"Does the introduction of a single lease standard lead to capital market reactions?"

Master Thesis Accounting & Auditing

Abstract

This thesis examines the effects on the US stock market following the introduction of a new lease accounting standard and the corresponding changes in companies' key accounting ratios. I select six critical events from 2006-2016 that led up to the introduction of a new lease standard, ASC 842. I provide evidence that for three events the stock prices increase around the date of the announcement and that for two events the stock prices decrease. Furthermore, I provide evidence that the most substantial drivers for an increase in cumulative abnormal returns are increases in return on assets and firm leverage. I also find that there is no significant difference in stock market reaction between firms with high numbers of operating leases and firms with an average number of such leases.

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1. Introduction

On the 25th of February, 2016, the FASB issued a new Accounting Standards Update about leasing (Topic 842, hereafter ASC 842). The new guidance was issued in order to increase transparency and comparability between organizations (FASB, 2018). Under the new accounting standards, organizations that lease assets (hereafter lessees) are required to recognize lease assets and lease liabilities on the balance sheet for lease terms of more than 12 months (FASB, 2016).

Extensive prior research has been conducted regarding lease accounting. Prior to 1976, leases were only required to be reported in the footnotes of financial statements. Efforts to end this form of off-balance sheet accounting started with new guidance issued by the FASB in 1976. After the introduction of this new standard, leases that were effectively purchases of assets, were required to be capitalized on the balance sheet as financial leases (Imhoff & Thomas, 1988).

With the guidance issued in 1976, the recognition, measurement and presentation of expenses and cash flows depended on the classification of the lease as either a financial or operating lease. Since the introduction of ASC 842, both financial and operating leases have to be recognized on the balance sheet, rather than only financial leases (FASB, 2016). According to the FASB Chair, Russel G. Golden, the new lease guidance responds to requests from financial statement users for a more faithful representation of an organization's leasing activities. The new standard requires more disclosure regarding leasing transactions, ending one of the largest forms of off-balance sheet accounting (FASB, 2016).

Capitalization of operating leases on the balance sheet is hypothesized to affect several key accounting ratios. Prior research shows that profitability, leverage and liquidity are all likely to be affected by the introduction of the new lease standard (Bennett & Bradbury, 2003; Nuryani, Heng & Juliesta, 2015; Freeman, 2018).

There has also been extensive research on capital market reactions following the introduction of new regulation. Armstrong, Barth, Jagolinzer & Riedl (2010) for example investigate the capital market reactions around the introduction of IFRS. Khan, Li, Rajgopal & Venkatachalam (2018) investigate the capital market reactions around the introduction of various FASB standards.

In this research, I will examine the capital market reactions around the announcement of ASC 842 and announcements that lead up to the introduction of the new lease standard. I will try to answer the following research question:

"Does the introduction of a single lease standard lead to capital market reactions?"

Using a sample of 17,275 firm-year observations, which consists of listed US-companies for the period 2006-2016, I study the effects on the stock market around the dates of the announcements. This is an interesting topic to investigate, as the stock market reactions could potentially be both positive and negative. The stock market reaction could be positive when the new standard leads to reduced information asymmetry. However, as key accounting ratios are likely to be affected by the new standard, the investors could also perceive the announcements as negative.

In order to test these stock market reactions, I use a traditional event study design. For the event study, I selected six critical events regarding the announcement of the new lease standard. I use two different event windows, where the dependent variable will be the cumulative abnormal stock returns for a 3-day and 7-day event window. The abnormal stock returns will be computed by subtracting market returns from the normal returns on the given day.

To verify whether the results for the event study are robust, I will also use the returns of a control group as market returns. In order to test whether the events cause a positive or negative stock market reaction, I take the cumulative abnormal return for the entire event. I find that for both event windows, all six events cause significant stock market reactions.

Furthermore, I conduct several regression analyses in order to test which factors are the biggest drivers for the stock market reactions. I find that a change in Return on Assets is the biggest driver for the stock market reactions, followed by Leverage. In the regression analyses, I also test whether certain industries are more affected by the new lease standard. I find that this is not the case for the retail, airlines, hotels and telecommunications industry.

My research contributes to current literature by investigating the relation between the announcement of the new lease accounting standard and capital market reactions. I will examine the investor reactions to critical events prior to the introduction of the standard, rather than looking at the effects of the implementation of the standard itself.

This thesis is organized as follows: In section 2, I will provide a literature review and the hypothesis development. In section 3, I will provide the research design used to test the hypotheses developed in section 2. In section 4, I will discuss the results for the statistical tests developed in section 3. In section 5, I will provide a conclusion, limitations and recommendations for future research.

2. Literature review and hypotheses

In this section I will provide a literature review and the corresponding hypotheses. Firstly, I will discuss the background of lease accounting. Secondly, I will review the literature regarding lease accounting, regulation and capital market reactions. Lastly, I will discuss the hypothesis development.

2.1 Background

Prior literature regarding lease accounting mainly focusses on the use of operating leases versus capital leases. Operating leases entail the recognition of rent expenses on the income statement by the lessee, rather than recognizing lease assets and liabilities on the balance sheet. In the case of capital leasing, the lessee recognizes lease assets and liabilities on the balance sheet. After capitalizing the leases on the balance sheet, the lessee records depreciation expenses on the lease asset and interest expenses on the lease liability (Lipe, 2001).

Back in 1976, "Statement of Financial Accounting Standard (SFAS) No. 13 'Accounting for Leases'" (SFAS No. 13 hereafter) was issued. Prior to SFAS No. 13, leases that were effectively purchases of assets, only had to be reported in the footnotes of financial statements (Imhoff & Thomas, 1988).

With the new guidance, non-cancellable leases that meet one of the four general criteria, must be capitalized on the balance sheet. The four new criteria to classify as a capital lease consist of: transfer to the lessee of property or ownership, the lease contains a bargain purchase option, the lease term is longer or equal to 75 percent of the useful life and whether the present value of the lease is greater or equal to 90 percent of the fair value of the asset (Lipe, 2001).

Under SFAS No. 13, firms were now required to report capital leases as assets and debt, moving them from the footnotes to the balance sheet (Imhoff & Thomas, 1988). By moving the capital leases to the balance sheet, firms' leverage ratios will increase, and rates of return will decrease. As a result, firms would likely shift from capital leases to operating leases. Imhoff & Thomas (1988) find that firms with large amounts of capital leases reported a substantial decline in capital leases and a corresponding increase in operating leases after adopting the new standard. They also find that the introduction of the standard is associated with capital structure changes, as they observe an increase in equity and a decrease in conventional long-term debt for their sample firms.

However, with the introduction of SFAS No. 13, the debate about lease accounting did not end. There were still many concerns regarding the off-balance sheet nature of operating leases. Similar transactions were still treated differently between standard-setters. This difference between the accounting standards has an effect on the level of debt and performance measures of firms.

If operating leases were also to be capitalized, this would have a significant effect on the profit margins and return on assets of the lessee. As a result, the new proposals were controversial and received many negative responses, especially from lessees with high amounts of operating leases (Beattie, Goodacre & Thomson, 2006).

2.2 Development of the new lease standard

In 2006, the IASB and FASB commenced a joint project "Accounting for Leases", in order to develop a unified lease accounting approach. With the new approach, the standards boards attempted to converge the "rules-based" SFAS No.13 with its "principles-based" IFRS counterpart. Besides the continuous effort to converge GAAP and IFRS, the project was also driven by political pressure. In June 2005, the SEC issued a report following the requirements of the Sarbanes-Oxley act. The report discusses issues concerning off-balance sheet transactions following recent accounting scandals, such as the collapse of Enron (Beckman, Judy, & Jervis, 2009).

In 2009, the IASB/FASB published their preliminary views on lease accounting in a joint discussion paper, responding to concerns regarding the treatment of leases under IFRS and GAAP, that were raised by users of financial statements. In the discussion paper, the two boards propose that all leases that lead to liabilities for future rent payments and the right to use an asset should be recognized on the entity's balance sheet. This would ensure that the application of lease accounting is consistent across sectors and industries (FASB, 2009).

In 2010, the FASB/IASB published the exposure draft Leases, and proposed an IFRS standard and amendments to the FASB Accounting Standards Codification. The proposals were developed in accordance with the responses to the discussion paper that was published in 2009. This draft was then published for comments only, as the proposals could be modified in response to the comments, before being issued in the final form (FASB, 2010.)

In 2013, the FASB issued a second exposure draft Leases (Topic 842). This exposure draft was again developed in accordance with the responses to the 2009 discussion paper and the first exposure draft issued in August 2010 (FASB, 2013).

In 2015, the FASB voted to proceed with the new accounting standard for leases. The final standard was expected to be published in early 2016. The FASB decided that for all public companies, the new standard would be effective for fiscal years (and interim periods) beginning after December 15, 2018. For private companies the standard would be effective for fiscal years beginning after December 15, 2019 (FASB, 2015).

Finally, in 2016, the FASB issued the Accounting Standards Update with new guidance on Lease Accounting (ASC 842). With the new approach, lessees are required to recognize assets and liabilities arising from leases with terms of over 12 months. Unlike old GAAP, in which leases could classify as either operating or capital leases, the new standard requires both type of leases to be recognized on the balance sheet (FASB, 2016). The new approach enables both lessees and lessors to report useful information to financial statement users about the amount, timing and uncertainty of cash flows arising from a lease (Barone, Birt & Moya, 2014).

In 2018, the FASB issued two Accounting Standards Updates regarding ASC 842. The first update laid out the transition of applying the new standards for land easements, as lessees were concerned about the costs and complexity of complying with the transition provisions required by the new standard (FASB, 2018a). The second update concerned comparative reporting requirements for initial adoption and the distinction between lease and nonlease components in a contract (FASB, 2018b).

In table 1, I summarize events related to the joint project of the FASB/IASB and the introduction of the new standard.

Table 1

Events related to the introduction of the new lease standard

Event	Date	Description
#1	July 19, 2006	The FASB and IASB commence a joint project to develop a single lease standard
#2	March 19, 2009	Issuance of the FASB discussion paper
#3	August 17, 2010	Issuance of first exposure draft
#4	May 16, 2013	Issuance of second exposure draft
#5	November 11, 2015	FASB votes to proceed with final standard on leases
#6	February 25, 2016	Official announcement of ASC 842
#7	January 25, 2018	First Accounting Standards Update regarding ASC 842
#8	July 30, 2018	Second Accounting Standards Update regarding ASC 842

2.3 Consequences of ASC 842

While operating leases used to be a legal and GAAP-approved way of keeping debt off the balance sheet, the issuance of ASC 842 officially put a stop to companies using lease contracts to hide "significant liabilities" (Freeman, 2018).

As the new lease standard leads to the capitalization of most leases currently classified as operating leases, this change was expected to have an significant effect on companies' financial statements and key financial ratios (Morales-Díaz & Zamora-Ramírez, 2018). The sectors most likely to be affected were thought to be those with high numbers of operating leases that - until then - were not disclosed in the balance sheet. Morales-Díaz & Zamora-Ramírez (2018) find that these sectors include: retail, airlines, hotels and telecommunications.

Nuryani, Heng & Juliesta (2015) also find that capitalization of operating leases on the balance sheet has a substantial effect on accounting ratios. As the IASB defines accounting ratios as relevant information criterion in decision-usefulness, the new standard is likely to affect decision making by financial statement users.

Firstly, firm leverage is likely to change after introduction of the new standard. Bennett & Bradbury (2003) examine leverage using the debt to equity and debt to total assets ratios. They find that capitalization of operating leases leads to an increase in leverage. After capitalization they observe an increase of 22,9% in total liabilities, while total assets only increased by 8,8% and equity even decreased by 3%. This is in line with research by Imhoff, Lipe & Wright (1991); Beattie, Edwards & Goodacre (1998); Duke, Hsieh & Su (2009); Lückerath-Rovers & de Bos (2009); Singh (2012); Nuryani et al. (2015); Wong & Joshi (2015); Morales-Díaz & Zamora-Ramírez (2018); Maglio, Rapone & Rey (2018) and Freeman (2018), who also find an increase in leverage post-capitalization.

Secondly, liquidity ratios are also likely to change. Nuryani et al. (2015) examine liquidity using the current ratio. They find that after capitalization of operating leases, current ratios decrease significantly. This corresponds with research by Bennett & Bradbury (2003); Duke et al. (2009); Lückerath-Rovers & de Bos (2009) and Freeman (2018), who also find a decrease in current ratios.

Lastly, profitability ratios are also likely to change. However, there is mixed evidence regarding the change in profitability. Imhoff, Lipe & Wright (1991); Beattie, Edwards & Goodacre (1998); Bennett & Bradbury (2003); Singh (2012); Nuryani et al. (2015); Maglio, Rapone & Rey (2018) and Freeman (2018) all examine profitability by looking at the return on assets (ROA), all finding a decrease.

Table 2

Literature about the effect of capitalizing leases on key financial ratios. With + for a positive effect, - for a negative effect, X for no effect or ? for conflicting evidence.

Authors	Effect on leverage	Effect on liquidity ratios	Effect on profitability ratios
Imhoff et al. (1991)	+		-
Beattie et al. (1998)	+		-
Bennett & Bradbury (2003)	+	-	-
Lückerath-Rovers & de Bos (2009)	+	-	X
Duke et al. (2009)	+	-	?
Singh (2012)	+		-
Nuryani et al. (2015)	+	-	-
Wong & Joshi (2015)	+		?
Maglio et al. (2018)	+		-
Morales-Díaz & Zamora-Ramírez (2018)	+		X
Freeman (2018)	+	-	-

In contrast, Duke et al. (2009); Lückerath-Rovers & de Bos (2009); Wong & Joshi (2015) and Morales-Díaz & Zamora-Ramírez (2018) find conflicting evidence regarding changes in ROA post-capitalization. Following the approach of Duke et al. (2009), Wong & Joshi (2015) divide income into sub-groups, by positive and negative income. They find that for the positive sub group the ROA decreased by 12,59%, while for the negative sub-group ROA actually increased by 3,07%.

This deviates from the results of Duke et al. (2009), who actually found a decrease in ROA for the negative sub-group, and an increase in ROA for the positive sub-group. The difference in findings could be explained by the selection of net income before tax used for calculating ROA, as Duke et al. (2009) ignored tax savings resulting from the capitalization of leases (Wong & Joshi, 2015).

In table 2, I summarize the results of prior literature, showing which effects on key accounting ratios the various authors found.

As mentioned, several key accounting ratios are significantly affected by the new lease standard. This could have an impact on the perception by investors and financial analysts of a company's financial health. The decreased current ratio reduces the company's ability to pay off short-term debt. This, with the increase in leverage, could increase a firm's cost of capital. The increased debt to equity ratio could also lead to the violation of debt contracts, as most contracts include debt covenants based on these exact same ratios (Duke et al., 2009).

2.4 Regulation and stock market reactions

Prior literature about accounting regulation shows that the introduction of new regulation can lead to different stock market reactions. Armstrong, Barth, Jagolinzer & Riedl (2010) hypothesize that the introduction of IFRS in 2005 could lead to both a positive and a negative stock market reaction.

On the one hand, the introduction of IFRS can lead to higher financial reporting quality, reducing information asymmetry between a company and its investors, reducing the information risk to the investor and the cost of capital to the company. On the other hand, if investors believe the introduction of IFRS leads to lower financial reporting quality, this introduction would trigger a negative stock market reaction. They find that overall stock market reaction is positive, however, for some of their sub-samples they observe a negative stock market reaction (Armstrong et al., 2010).

Khan, Li, Rajgopal & Venkatachalam (2018) examine stock market reactions regarding the introduction of 138 FASB standards between 1973-2009. They find significant stock market reactions for 34 of the standards, of which 19 are associated with a decrease in stock price, and 15 with an increase in stock price.

They also find that that for 60 of the standards, there was a change in estimation risk. For 35 standards there was a decrease in estimation risk. Surprisingly, for the other 25 standards they observed an increase in estimation risk, which is unexpected, as the new standards were designed to reduce estimation risk. However, for all standards taken together, this change was statistically insignificant (Khan et al., 2018).

I will contribute to current literature about lease accounting by investigating the relation between the announcements regarding the new lease accounting standard and the corresponding capital market reactions. Rather than looking at the effects of the new regulation post adoption, I will examine capital market reactions that are associated with the critical events leading to introduction of the standard.

In the next section, I will discuss the development of the hypotheses that I derived from the literature review.

2.5 Hypotheses

From the literature it appears that the introduction of a single, new standard on leases may have various consequences. As mentioned in the previous paragraph, I will examine capital market reactions at the time of the announcement of the new lease standard, as well as the critical events leading to the introduction of the new standard. Therefore, I arrive at the following research question:

"Does the introduction of a single lease standard lead to capital market reactions?"

As the introduction of prior FASB standards has led to both positive and negative stock market reactions and even to both increases and decreases in information risk (Khan et al., 2018), there could be two different reactions to the announcements regarding the new leasing accounting standard.

Firstly, investors can perceive the announcements as positive. Barone, Birt & Moya (2014) state that the new standard enables both the lessees and lessors to report more useful information to financial statement users about the amount, timing and uncertainty of cash flows arising from a lease.

As the new standard can improve financial reporting quality, information risk and information asymmetry between a company and its investors would decrease. The new standard would also lower the cost of comparing firms' financial positions (Armstrong et al., 2010). The availability of more information, with a lower cost of comparing companies' financial positions, could trigger a positive stock market reaction.

Secondly, investors could also perceive the announcements as negative. As mentioned in the literature discussed, and summarized in table 2, the new standard could affect key accounting ratios. Freeman (2018) finds that the new standard could lead to increased leverage, a decrease in liquidity ratios and a decrease in profitability ratios. For the leverage and liquidity ratios, the findings of Freeman (2018) are in accordance with the results discussed in the literature review. Only the effect on the profitability ratios is uncertain, as prior literature finds mixed evidence for this effect.

As the new standard could also negatively affect firms' financial statements and therefore investors' perception of the company, its announcement could also trigger a negative stock market reaction.

Since such announcements could trigger both a positive and a negative stock market reaction, I form no expectations about the sign of the effect on the stock market following the announcements. Therefore the first hypothesis is as follows:

Hypothesis 1: *The announcement of a new lease accounting standard has an effect on the stock market*

Morales-Díaz & Zamora-Ramírez (2018) find that retail, airlines, hotel and telecommunications industries have high numbers of operating leases currently not disclosed in the balance sheet. As these industries are more likely to be affected by the new standard, I arrived at the following second hypothesis:

Hypothesis 2: *The announcement of a new lease accounting standard has a stronger effect on the stock market for industries with a relatively large number of operating leases*

3. Research design

In the following section, I will explain the research design used to answer the research question. Firstly, I will identify the critical events regarding the announcement of the new lease standard. Secondly, I will discuss the different statistical analyses used. Lastly, I will explain the data and sample selection.

3.1 Critical events

In order to examine the relation between the announcements regarding the new lease standard and the stock market reactions, I will use an event study design. An event study involves the analysis of security price behavior around the time of an event or information announcement (Bowman, 2006). The first step is to identify critical events regarding the announcement of the new standard on leasing. my selection is based on the events summarized in table 1 in the literature review. In table 3, the selected critical events and the expected effects on the stock market are summarized.

The first critical event is the start of the joint project to reconsider lease accounting by FASB and IASB. The date of the news release was the 19th of July, 2006 (FASB, 2006). As the objective of the project was to provide users of the financial statement with useful, transparent and complete information about leasing, I expect a positive stock market reaction following the announcement.

The second critical event was the launch of a public discussion on lease accounting. On the 19th of March, 2009, FASB and IASB jointly published a discussion paper regarding their preliminary views on lease accounting (FASB, 2009). As both financial statement users and companies could comment on this discussion paper, I expect this event to be perceived as positive.

The third critical event is the issuance of the first exposure draft, on the 17th of August, 2010. This exposure draft discussed needed improvements and proposed solutions (FASB, 2010). As discussed in the hypothesis development, improvements can lead to reduced information asymmetry, but the proposed solutions could also have a negative effect on key accounting ratios. Therefore I form no expectations about the sign of the effect on the stock market following the announcement.

The fourth critical event is the revision of the first exposure draft, resulting in the issuance of the second exposure draft on the 16th of May, 2013 (FASB, 2013). As this is a revision of the first exposure draft, following the explanation mentioned before, I form no expectation about the sign of the effect on the stock market.

The fifth critical event is the FASB vote to proceed with the new accounting standard, on the 11th of November, 2015. In this press statement the adoption date for public and private companies also becomes clear. According to FASB Chairman Russell G. Golden, investors would have more accurate information on long-term financial obligations of the company they choose to invest in (FASB, 2015). As investors will have a more accurate picture of such financial obligations, I expect a positive stock market reaction. However, as investors might still be skeptical of the negative change in key accounting ratios, I form no expectation about the sign of the effect.

The sixth and last critical event is the official FASB announcement on the 25th of February, 2016 of the new guidance on lease accounting, . On this date, the FASB issued the Accounting Standards Update as ASC 842. Here too, I form no expectation about the sign of the effect on the stock market, because of the possibility of varying reactions by investors.

Table 3

Critical events selected for the event study. The expected sign of the effect could be positive, negative or no expectation.

Event	Date	Description	Expected effect
#1	July 19, 2006	FASB formally reconsiders Lease Accounting	Positive
#2	March 19, 2009	Issuance of the FASB discussion paper - Leases: Preliminary views	Positive
#3	August 17, 2010	Issuance of first exposure draft	No expectation
#4	May 16, 2013	Issuance of second exposure draft	No expectation
#5	November 11, 2015	FASB votes to proceed with final standard on leases	No expectation
#6	February 25, 2016	FASB issues new guidance on Lease Accounting	No expectation

3.2 Methodology

3.2.1 Traditional event study

In order to answer the first hypothesis, I use a traditional event study design.

Kothari & Warner (2007) state that event studies serve an important purpose in capital market research, as a way of testing for market efficiency. Systematically nonzero abnormal security returns that persist after a particular event are inconsistent with market efficiency. Therefore, I will measure capital market reaction by using abnormal stock returns (Kothari & Warner, 2007).

In order to calculate abnormal stock returns, I follow the approach used by Schaub (2004) and MacKinlay (1997). To mitigate the effects of confounding events, I market-adjust event returns following Armstrong et al. (2010) and Larcker, Ormazabal & Taylor (2011). The first equation defines the calculation of the abnormal returns. To compute the abnormal stock return for security *i* on day *t* ($ARit$), I take the return for the security on day *t* (Rit) and subtract the return of the market on day *t* (Rmt).

$$ARit = Rit - Rmt \tag{1}$$

For computing the market return (Rmt), I will use two different indices, as Campbell, Lo & MacKinlay (1997) state that both indices are popular choices for conducting event studies. The first index used is the CRSP value-weighted market index, following the research of Larcker et al. (2011). The second index is the CRSP equal-weighted market index, which is also in line with the research of Larcker et al. (2011). Dividends and distributions are excluded from the indices, in order to ensure that the results are attributable to events that are related to the research question, rather than to other corporate events (Larcker et al., 2011).

The second equation defines the calculation of the Average Abnormal Returns ($AARt$). This is calculated as the average of all abnormal returns for the securities on day *t*.

$$AARt = \frac{1}{N}\sum_{i=1}^{N} ARit \tag{2}$$

The third equation defines the calculation of the Cumulative Abnormal Returns ($CARt$). This is calculated as the sum of the Average Abnormal Returns for each event, with the event window starting at t1 and ending at t2 (MacKinlay, 1997), (Schaub, 2004).

$$CAR\ t1, t2 = \sum_{t=t1}^{t2} AARt \tag{3}$$

To verify whether the results are statistically significant, I test whether the cumulative abnormal returns of the six events differ from zero (Gao, Liao & Wang, 2018). If the cumulative abnormal returns ($CARt$) differ from zero, the first hypothesis will be accepted. As I do not form an expectation about the sign of the effect, I will use a two-sided t-test. The equation for the t-test is as follows, with $S(AARt)$ being the estimated standard deviation of the average abnormal returns:

$$t - statistic = \frac{CAR\ t1, t2}{\sqrt{T} * S(AARt)} \quad (4)$$

The market reaction will be measured using two event windows. The first event window will be the three-day cumulative abnormal returns [-1,1], with the announcement day being t = 0. This conforms to the research of Armstrong et al. (2010) and Larcker et al. (2011). As it is possible that investors could require more time to react to the announcements, the second event window will be the seven-day cumulative abnormal returns [-3,3].

3.2.2 Multivariate analysis

In order to answer the second hypothesis and investigate the different factors affecting the Cumulative Abnormal Returns, I use a multivariate analysis.

$$\mathrm{CAR} = \beta 0 + \beta 1\ Industry + \beta 2\ Leverage + \beta 3\ Liquidity + \beta 4\ Profitability + \varepsilon it \quad (5)$$

The dependent variable will be the Cumulative Abnormal Returns for the two event windows, as specified in the previous section.

For the independent variables, several are added to the multivariate regression. First, I created a dummy variable Industry, following the research of Maglio et al. (2018). The variable industry equals a value of 1 if the firms are in an industry that is more likely to be affected by the new standard, and 0 otherwise. The industries that are more likely to be affected are further explained in the sample selection.

The following three independent variables are all derived from the literature review, as these factors are most likely to be affected following the introduction of the new lease standard. Leverage is proxied by the total debt divided by total equity of the firm (D/E ratio). Liquidity is proxied by the current ratio, which divides the current assets by current liabilities. Profitability is proxied by the Return on Assets (ROA), which divides the net income by total assets.

Following the research by Larcker et al. (2011), I include two control variables in the model: Size and BM. Size is computed as the natural logarithm of total assets. BM is the book-to-market ratio, which is computed as the ratio of book value to market value (Larcker et al., 2011).

3.2.3 Robustness tests

In order to test for robustness, I follow the approach that I used to test hypothesis one. However, rather than using market returns (Rmt), here I subtract the returns of a control group from the raw returns. Because of using a control group, the first equation changes into equation six as follows:

$$ARit = Rit - Rct \quad (6)$$

Where $ARit$ remains the Abnormal Returns and Rit the return for the security on day t. The new variable Rct consists of the return of the control group. The formulas to calculate the Average Abnormal Returns (equation two) and the Cumulative Abnormal Returns (equation three) remain similar to those in the methodology to test hypothesis one that I described.

The control group consists of the financial firms that were excluded from the main sample, with SIC codes 6000 through 6999. Compared to other industries, key accounting ratios of financial institutions, will be the least affected by the new lease standard (Kostolansky & Stanko, 2011). Therefore, this is an appropriate control group to illustrate a scenario in which abnormal returns are hardly affected by the new lease standard.

3.3 Data and sample selection

All research data was retrieved from the Wharton Research Data Services database. The primary sample consists of all listed US firms available on the CRSP/Compustat Merged database for the period of 2006-2016. As the first critical event takes place in 2006, and the last event in 2016, the full sample only focuses on this period.

The stock data will be retrieved from the CRSP/Compustat annually updated daily stock returns database. The data regarding financial statement items will be retrieved from CRSP/Compustat Fundamentals Annual. The event dates derived from the literature review are retrieved from press statements and documents from the official Financial Accounting Standards Board website.

Following the research of (Larcker et al., 2011), all financial firms (SIC codes 6000 through 6999) are excluded from the main sample, as these firms are subject to different regulations compared to the rest of the sample.

For the dummy variable Industry, which consists of industries more likely to be affected by the new standard, I selected the retail, airlines, hotel and telecommunications industries. As discussed in the literature review, all these industries have high numbers of leases. Therefore the dummy variable equals 1 if the firms fall into one of the following SIC code categories: [5200-5999], [4500-4599], [7000-7099] and [4800-4899]. For all other SIC codes the variable equals 0.

Table 4

Descriptive statistics full sample

	N	Mean	Sd	Min	P5	P50	P95	Max	Skewness	Kurtosis
CAR1[-1,1]	17275	.002	.058	-.209	-.082	.000	.092	.442	1.352	12.836
CAR2[-1,1]	17275	-.001	.057	-.224	-.095	-.001	.086	.408	.882	10.890
CAR1[-3,3]	17275	.002	.087	-.319	-.127	-.001	.142	.637	1.201	11.407
CAR2[-3,3]	17275	-.001	.086	-.312	-.135	-.001	.133	.599	.873	10.014
ROA	17275	-.039	.247	-1.325	-.552	.030	.162	.281	-2.992	13.466
Leverage	17275	.612	1.992	-8.148	0	.277	3.005	12.202	1.709	20.053
Liquidity	17275	3.026	3.078	.341	.676	2.055	8.866	19.589	3.038	14.151
Size	17275	6.524	2.139	2.113	3.091	6.45	10.271	11.639	.166	2.479
BM	17275	488.264	1472.667	1431.6	1.232	90.127	2291.065	10664.86	5.039	31.524

CAR1 and CAR2 are computed as the sum of abnormal returns (normal returns-market returns) for both event windows. The abnormal returns for CAR1 are calculated as retx-vwretx and the abnormal returns for CAR2 are calculated as retx-ewretx. Retx is the CRSP variable for normal returns on a given day and vwretx and ewretx are the CRSP Value-Weighted and CRSP Equally-Weighted returns excluding dividends, which are used as the market return. ROA is computed as net income divided by total assets. Leverage is computed as total debt divided by shareholders' equity. Liquidity is computed as current assets divided by current liabilities. Size is the natural logarithm of total assets and BM is computed as market value divided by book value of equity.

The full sample consists of 17275 firm-year observations. This is after dropping all the duplicates and missing observations for the financial statement items listed below. All variables are winsorized at the 1st and 99th percentile. The descriptive statistics for the full sample are listed in table 4 on the previous page.

4. Results

In the following section, I will discuss the results of the statistical tests. Firstly, I will discuss the results of the event study. Secondly, I will discuss the results of the multivariate regression model. Lastly, I will discuss the results of the robustness tests.

4.1 Event study

In order to test whether the announcements cause a significant stock market reaction, I calculated the Cumulative Abnormal Returns per event, for a 3-day and 7-day event window. CAR1 is computed using the CRSP Value-Weighted returns and CAR2 is computed using the CRSP Equally-Weighted returns. I perceive the capital market reaction as significant when the CAR is significantly different from zero. The results for the event study are presented in table 5 on the next page.

For the first event, the 19th of July 2006, the stock market reaction can be perceived as negative. For CAR1 the coefficient is -0.6% for the 3-day event window and -1.8% for the 7-day event window, both significant at the 1% level. As for CAR2, the coefficient for the 3-day event window is -0.1% and -0.3% for the 7-day event window, also both significant at the 1% level. The coefficients decrease from the 3-day to the 7-day event window, meaning the negative stock market reaction can be perceived as stronger using the wider event window.

For the second event, the issuance of the FASB discussion paper on the 19th of March 2009, results are mixed. The coefficients for CAR1 are 2.2% and 2.7% for the 3-day and 7-day event window, both significant at the 1% level. The coefficients for CAR2 however are both negative and significant at the 1% level, being -1.1% for the 3-day window and -1.2% for the 7-day window. As the results are mixed for the second event using the two different indices, the sign of the stock market reaction is unclear.

For the third event, the issuance of the first exposure draft on the 17th of August 2010, stock market reaction can be perceived as positive. For CAR1 the coefficients are 0.5% and 0.3% for the 3-day and 7-day event window respectively, both significant at the 1% level. For CAR2 the coefficient for the 3-day event window is positive and statistically significant at the 1% level as well, however the coefficient for the 7-day event window is insignificant. As all significant results are positive the stock market reaction can be perceived as positive, but less pronounced for the 7-day event window.

Table 5

Results Cumulative Abnormal Returns Event Study

	Event 1		Event 2		Event 3		Event 4		Event 5		Event 6	
	CAR1	CAR2	CAR1	CAR2	CAR1	CAR2	CAR1	CAR2	CAR1	CAR2	CAR1	CAR2
[-1,1]	-0.006***	-0.001***	0.022***	-0.011***	0.005***	0.005***	-0.001**	0.002***	-0.013***	-0.008***	0.009***	0.007***
[-3,3]	-0.018***	-0.003***	0.027***	-0.012***	0.003***	-0.001	0.004***	0.006***	-0.012***	-0.005***	0.013***	0.010***

*** p<0.01, ** p<0.05, * p<0.1

CAR1 and CAR2 are computed as the sum of abnormal returns (normal returns-market returns). The abnormal returns for CAR1 are calculated as retx-vwretx and the abnormal returns for CAR2 are calculated as retx-ewretx. Retx is the CRSP variable for normal returns on a given day and vwretx and ewretx are the CRSP Value-Weighted and CRSP Equally-Weighted returns excluding dividends, which are used as the market return.

For the fourth event, the issuance of the second exposure draft on the 16th of May 2013, results are also mixed. For CAR1, the coefficients are -0.1% and 0.4%. The first coefficient is statistically significant at the 5% level and the second is significant at the 1% level. As the direction of the reaction differs between the 3-day and 7-day event window, the sign of the stock reaction is unclear. For CAR2 however the results are both positive, with coefficients of 0.2% and 0.6%, both significant at the 1% level.

For the fifth event, the FASB vote to proceed with the final standard on, the 11th of November 2015, stock market reaction can be perceived as negative. For CAR1 the coefficients are -1.3% and -1.2% for the 3-day and 7-day event window. For CAR2, the coefficients are -0.8% and -0.5% respectively. As all four results are statistically significant at the 1% level, the stock market reaction can be perceived as negative. As the coefficients decrease between the two event windows, the stock market reaction actually becomes less pronounced when increasing the event window from three to seven days.

For the sixth and last event, the official announcement of ASC 842 on the 25th of February 2016, stock market reaction can be perceived as positive. For CAR1 the coefficients are 0.9% and 1.3% for the 3-day and 7-day event window. For CAR2 the coefficients are 0.7% and 1% respectively. All results are positive and significant at the 1% level. In contrast to the previous event, stock market reaction to this event becomes more pronounced using the seven day event window. .

The effects on the stock market of all six critical events are summarized in table 6 below.

As I find significant stock market reactions for all six events, the first hypothesis "*The announcement of a new lease accounting standard has an effect on the stock market"* can be accepted. However, as the stock market reactions differ per event, the sign of the effect is unclear.

Table 6

Effect on the stock market for the six events using the results of the event study.

	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6
CAR1	Negative	Positive	Positive	Mixed	Negative	Positive
CAR2	Negative	Negative	Positive	Positive	Negative	Positive
Overall	**Negative**	**Mixed**	**Positive**	**Mixed**	**Negative**	**Positive**

CAR1 and CAR2 are computed using the CRSP Value-Weighted and CRSP Equally-Weighted returns.

4.2 Multivariate regression

In order to test which key accounting variables drive the change in Cumulative Abnormal Returns, I used a multivariate regression model. For the 3-day and 7-day event window, CAR1 and CAR2 are used as dependent variables in two different models. The dependent variables are the three key accounting ratios identified, ROA, Leverage and Liquidity. In order to control for year fixed effects, the variable i.year is added in the regression model. In the second model, the control variables are added in order to mitigate the effect of omitted correlated variables. To mitigate the bias introduced by single firms occurring frequently in the dataset, standard errors are clustered per firm, using the variable gvkey.

In order to test the second hypothesis, I included a dummy variable Industry in the regression model. The dummy variable Industry equals 1 if the firm is in one of the four industries which I identified as more likely to be affected by the new lease standard. These industries are retail, airlines, hotels and telecommunications.

4.2.1 Three-day event window

The results for the first regression model, the 3-day event window, are presented in table 7 on the next page. The first column presents the results for CAR1 Model 1, where CAR1 is the dependent variable and no control variables are included in the model. The second column presents CAR1 Model 2, where CAR1 is the dependent variable again, but in this model the control variables are included. The third column and fourth column follow the same approach as the former two, using CAR2 as the dependent variable.

For CAR1 Model 1 the only significant result is ROA with a coefficient of 0.9%, which is significant at the 1% level. Leverage and Liquidity are insignificant, as well as the dummy variable Industry. When I include the control variables in model 2, more variables become significant. First, the coefficient for ROA increases slightly to 1.1%, still significant at the 1% level. The coefficients of ROA indicate that when ROA increases with one, the stock market reaction increases by around 1%. Leverage and Liquidity both increase slightly and become significant at the 10% level. The control variable Size is significant at the 10% level and Book-to-Market is significant at the 5% level. The dummy variable Industry remains insignificant for Model 2.

Based on the results for CAR1, return on assets seems to be the most substantial driver for the stock market reactions to the announcements. Since leverage and liquidity are only significant at the 10% level for Model 2, the effect of these two factors is negligible. As the dummy variable Industry is insignificant, the stock market reaction is not more pronounced for firms in an industry with high numbers of operating leases.

Table 7

Multivariate regression results for the 3-day event window

	Model 1	Model 2	Model 1	Model 2
CAR[-1,1]	CAR1	CAR1	CAR2	CAR2
Industry	0.002	0.002	0.002	0.002
	(0.001)	(0.001)	(0.001)	(0.001)
ROA	0.009***	0.011***	0.009***	0.011***
	(0.002)	(0.003)	(0.002)	(0.003)
Leverage	0.000	0.001*	0.000	0.001*
	(0.000)	(0.000)	(0.000)	(0.000)
Liquidity	-0.000	-0.000*	-0.000	-0.000*
	(0.000)	(0.000)	(0.000)	(0.000)
Size		-0.000*		-0.000*
		(0.000)		(0.000)
BM		-0.000**		-0.000**
		(0.000)		(0.000)
Constant	-0.006***	-0.002	-0.001	0.003
	(0.001)	(0.002)	(0.001)	(0.002)
Observations	17,275	17,275	17,275	17,275
R-squared	0.041	0.041	0.015	0.016
Control variables	No	Yes	No	Yes
Year FE	Yes	Yes	Yes	Yes

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Industry is a dummy variable which equals 1 if the firm is in an industry more likely to be affected by the new standard. ROA, Leverage and Liquidity are calculated as previously explained in the sample selection. The control variables are Size and BM, also calculated as explained in the sample selection. Year Fixed Effects are included in the regression model using i.year. Standard errors are clustered per firm using gvkey, in order to control for firm fixed effects.

For CAR2, the results are approximately similar. The dummy variable industry in insignificant for both models. For Model 1 only ROA is significant, at the 1% level. When including control variables in model 2, the coefficient of ROA also increases slightly and remains significant at 1%. Leverage and Liquidity become significant at the 10% level and the control variables Size and BM are significant at the 10% and 5% level respectively.

Based on the results for CAR2, return on assets still seems the be the most substantial driver for the stock market reactions. Leverage and liquidity are again only significant at the 10% level for model 2, so the effect is negligible for CAR2 as well. The dummy variable Industry also remains insignificant, so the stock market reaction is still not more pronounced for firms in an industry with high numbers of operating leases.

For the first regression model, I find that return on assets positively affects stock market reactions. This result is not surprising, as return on assets is used as a proxy to measure profitability. When a firm is more profitable, stock prices are likely to increase. This finding is in line with the research of Fama (1970), who finds that stock prices should reflect all publicly available information. As an increase in return on assets would lead to higher profitability, a positive indicator for firm performance, stock prices are expected to increase. The effects of leverage, liquidity and industry are all insignificant for the first regression model.

4.2.2 Seven-day event window

The results for the second regression model, the 7-day event window, are presented in table 8 on the next page. The results follow the same structure as those in table 7. The first two columns present the results for Model 1 and Model 2 with CAR1 as dependent variable and the third and fourth columns present the results for Model 1 and Model 2 with CAR2 as dependent variable.

For CAR1 Model 1, all three variables are significant. ROA is significant at the 1% level with a coefficient of 1.2%. Leverage and Liquidity are both significant at the 5% level with coefficients of 0.1% and -0.1% respectively. When I include the control variables in Model 2, the coefficients of ROA and Liquidity decrease. The coefficient of ROA decreases to 0.9% and becomes significant at the 5% level rather than at the 1% level. For Liquidity, the significance level decreases from 5% to 10%. Leverage remains the same, and is still significant at the 5% level. Both control variables, Size and BM, are significant at the 1% level. The dummy variable industry is still insignificant in the seven-day event window, for both models with CAR1 as dependent variable.

Table 8

Multivariate regression results for the 7-day event window

CAR[-3,3]	Model 1 CAR1	Model 2 CAR1	Model 1 CAR2	Model 2 CAR2
Industry	0.001	0.001	0.001	0.001
	(0.002)	(0.002)	(0.002)	(0.002)
ROA	0.012***	0.009**	0.012***	0.009**
	(0.004)	(0.004)	(0.004)	(0.004)
Leverage	0.001**	0.001**	0.001**	0.001**
	(0.000)	(0.000)	(0.000)	(0.000)
Liquidity	-0.001**	-0.000*	-0.001**	-0.000*
	(0.000)	(0.000)	(0.000)	(0.000)
Size		0.001***		0.001***
		(0.000)		(0.000)
BM		-0.000***		-0.000***
		(0.000)		(0.000)
Constant	-0.016***	-0.022***	-0.002	-0.008***
	(0.001)	(0.003)	(0.001)	(0.003)
Observations	17,275	17,275	17,275	17,275
R-squared	0.030	0.031	0.009	0.010
Control variables	No	Yes	No	Yes
Year FE	Yes	Yes	Yes	Yes

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Industry is a dummy variable which equals 1 if the firm is in an industry more likely to be affected by the new standard. ROA, Leverage and Liquidity are calculated as previously explained in the sample selection. The control variables are Size and BM, also calculated as explained in the sample selection. Year Fixed Effects are included in the regression model using i.year. Standard errors are clustered per firm using gvkey, in order to control for firm fixed effects.

Based on the results for CAR1, return on assets remains the most substantial driver for the stock market reactions following the announcements. As opposed to the results for the 3-day window, leverage actually becomes significant at the 5% level, becoming the second substantial driver for the stock market reactions. Liquidity is still not a substantial driver, as it is only significant at the 10% level for Model 2. The dummy variable industry is insignificant, so I still find no evidence that the stock market reactions to the announcements are more pronounced for firms in an industry with high numbers of operating leases.

For CAR2, same as in the first regression model, the results are reasonably similar to CAR1. When I include the control variables in model 2, ROA decreases and becomes significant at 5% rather than at 1%. Liquidity decreases and becomes significant at the 10% level rather than at 5%. Leverage remains significant at the 5% level, and both control variables are significant at the 1% level. Also here for both models, the dummy variable industry is insignificant.

Based on the results for CAR2, the conclusion is quite similar to those of CAR1. Return on assets is the most substantial driver for the stock market reactions to the announcements, followed by leverage. The effect of liquidity is still not substantial, as the coefficient is still only significant at the 10% level for Model 2. Also for the last regression model, the dummy variable industry is insignificant. I do not find any evidence for a more pronounced stock market reaction for firms in an industry with high numbers of operating leases.

For the second regression model, I find the same results for return on assets as for the first regression model. Return on assets positively affects stock market reactions, in line with the research of Fama (1970). However, for the second regression model, I also find that leverage positively affects stock market reactions. This is an interesting finding, as I expected to find a negative effect for leverage. As previously discussed in the literature review, an increase in firm leverage could increase cost of capital and the threat of violating debt contracts. This increase in cost of capital and threat of violating debt contracts could negatively affect the investors' perception of the financial health of the firm, resulting in a decrease in stock price. However, Demirguc-Kunt, Detragiache & Merrouche (2013) find that an increase in leverage could actually positively affect stock market reactions. This is due to the fact that a higher amount of capital increases the ability to absorb losses. The effects of liquidity and industry remain insignificant for the second regression model.

Overall, ROA seems to be the most substantial driver for stock market reaction around the announcements. Leverage and Liquidity both play a smaller role, but the effect of Leverage increases for the 7-day event window. Both control variables are significant for both regression models, being significant at the 5% level for the 3-day window and at the 1% level for the 7-day window.

For both regression models, the dummy variable Industry in insignificant. This is for both dependent variables and when including the control variables in model 2 this variable remains insignificant. This is an interesting finding, as I would expect stock market reactions to be stronger for firms with high numbers of operating leases. Morales-Díaz & Zamora-Ramírez (2018) find that the retail, airlines, hotels and telecommunications sectors are more likely to be affected by the new lease standard, as these industries have high numbers of operating leases. Since the dummy variable industry is insignificant in all models, I find that the stock market reaction is not stronger for these four industries. Therefore, the second hypothesis "*The announcement of a new lease accounting standard has a stronger effect on the stock market for industries with a relatively large number of operating leases"* can be rejected. I don't find a stronger stock market reaction for the retail, airlines, hotel and telecommunications industries.

4.3 Robustness tests

In order to test for robustness, I used a different version of the event study model. In the first event study I used the CRSP Value Weighted/Equally Weighted indices as market returns in order to compute the abnormal returns. For the robustness test, I used the returns of the control group in order to compute abnormal returns. The control group returns are the average daily returns for the financial institutions, which are calculated by taking the average of the CRSP variable retx. The new control group return variable is then added to the full sample and the abnormal returns are calculated by subtracting the control group returns from the normal returns. The results for the robustness tests are presented in table 9 below.

Table 9

Results Cumulative Abnormal Returns using the returns of the control group as market returns.

	Event 1 CAR	Event 2 CAR	Event 3 CAR	Event 4 CAR	Event 5 CAR	Event 6 CAR
[-1,1]	-0.006***	0.010***	0.010***	0.003***	-0.018***	-0.016***
[-3,3]	-0.017***	0.015***	-0.001**	0.014***	-0.016***	0.016***

*** p<0.01, ** p<0.05, * p<0.1

CAR is calculated as the sum of abnormal returns (normal returns–control returns). For the normal returns the CRSP variable retx is used. The control returns are computed as the average daily return on that day for the control group (financial institutions).

For the first event, the stock market reaction can be perceived as negative. For the 3-day event window the coefficient is -0.6%, where the coefficient for the 7-day event window decreases to 1.7%. For both event windows, the coefficients are significant at the 1% level. As the coefficient decreases, the negative stock market reaction can be perceived as stronger using the wider event window. This is in line with the results found for the first events in section 4.1.

For the second event, the stock market reaction can be perceived as positive. The coefficient for the 3-day event window is 1% and significant at the 1% level. For the 7-day event window the coefficient increases to 1.5%, also significant at the 1% level. As the coefficient increases, the positive stock market reaction can be perceived as stronger using the wider event window. These results are not entirely in line with the results found for the event study, as I found mixed evidence for the stock market reaction regarding the second event.

For the third event, there is mixed evidence on the stock market reaction. For the 3-day event window, the coefficient is positive, at 1% and also significant at the 1% level. While for the 7-day event window, the coefficient is negative at -0.1% but only significant at the 5% level. These results do not conform to the results of the event study, as the stock market reaction to the third event is found to be positive. However, since the only negative coefficient was not significant at the 1% level, the event can probably be perceived as predominantly positive.

For the fourth event, the stock market reaction can be perceived as positive. For the 3-day event window the coefficient is 0.3%, while this increases to 1.4% for the 7-day event window. Both coefficients are significant at the 1% level. These results, too, do not entirely conform to event study results, as I found mixed evidence for the fourth event. However, since only one of the coefficients had a different sign and was only significant at the 5% level, the event can probably be perceived as predominantly positive.

For the fifth event, the stock market reaction can be perceived as negative. The coefficient is -1.8% for the 3-day event window, and increases to -1.6% for the 7-day event window. Both are significant at the 1% level. These are interesting results, as this is the only event for the robustness test where stock market reaction becomes weaker for the wider event window. These results do conform to the results of the event study, where stock market reaction was also perceived as negative.

For the last event, the evidence for the stock market reaction is mixed. For the 3-day event window the coefficient is negative, being -1.6%. However, for the 7-day event window, the coefficient is positive at 1.6%, both significant at the 1% level. As stock market reaction changes from negative to positive for the wider event window, the evidence on the stock market reaction is unclear. This contradicts results from the event study, where stock market reaction was positive.

Overall stock market reactions, as well as stock market reactions for the event study and control group are summarized in table 10 below.

Table 10

Comparison of the effect on the stock market using the results of the event study and robustness test

	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6
Event study	Negative	Mixed	Positive	Positive*	Negative	Positive
Control group	Negative	Positive	Positive*	Positive	Negative	Mixed
Overall	**Negative**	**Mixed**	**Positive**	**Positive**	**Negative**	**Mixed**

* as the only negative coefficient was not significant at the 1% level, the overall conclusion is positive

5. Conclusion

Extensive research exists on stock market reactions to announcements of new regulations. Notable studies include Armstrong et al. (2010), who study stock market reactions to the introduction of IFRS. Khan et al. (2018) studied the stock market reaction to the introduction of 138 FASB standards. This present thesis provides new insights into stock market reactions to the introduction of one single lease standard, ASC 842.

In analyzing my selection of six critical events leading up to the introduction of the new lease accounting standard, I find significant stock market reactions for all six events. The sign of the effect differs by event. Three events trigger a positive stock market reaction and two events trigger a negative stock market reaction. Using the CRSP Value-Weighted and Equally-Weighted returns, I found conflicting evidence between abnormal returns for the second event. While all coefficients were significant, the direction of stock market reaction is unclear. For the other five events, the direction of stock market reaction is the same for the 3-day and 7-day event window. For some events, the coefficient of the effect increased using the 7-day event window, which means that that the stock market reaction becomes more pronounced for a wider event window.

The results for the event study are in line with the results of Armstrong et al. (2010) and those of Khan et al. (2018), who also find significant stock market reactions in both directions. When using the returns of the control group, financial institutions, the results are robust for four of the events. For the other two events the evidence is mixed, but do not contradict the results of the event study.

Furthermore, I investigated which key accounting ratios drive the stock market reactions around the announcements. Following the discussed literature, I investigated the effects of profitability using return on assets, the effect of liquidity using the current ratio and the effect of leverage using the debt to equity ratio.

I find that the most substantial driver of the stock market reaction is a change in return on assets. Based on the results for both regression models, return on assets has the largest coefficients, with positive significant results at the 1% level, using different dependent variables and event windows. This is an interesting finding, as prior literature finds conflicting evidence for the effect of the new lease standard on profitability. The effect of return on assets on the stock market reactions is in line with my expectation. As an increase in return on assets is a positive indicator for a firms' financial health, stock prices are expected to increase. This is line with the research of Fama (1970).

I also find that a change in leverage has a significant effect on the stock market reaction. The variable leverage is slightly significant for the 3-day event window, but becomes increasingly significant using the 7-day event window. This means that leverage is the second most substantial driver, after return on assets. My results are in line with the research of Morales-Díaz & Zamora-Ramírez (2018), Maglio, Rapone & Rey (2018) and Freeman (2018), who all find that the introduction of the new lease standard will have a significant effect on leverage. However, the effect of leverage on the stock market reactions differs from my expectation. Where I would expect an increase in leverage to trigger a negative stock market reaction, due to an increase in cost of capital and threat of violating debt contracts, I actually find a positive effect on the stock market reactions. I expect that this positive effect is could be caused by the fact that an increase in capital increases the ability to absorb losses, as found by Demirguc-Kunt et al. (2013).

The effect of liquidity is a lot weaker than the effects of return on assets and leverage. The variable leverage is only significant for one of the regression models and this effect weakens when including control variables in the model. This means that the effect of liquidity on the stock market reactions is negligible. The results for liquidity are not surprising, as the effect of the new standard on liquidity is not widely discussed by prior literature.

Finally, I investigated whether the effect on the stock market was stronger for industries with a relatively large number of operating leases. I studied this effect using a dummy variable Industry, that included firms in the retail, airline, hotel or telecommunications industry. I find that the stock market reaction is not significantly stronger for these specific industries, as the effect is insignificant for all dependent variables in both regression models. My results contradict those of Morales-Díaz & Zamora-

Ramírez (2018), who find that these four sectors are more likely to be affected by the new lease standard than sectors with an average amount of operating leases.

However, there are limitations to take into account. Firstly, for this type of research, there is always a risk of confounding events that affect the dependent variable. Since stock market reactions could be triggered by many different factors, it is difficult to fully mitigate the effects of confounding events. Secondly, I selected six events that I perceived to be critical to the introduction of the standard. Of course, there could be other events, that I did not select that could yet be critical to the announcement of the new standard.

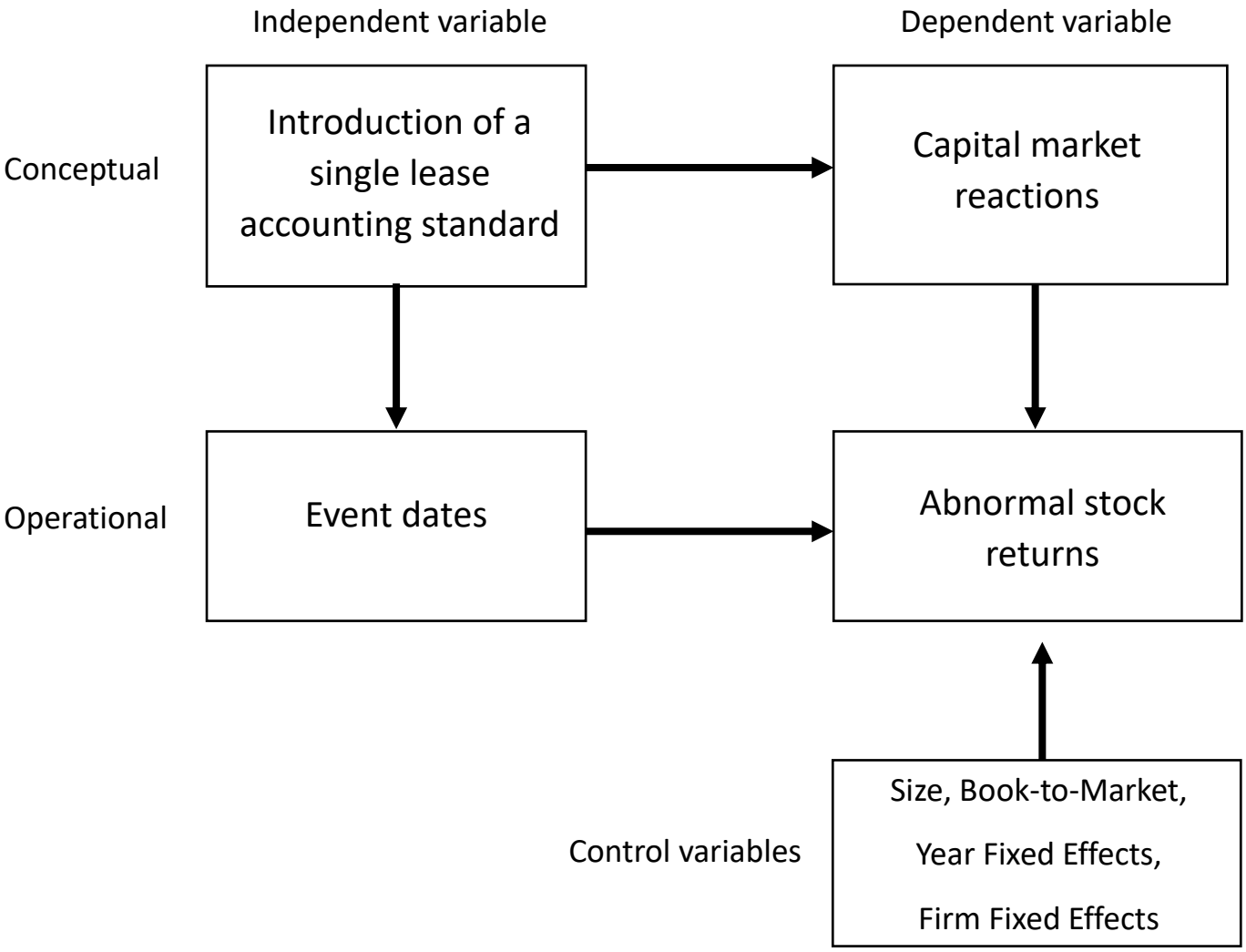
Moreover, this thesis focusses solely on the introduction of ASC 842, which was issued by the Financial Accounting Standards Board. Regulation issued by the FASB is only relevant for firms who have to comply with regulation issued in the United States. Therefore it is not safe to assume that the results can be generalized for the IFRS counterpart, IFRS 16, which was issued around the same time as ASC 842.

I have two recommendations for future research. First of all, it would be interesting to conduct an event study investigating market reactions regarding the introduction of IFRS 16. The IFRS counterpart of the ASC 842 standard was issued around the same time, but the stock market reactions in countries that adopted this IFRS standard could be different than the results found in this thesis.

It could also be interesting to investigate whether the hypothesized effects of the introduction of ASC 842 on key accounting ratios actually hold. As the lease accounting regulation was only recently adopted, the financial statement data is not yet available to conduct this research. Therefore it would be interesting for future research to investigate whether the factors affecting the stock market reactions are also the factors that are affected in the firms' financial statements.

Appendices

Libby boxes



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