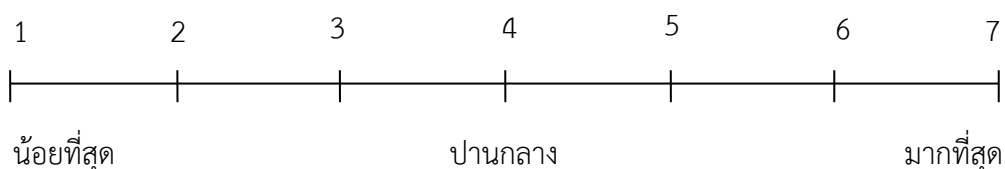
4. จากข้อมูลที่กำหนดให้ ท่านคิดว่าผู้บริหารของบริษัท ABC จำกัด <u>มีความตรงไปตรงมา</u> อยู่ในระดับ
ใด กรุณาวงกลมล้อมรอบตัวเลขที่ตรงกับความรู้สึก/ความคิดเห็นของท่านมากที่สุด

1	2	3	4	5	6	7
น้อยที่สุด			ปานกลาง			มากที่สุด
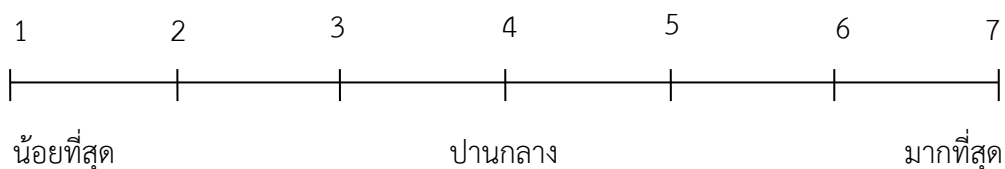
5. จากข้อมูลที่กำหนดให้ ท่านคิดว่าผู้บริหารของบริษัท ABC จำกัด <u>มีความสามารถในการบริหาร</u> อยู่
ในระดับใด กรุณาวงกลมล้อมรอบตัวเลขที่ตรงกับความรู้สึก/ความคิดเห็นของท่านมากที่สุด

1	2	3	4	5	6	7

น้อยที่สุด   ปานกลาง   มากที่สุด

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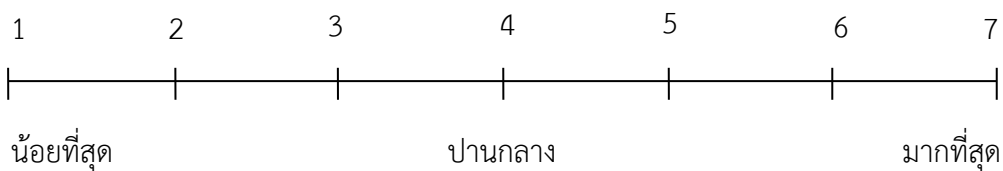
VITA

Huda Wongyim was born on December 30, 1982 in Bangkok, Thailand. She received her Bachelor of Accountancy with 1st class honor from Thammasat University in 2005. She started working with KPMG, Thailand for one year before pursuing Master degree in Business Administration from Thammasat University in 2009. During the completion of her master's degree, she has worked as an accountant at real estate firm. After that, she has worked as a part time lecturer of the Faculty of Management Science at Silpakorn University, Petchaburi IT Campus and Bansomdejchaopraya Rajabhat University.

In 2010, she earned a scholarship from Personal Development Fund, Suan Sunandha Rajabhat University to pursue Ph.D. study and is now a Ph.D. candidate majoring in accounting at Chulalongkorn University. Moreover, in August 2014, she was invited to present her research work at the 7th Asia-Pacific Business Research Conference in Singapore.

จุฬาลงกรณ์มหาวิทยาลัย
CHULALONGKORN UNIVERSITY