STOCKHOLM SCHOOL OF ECONOMICS
Department of Finance
Bachelor Thesis
Spring 2012

The impact of lobbying regulations on firms' financial performance, value and lobbying activities[1]

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Abstract

The "Honest Leadership and Open Government Act of 2007" was introduced in order to increase transparency and accountability of lobbying activities in the U.S., as well as to impose stricter regulations on lobbyists. In this paper we examine both long-term and short-term potential effects of the introduction and implementation of the lobbying regulation on firms' financial performance, value and lobbying activities. We perform a difference-in-difference estimation between the years 2004 to 2010 with companies listed on the S&P 500. We define an exposure measure towards the regulation based on firms' historical lobbying expenditures allowing us to examine whether the changes in outcomes differ across treatment levels. In addition, we investigate short-term effects by performing an event study with three key dates in the process of introducing and passing the regulation. Evidence show that the regulation had a significant negative impact on stock market returns in the beginning of the introduction process. However, the economical significance was low. In the long run, stricter lobbying regulations seem neither to decrease firms' lobbying activities nor decrease firms' ability to gain political influence through lobbying. Furthermore, we argue that firms that spent more on lobbying during the latest financial crisis actually coped better in terms of after tax financial measures.

Keywords: Honest Leadership and Open Government Act, lobbying regulation, financial performance, difference-in-difference estimation, event study

Tutor: Ulf von Lilienfeld-Toal
Presentation date: May 21st 2012

[1] We would like to thank our tutor Ulf von Lilienfeld-Toal for valuable help and support in writing this thesis.

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1. Introduction

I don't take a dime of their [lobbyist] money, and when I am president, they won't find a job in my White House. "

President Barack Obama, 2007-03-11

Lobbying is an important activity for all kinds of organizations, both for corporations and interest groups. The main objective of lobbying is to change legislation and public opinions in a more favourable way. In *Lobbying in America: A reference handbook,* Hrebernar and Morgan (2009) associate lobbying with interest groups, which share common characteristics or objectives and engage in the political system in order to affect public policy. Such groups have been present in the U.S. history for over 200 years and are still surrounded by controversy. On the one hand, lobbying is regarded as an unethical or even illegal influence on political decision-making. As a result, president Obama strive to minimize the influence of lobbyists on his politics. On the other hand, lobbyists are seen as an important part of the U.S. political system. The American League of Lobbyists (ALL) claims that lobbying is a legitimate and necessary aspect of the democratic process, for example by providing information to public officials. According to Bo Jansson, Senior Advisor and founder of JKL, the emphasis on lobbying is on its ability to affect society and regulations. The government would not be able to function effectively in the absence of lobbying activities.

Both the number of lobbyists and the money spent on lobbying to the Congress have risen dramatically in the last 15 years. Between 1998 and 2011, firms and special interest groups have spent over $35 billion to lobby U.S. politicians and federal agencies (OpenSecrets, 2012). The large investments in lobbying have common perception among both the public and lobbyists as providing high returns to contributors. The investments in lobbying is said to be "…minimal compared to the outcomes",[4] making the rewards from lobbying significant for U.S. firms (Bimbaum, 2006). Corporations primarily use lobbying for tax purposes, especially on foreign earnings. Firms spend money on lobbying activities to exploit loopholes in taxation regulation and influence the tax code in order to avoid billions of dollars in taxes[5] (Bowie, 2012). The extensive tax benefits firms can obtain through lobbying seem to be the most sought after objective when hiring lobbyists.

[4] James A. Thurber, lobbying expert at American University

[5] See http://abcnews.go.com/Business/exxon-mobil-verizon-companies-spent-lobbying-lower-tax/story?id=16162792#.T6JcsHjVLBA

Additional effects of lobbying on company performance have been discussed in previous literature. Brinig, Holcombe and Schwartzstein (1991) state that firms with the highest ability and willingness to pay for lobbying will benefit the most from lobbying after regulations has been introduced. In addition, Borisov, Goldman and Gupta (2011) found that legislations aimed at regulating lobbying activities and curbing corrupt lobbying practices significantly reduces abnormal returns during the introduction of the legislation. Chen, Parsley and Yang (2010) state that lobbying is positively related to accounting and market measures of financial performance. Furthermore, Richter, Samphantharak, and Timmons (2008) argue that lobbying efforts are successful in reducing corporate taxes. Research on lobbying has developed into two broad strands: studied focusing on the relationships between lobbying activities and specific policies, and those that aim to explore the consequences of lobbying on firm-specific economic outcomes (Igan et. al, 2011). Research on the effects of lobbying regulation is, on the other hand limited. Hence, we attempt to contribute to the development in this research area with our thesis.

In our thesis we investigate both the effects on financial measures and on lobbying activity of introducing stricter lobbying regulations through the implementation of the ”Honest Leadership and Open Government Act of 2007”, with an effective date of January 1st 2008. We address two principal questions. First, we execute a natural experiment using the lobbying regulation as an exogenous event aiming to answer the question of how lobbying regulations affect company’s performance and lobbying activities in the long run. We use a difference-in-difference method and define companies’ exposure towards the law as the amount of money spent on lobbying before the introduction of the law. We investigate the effects of the regulation on four financial measures on an after tax basis taking into account that lobbying affect company’s financial measures predominantly through tax benefits. The measures include the profit margin, return on assets, return on equity and income before extraordinary items. We study the time period of 2004 to 2010 representing four years before and three years after the implementation of the regulation. We do suspect that there might be a short time lag between the implementation of the law and the financial figures. Therefore, we examine lagged effect for year t+1 to test this theory.

Second, we perform an event study attempting to answer the question of how lobbying regulations affect company value in the short run. We investigate three key dates during the passage of the regulation. The first event date is January 4th 2007, when the regulation was first introduced and reported by committee. The second date is 9th of January 2007, the end of the introduction process. Finally, the third date is July 31st 2007, when the House passed the bill

with amendments. We then investigate whether abnormal returns and cumulative abnormal returns differed significantly between firms with higher prior lobbying activities by performing regressions similarly to previous research by Borisov, Goldman and Gupta (2011).

We believe there are several scenarios regarding how the regulation affected U.S. companies. On the one hand, we would expect stricter regulations to decrease lobbying activities since it has shown to make lobbying more costly as stated by Brinig, Holcombe and Schwartzstein (1991). As a result, company performance should decrease due to lower ability to affect legislation in beneficial ways. This is further supported by the finding of Borisov, Goldman and Gupta (2011) indicating that lobbying regulations resulted in a significantly negative impact on firm value as a of result of market reactions. On the other hand, we believe that lobbying regulations actually might have a positive impact on firm performance for companies' with high resources to invest in lobbying since the increased cost of lobbying after stricter regulation can eliminate opposition from interest groups and corporations with inadequate resources to match larger companies' lobbying investments. Regulation might also raise entering barriers through higher lobbying fees. Lastly, we believe there is a possibility that the regulation might have little or no affect on the magnitude of lobbying activity since lobbying expenses has on a total kept rising during the implementation of previous regulation.

In the short run, we find evidence that the lobbying regulation had a statistically negative impact on three-day cumulative returns on for firms with higher prior lobbying expenses the date the regulation was first introduced on January 4th 2007, after outlier adjustments. In addition, the market reacted negatively to the introduction of the regulation on January 9th 2007, which is observed in the abnormal return of firms with higher prior lobbying expenses. However, the market showed no significant reactions around or on the date when the regulation was passed in the House on July 31st 2007 indicating that the market had already anticipated the passage of the bill in the House. Hence, the information was already incorporated into stock prices.

In the longer run, the difference-in-difference estimation shows that firms with higher prior lobbying expenditures experienced a positive change in profit margin and return on assets after the implementation of the regulation. However, we are cautious to state that such results are attributable to changes caused by the lobbying regulation. Instead we recognize the possibility that the positive differences between firms with different levels of prior lobbying expenditures observed could merely be a result of lobbying expenditures growing faster after January 1st 2008 for firms with higher prior lobbying expenses. We conclude that regulating lobbying has so far had a minor impact on firms lobbying activity. In addition we argue that firms' ability to reap tax

benefits and other potential benefits from lobbying is not affected by stricter lobbying regulations. Furthermore, we suggest that firms investing more in lobbying coped better during the latest financial crisis.

We believe that our study contributes to previous research in several ways. We have investigated how lobbying regulations do affect company's performance, value and lobbying activities both in the short run and the long run, a field that has not yet been widely researched. Furthermore our thesis is by our knowledge unique in the sense that no previous literature has analysed "The Honest Leadership and Open Government Act of 2007" in a quantitative method as done in our thesis. Moreover, we contribute to current research debating whether lobbying regulations are favourable for some firms and hurtful to others. In addition, we contribute to research regarding the latest financial crisis arguing that lobbying was a positive contributor for companies' coping abilities.

2. Background

The first regulation on lobbying was introduced in 1938, with the Foreign Agents Registration Act. The legislation strived to improve lobbying disclosure but did not include restrictions of lobbying activities. Also the Federal Regulation of Lobbying Act of 1946 was mainly a disclosure regulation. Both acts had little effect as the unclear standards made the legislation voluntary in practice. (Holman, 2008)

Seeing that the number of lobbyists increased dramatically in the 1950's, their influence in the US legislative system needed regulation. In 1995, legislation was passed regarding the issue. The Lobbying Disclosure Act of 1995 (LDA) states that all US organizations must register with the Office of Clerk or Secretary of Senate if it plans to engage in lobbying activities during any three-month period and incurring at least $10,000 in lobbying expenses. As defined in the act, a lobbyist include any person who:

1. Receives financial or other compensation for lobbying in excess of $2,500 per three-month period,
2. Makes more than one lobbying contact, and
3. Spends twenty per cent or more of his or her time over a three-month period on lobbying activities on behalf of an employer or individual client.

Unless each of these criteria is met, there is no registration requirement for that individual. The act clarified the definition of lobbying activities and made the political system more transparent for the public.

Due to several lobbying scandals, in particular Jack Abramoff's guilty plea in 2006, stricter regulation of lobbyists was called for. Therefore, "The Lobbying Transparency and Accountability Act" was passed in 2006. The bill barred lobbyists from buying legislators gifts and meals, regulated privately funded trips and required lobbyists to file public activity reports. In short, the act strived to limit corruption in the political arena. This changed the way in which lawmakers and lobbyists interact. The scandals moreover made politicians more reluctant to meet with lobbyist, thus making it more difficult for firms to present their interests (Bimbaum and Balz, 2006).

Despite the fact that new regulation and amendments to LDA had been introduced, concerns still remained regarding that the Congress could not oversee the activities of professional lobbyists (Congressional Research Service, 2006). After the congressional elections in 2006, voters regarded 'corruption and scandal in government' as the single most important issue. As the Republicans had been avoiding a lobbying reform, the Democrats received new seats and majority in both the House and the Senate. (Holman, 2008) The change in politics resulted in an increased focus on stricter lobbying regulation. In 2007, the Honest Leadership and Open Government Act - H.R.2685 (HLOGA) amended LDA. The act was introduced and reported by committee on January 4th 2007 and a consensus was formed regarding the structure of the bill on January 9th 2007. Thereafter, the Senate passed the bill on January 18th 2007. The House then passed the bill with amendments on July 31st 2007, followed by a concurrence of amendments by the Senate on August 2nd 2007. President George W. Bush then signed the act on September 14th 2007[6] (U.S. Government Printing Office, 2007). HLOGA strengthened public disclosure requirements concerning lobbying activity and funding, places more restrictions on gifts for members of Congress and their staff, as well as provides for mandatory disclosure of earmarks in expenditure bills.[7]

In 2009, the Obama administration introduced proposals for further limiting of lobbying influence. A task force was also formed to supplementary examination of lobbying in the political arena. Some of their recommendations were more transparency, stricter fundraising rules and new regulatory bodies (American Bar Association, 2011). Recently, ALL has suggested a reform for stricter disclosure of lobbying activities. The registration requirements under LDA and HLOGA are regarded as too lax. Some of the suggested improvements include tougher registration standards, a shorter reporting period and better enforcement of lobbying law. The proposal was sent to congress in April 2012 (Bogardus, 2012).

[6] The House passed the bill, 411-8, on July 31. The Senate approved it, 83-14, on Aug. 2. (Babington, 2007)
[7] See http://www.commoncause.org/site/pp.asp?c=dkLNK1MQIwG&b=4773635 for a more detailed description of HLOGA main points.

At present, the European Union (EU) does not regulate lobbying as extensively. Lobbying registration is only mandatory for accreditation in the European Parliament, but nonexistent in the European Commission (The European Union Delegation to the USA, 2008). Professor Mahoney argues that the main difference between lobbying in the US and in EU is that EU officials are not elected and hence dependent on monetary contributions to their campaigns. The percentage of successful lobbying campaigns is equal between business and foundations/citizen groups in the EU, while business and trade associations interests win more often in the US (Mahoney, 2008). Nonetheless, on June 23rd 2011, the European Parliament and the European Union agreed to establish a common Transparency Register to facilitate information gathering for citizens and interest groups (The European Parliament, 2011). However, Jansson does not recommend increased transparency legislation, as it would make the system less democratic. Only registered lobbyists would be allowed to present their ideas to the politicians resulting in a decreased possibility to for individuals to affect the legislation.

3. Previous literature

In research by Brinig, Holcombe and Schwartzstein (1991) the results of a stricter legislation on lobbying are discussed. Lobbying regulations make it more difficult to lobby by increasing both the cost of lobbying and the cost of entering the lobbying industry. As a result, the firms with the highest ability and willingness to pay for lobbying will benefit the most from lobbying after regulation has been introduced. However, their conclusion has later been questioned by Lowery and Gray (1997) who argue that the restrictiveness of lobby regulations has little impact on numbers of organizations registered to lobby.

Borisov, Goldman and Gupta (2011), investigate lobbying regulations from a different angle. They examine whether corporate lobbying simply adds value by allowing firms to communicate expert information to policy makers, or if it also adds value by facilitating potentially illegal quid pro quo arrangements, where lawmakers receive private benefits in exchange for favourable policy decisions. They use the corruption scandal involving the top Washington D.C. lobbyist Jack Abramoff as an exogenous negative shock to firms' ability to lobby. The results suggest that firms experience a significant decrease in market value following the guilty plea by Mr. Abramoff the more they had engaged in lobbying activities. In addition, they find that legislations aimed at curbing corrupt lobbying practices significantly reduces abnormal return around the introduction of the legislation. Their results indicate that lobbying creates shareholder value, and that part of this value can be attributed to corrupt lobbying practices.

The research on the effects of lobbying regulation is limited, however, there have been several papers written about corporate lobbying and its impact on firms' value. Chen, Parsley and Yang (2010), examines corporate lobbying from a financial perspective. They find that on average, lobbying is positively related to accounting and market measures of financial performance. In addition, the also prove that portfolios consisting of firms with high lobbying intensity[8] outperform their benchmark portfolios in the three years following portfolio formation. Another paper by Hill, Kelly and Van Ness (2009), reported finding statistically significant returns on investment of approximately $200 for every dollar spent on lobbying by S&P 500 companies that registered as clients in Lobbying Disclosure Filings.

A closely related research area focuses on the linkage between companies lobbying expenditures and their tax rates. Richter, Samphantharak, and Timmons (2008) argue that companies engaging in lobbying receive certain benefits. They suggest lobbying efforts are successful in reducing corporate taxes as their findings suggest that tax rates are negatively related to lobbying expenses. Firms that increase their lobbying expenditures by 1% in one year, reduces their effective tax rates in the range of 0.5 to 1.6 percentage points the following year. This would also imply that these firms would register higher profit margins the year after employing lobbyists. Stigler describes other value-enhancing effects of lobbying on companies' performance (1971). The state has the power to help or hurt firms and industries by securing direct subsidies, limiting competition, granting government contracts or permitting access into previously protected markets. In addition, lobbyists can be hired to express opposition to potentially damaging legislation, instead of advocating desired regulation.

4. Data and Methodology

In order to investigate the impact of the introduction of the "Honest Leadership and Open Government Act of 2007" we employ two different methodologies. First, we perform a difference-in-difference study in order to examine the long-term effects on four financial performance measures in the years 2004 to 2010. We also include observations for 2011 in order to investigate lagged effects of the implementation of the law. Second, we perform and event study on three key event dates in the introduction and passing of the law, in order to measure the abnormal returns in conjunction with the event dates. With the intention of investigating whether the abnormal returns and cumulative abnormal returns are related to companies' lobbying expenditures, we run regressions examining lobbying expenditures' effect

[8] Lobbying intensity is defined as either: 1) lobbying expenditures relative to assets, or 2) lobbying expenditures relative to market value.

on abnormal and cumulative abnormal returns on and around the event dates. The difference-in-difference study examine long-term effects and uncovers the actual company results that are formally present in annual reports whereas the event study deals with short-term effects and displays market participant's expectations of the impact of the new law on company performance. We argue that these two methodologies complement each other.

4.1 The data

We obtain lobbying data from Centre for Responsive Politics (CRP), financial data from COMPUSTAT, and returns and pricing data from CRSP. The data from CRP is compiled using the semi-annual lobbying disclosure reports filed with the Secretary of the Senate's Office of Public Records (SOPR). As implied by the Lobbying Disclosure Act, all who seek to affect U.S. Government policies or the implementation of Federal programs must register and report their activities. Registrants must file semi-annual reports within 30 days of the end of the semi-annual period, detailing the issue they lobby for and the amount spent. The CRP data includes lobbying, PAC contributions and soft money as distinctive categories and is available by calendar year since 1998. Quarterly data are due on the 20th day in January, April, July and October.

Lobbying can be done in-house, and/or via a contractual arrangement with external lobbyists to lobby on a company's behalf. The CRP uses the amount reported by the organization, including both in-house lobbying and external lobbyist filings, as the total lobbying expenditures for the period. Moreover, CRP attributes all lobbying expenses to the parent firm when a subsidiary and its parent firm both file for lobbying. An organization that spends less than $10,000 in any six-month period does not have to state its expenditures; hence the figure is treated as zero by the CRP. Finally, annual lobbying expenditure and income totals on the site are calculated by adding mid-year totals and year-end totals. If a lobbying report is amended, income/expense figures from the amendment are generally used instead of those from the original filing.[9] Our data compromises of lobbying expenditures from the year 2004 to the latest data available, that is, lobbying expenditures for 2010.

We have restricted our sample to include firms listed on the S&P 500 during the whole time period from 2004 to 2011. Thus we exclude firms that have been delisted or listed within the period. In this way, we make sure that we compare the same sample of firms over time. Information about annual S&P 500 constitutes was collected from COMPUSTAT. We have assembled annual accounting data, denominated in dollars, for the time period 2004 to 2011 from COMPUSTAT. In the COMPUSTAT database, the data for year t include companies with

[9] See http://www.opensecrets.org/lobby/methodology.php for more details about the CRP's methodology.

fiscal year ends through March 31st of year t_{+1}. The accounting data compromises of the profit margin measure, income before extraordinary items, the net income, total assets, market capitalization and shareholders equity for each company and each year. In addition, the data contains information about industry classification.

4.2 Difference-in-Difference Estimation

4.2.1 Exposure measure

In the difference-in-difference estimations we study the time period 2004 to 2010. It represents four years prior to and three years after the introduction of the "Honest Leadership and Open Government Act of 2007". We follow a similar approach as von Lilienfeld-Toal and Mookherjee (2011), defining a measure of exposure towards the introduced law. We define a measure of *prior lobbying* for each firm. This measure is defined as each firm's average lobbying expenditures from 2004 to 2007 on an annual basis. We argue this measure to be appropriate since it defines the extent to which each firm is continually investing in lobbying. Thereafter, we create a measure named *rank.* The lobbying firms with positive *prior lobbying* are split into 10 deciles based on their *prior lobbying* expenditure*s.* Firms with the highest *prior lobbying* are assigned a rank of 10 and firms with lowest *prior lobbying* are assigned a rank of 1. Firms with zero *prior lobbying (non-lobbying firms)* are assigned a rank of 0. Table 2 in the appendix describes the cut off points for each of the ten deciles. Differences in the intensity of the treatment (exposure to the regulation) across different groups allow us to examine if the changes in outcomes differ across treatment levels (Meyer, 1995).

4.2.2 The financial measures

The income before extraordinary items (IBEI) is examined as a measure of financial performance. This measure is used instead of other earning measures, such as income before interest, income tax, depreciations and amortizations, because lobbying activities may affect lobbying firm's effective tax rates and interest rates.

Secondly, we examine the profit margin after tax, which is defined as a company's profit after tax divided by its operating revenue. The measure indicates how cost-efficient the company is and it allows us to examine after tax income state effects of the regulations. The profit margin also enables an investigation of the impact on profitability in relation to sales. An increased profit margin indicates a higher profitability relative to the revenue generated by the company. A high profit margin implies a large value for the investors for every unit of revenue generated by the company. High competitiveness generally pressure companies' profit margins. Therefore,

companies managing to receive beneficial political agreements and thus creating a competitive advantage can be expected to improve their profit margin.

Thirdly, we examine the return on assets (ROA) after tax, which is defined as a company's profit after tax divided by its total assets. The financial ratio shows the percentage of profit a company earns in relation to its overall resources. In other words, the measure describes the total return the company generates on its assets. Return on assets places a company's income in proportion to the capital used in order to create it. We believe this measure to be of interest since it provides an overview of how effectively the company is converting its capital into income.

Finally, we study return on equity after tax, which is defined as profit after tax divided by total equity. This measure reveals a company's profitability by measuring how much profit it generates with the money the shareholders have invested. Hence, ROE shows how well a company uses investment funds to generate earnings growth. A high value on ROE characterizes a profitable and efficient company generating a good return on the capital invested by its shareholders.

4.2.3 Data issues

The combined dataset collected from the COMPUSTAT and CRP compromises of 2,748 observations and 353 unique firms. We winsorize the data at the 1st and 99th percentile of the four performance measures[10] to mitigate the effect of potential outliers. The lobbying data was manually assigned to each firm. In addition, the lobbying data was cleaned before annual lobbying expenditures were calculated. This was accomplished by eliminating reports of lobbying expenditures that had been amended later or terminated.

4.2.4 Regressions

When performing the difference-in-difference estimations we employ a step-by-step method beginning with a simplistic specification and then gradually enhance it. We control for time invariant, unobservable industry characteristics as well as time fixed effects in order to provide the analysis as clearly as possible. We use two different measures of the dependent variables. First, we use the financial measure of the current year. Secondly, we use the financial measure of the next year in order to investigate any lagged effects of the regulation. The specifications below are only given for the financial measure of the current year but regressions are run for the lagged effects of the law as well.

[10] Profit margin, IBEI, ROA and ROE.

In the first step we create the two exposure variables and a time dummy[11]. The first exposure variable, *prior lobbying*, is defined as the average lobbying expenses during years 2004 to 2007 for each firm and is measured in logs. The second exposure variable, *rank*, is a ranking variable taking on values of 0-10 corresponding to deciles of *prior lobbying* expenditures. [12] We have chosen to study the time period four years before and three years after the implementation of the law in January 1st 2008, and therefore the time dummy takes on the value 1 if the year is 2008 to 2010 and 0 if the year is 2004 to 2007. The relevant specifications is then given by:

$$y = \alpha_0 + \alpha_1 \times Lobbying + \alpha_2 \times post \times Lobbying + \alpha_3 \times post + \varepsilon \quad (1)$$

where α_0 represents the intercept for firms with zero *prior lobbying* expenditures, α_1 estimates the additional intercept effect for firms with increasing *prior lobbying* expenditures, α_2 is the difference-in-difference effect of the HLOGA regulation and α_3 displays the additional effect of the time after the introduction. The dependent variable y is given by the different accounting measures; profit margin, return on equity, return on assets and IBEI respectively. The variable ε is an error term.

In the second step, we include year dummies in order to control for year specific effects. We create year dummies for each year respectively which takes on the value of one for the current year, and zero otherwise. The specifications can then be defined as

$$y = \alpha_0 + \alpha_1 \times Lobbying + \alpha_2 \times post \times Lobbying + Y + \varepsilon \quad (2)$$

where the variable *Y* represents the year dummies.

In the third step we improve our specification further by controlling for industry specific effects.[13] We classify firms into different industries by their assigned four figure Standard Industrial Classification (SIC) codes. The data is collected from COMPUSTAT and we have approximately 150 different industries classifications in our data set. The relevant specifications is then given by

$$y = \alpha_0 + \alpha_1 \times Lobbying + \alpha_2 \times post \times Lobbying + Y + I + \varepsilon \quad (3)$$

where *I* denotes the industry specific effects.

[11] Post

[12] *Prior lobbying* and *rank*, see section 4.2.1 for further details.

[13] Chen, Parsley and Yang (2010) argue the importance of controlling for industry specific effects when measuring the financial impact of lobbying.

In the fourth and final step we add a size variable in order to control for effects due to difference in size between the firms. For our size variable, we use total assets in year 2004, in logs, for each firm as a proxy for size and the data is collected from COMPUSTAT and denominated in dollars. We choose to use a fixed measure to ascertain that changes in total assets during the time period is not captured by the measure. The specifications is given by

$$y = \alpha_0 + \alpha_1 \times Lobbying + \alpha_2 \times post \times Lobbying + Y + I + S + \varepsilon \quad (4)$$

where S is the size variable. The standard errors are corrected for heteroskedasticity in all regressions.

4.3 Event study

4.3.1 Assumptions

The event study method is a powerful tool to assess the financial impact of changes in corporate policy. Using this method, one can determine whether there is an "abnormal" stock price effect associated with an unanticipated event. However, in order to be able to perform the event study we have to make some critical assumptions as argued by McWilliams and Siegel (1997).

The first assumption we have to make is that the efficient market hypothesis holds. The hypothesis implies that stock prices incorporate all relevant information available to market traders. Hence, any financially relevant information that is newly revealed to investors will be immediately incorporated into stock prices. This assumption allows us to interpret the observed abnormal returns as a result of the event and as a reflection of the true value effect of the event. Even though the efficient market hypothesis has been vividly criticized in recent research[14] we assume the U.S. market to be reasonably efficient.

The second assumption we make is that the event is unanticipated. This means that the market previously did not have any information about the event, signifying that the observed abnormal returns only contain unanticipated information attributable to a specific event. We believe this assumption to hold since prior to the event dates the public could not have anticipated the actual implications of the law introduction.

The last assumption we make is that there are no biases from confounding effects from other events. This means that no other new information is released or events occur simultaneously or

[14] Lo and MacKinlay (1999), Cootner (1964), Lo, Mamaysky and Wang (2000), DeBondt and Thaler (1985), Haugen and Lakonishok (1988).

near our specific event dates. If it were so, the observed abnormal returns could not be attributed to our specific events. In order to control for confounding effects in our study we examine whether any other news is released or any other events occurs on or around our event dates and then eliminate those observations we believe are subject to confounding effects.

4.3.2 Event dates

To investigate the effects of HLOGA on the chosen firms' returns, we have chosen three dates during the passage of the law that we argue is of the most importance.

Firstly, the bill was first introduced and reported by committee on January 4th 2007. Despite the fact that stricter lobbying regulations had been demanded and debated before this date, January 4th is the first formal announcement of the bill and therefore used as the initial event date in our study. A formal announcement is a clear indicator of that lobbying regulation will likely change and this will be new and unexpected information for the public on the day of formal introduction. Following the introduction, the bill gained 17 co-sponsors during January 4th to January 9th 2007.

Secondly, the date on January 9th 2007 is regarded as the end of the introduction process, thus the day is of importance as it can be assumed that a consensus had been formed regarding the constituents of the bill. The Senate first passed the bill on January 18th 2007, but a clear signal had already been sent to the public on January 9th that the Senate would pass the bill. Even though the bill had previously been introduced, the information can still be seen as unanticipated by the public and business community since the consensus in the Senate is a strong indicator of that lobbying regulation will likely change.

Thirdly, the House then passed the bill with amendments on July 31st 2007, followed by a concurrence of amendments by the Senate on August 2nd 2007. The passing by the House is a strong indicator of that the bill will become part of US legislation in the near future. Until the House has passed the bill, firms cannot know whether the bill will be enacted and thus have an impact on their business. As a result, July 31st can be seen as an event providing new information to the public regarding HLOGA that might cause abnormal returns. President George W. Bush then signed the act on September 14th (U.S. Government Printing Office, 2007).

We have chosen not to investigate the importance of the last two dates (August 2nd and September 14th), as we argue that they are both anticipated events in the process of passing

HLOGA. The signing by the president and the second passing in the Senate are anticipated activities with only formal status.

4.3.3 Abnormal and cumulative abnormal returns

For each of our event dates we examine market's reactions to the introduction of HLOGA by generating abnormal returns and cumulative abnormal returns on and around the event dates. We compute a total of three different measurements; abnormal returns on the event date and two separate cumulative abnormal returns for the event window of the event date±1 day and the event date±3 days, respectively for each stock. The abnormal returns captures the market reactions of the event on the official announcement date while the cumulative abnormal returns enable us to capture market reactions prior to the event as well as the after the closing of the market on the announcement date. The lengths of the event windows are chosen for different reasons. The prior-post introduction of the act window is justified by the fact that there might be a leakage of information prior to the announcement of the different events in the stages of implementation. The measures are defined as:

$$AR_{i,\tau} = R_{i,\tau} - E\left(R_{i,\tau}|X_{\tau}\right)$$

$$CAR_i(\tau_{-1}|\tau_1) = \sum_{\tau=\tau_{-1}}^{\tau_1} AR_{i,\tau}$$

$$CAR_i(\tau_{-3}|\tau_3) = \sum_{\tau=\tau_{-3}}^{\tau_3} AR_{i,\tau}$$

Where $AR_{i,\tau}$ is the abnormal return for stock *i* at time period τ, $R_{i,\tau}$ is the actual return for stock i at time period τ and $E\left(R_{i,\tau}|X_{\tau}\right)$is the estimated return for stock *i* at time period τ given the benchmark return X_{τ}. $CAR_i(\tau_{-1}|\tau_1)$ is the cumulative abnormal return for stock *i* between time period τ_{-1} and τ_1, and $CAR_i(\tau_{-3}|\tau_3)$ is the cumulative abnormal return for stock i between time period τ_{-3} and τ_3.

We use the same sample of firms as in the difference-in-difference estimation, all firms listed in the S&P 500 throughout the years 2004 to 2011. However, we eliminate *non-lobbying firms* since we argue their stock prices not to be sensitive to information regarding regulations on the lobbying market. The daily stock returns are downloaded from the CRSP and are defined as the official closing price of each trading day, adjusted for subsequent capital actions and denominated in USD.

$$R_{i,\tau} = \frac{P_{i,\tau}}{P_{i,\tau-1}} - 1$$

4.3.4 Model to estimate abnormal returns

MacKinlay (1997) argues for several ways in which one can estimate a stock's estimated or expected return. We have chosen to employ a market model in our study in order to calculate abnormal and cumulative abnormal returns. The market model represents a potential improvement over the constant mean return model. "By removing the portion of the return that is related to variation in the market's return, the variance of the abnormal return is reduced. This in turn can lead to increased ability to detect event effects." (MacKinlay, 1997). However, because the daily expected returns are close to zero, the model for expected returns does not have a big effect on inferences about abnormal returns, giving an advantage to event studies with event windows of only a few days (Fama, 1997). The market model is a statistical model that relates the return of any given security to the return of the market portfolio. The model's linear specification follows from the assumed joint normality of asset returns. Abnormal returns are defined as:

$$AR_{i,\tau} = R_{i,\tau} - R_{\tau}^{f} - \beta_{\tau}^{i}\left(R_{\tau}^{SP500} - R_{\tau}^{f}\right)$$

where $R_{i,\tau}$ are actual returns for secutiry *i* at time τ, R_{τ}^{f} is the risk-free returns and R_{τ}^{SP500} is the market returns. The β_{τ}^{i} is defined as the correlated relative volatility between security *i* and the market portfolio. We use the value weighted S&P 500 index as a proxy for the market portfolio. The S&P 500 index is downloaded from the CRSP and denominated in USD.

$$\beta_{\tau}^{i} = \frac{Cov\left(r_{\tau}^{i}, r_{\tau}^{SP500}\right)}{Var\left(r_{\tau}^{SP500}\right)}$$

4.3.5 OLS Regression and properties of abnormal returns

We set the estimation window to 120 trading days prior to the event, beginning on the fourth day prior to the event. By this, the estimation window and the event window do not overlap. This design provides estimators for the parameters of the normal return model that are not influenced by the returns around the event. As further suggested by MacKinlay (1997) we apply an ordinary least squares procedure in order to estimate the market model parameters in the estimation window.

4.3.6 Regressions

In order to examine the stock market reactions for companies with varying amounts of lobbying expenditures we run regressions where our three different measurements[15] are set as the dependent variable. Alternatively, we considered the possibility of aggregating abnormal and cumulative abnormal returns through time and across securities in order to draw overall inference for the event, as proposed by MacKinlay, (1997). However, we regard this approach to be insufficient for drawing any conclusions about the effect of lobbying expenditures since firms in different deciles of lobbying expenditures have shown to be rather unlike in other aspects.[16] Instead, we follow the approach made by Borisov, Goldman and Gupta (2011) and control for size and industry effects. In this way, we will be able to draw conclusions by comparing our results with their study which examines the introduction of "The Lobbying Accountability and Transparency Act of 2006" in a similar way.

In our report we use three different measurements of the company's lobbying activity. First, we use the same two measurements as used in the difference-in-difference estimation, that is, *prior lobbying* and *rank*. Second, we create an additional variable measuring the company's lobbying expenditures in 2006, named *lobbying in preceding year*. The regression specification is then given by

$$y = \alpha_0 + \alpha_1 \times Lobbying + \alpha_2 \times FirmeSize + I + \varepsilon \quad (4)$$

where y is defined as either abnormal returns, cumulative abnormal returns ±1 day or cumulative abnormal returns ±3 days. $Lobbying$ is defined as any of other three measurements of lobbying expenditures. *FirmSize* is total assets in the year preceding the event and I represents industry fixed- effects based on the Fama-French 12 industry classification. The standard errors are corrected for heteroskedasticity, ε representing the error term.

4.3.7 Outlier, confounding effects and how results are presented

We control for outliers by eliminating observations with absolute values of abnormal and cumulative abnormal returns exceeding 10% following the approach by Markides (1996). By doing this, we eliminate 4 stocks on January 4th 2007, 7 stocks on January 9th 2007 and 11 stocks

[15] Abnormal returns on the event date and two separate cumulative abnormal returns for the event window of the event date±1 day and the event date±3 days, respectively for each stock.
[16] For example industry and size.

on July 31st 2007. In addition, we adjust for confounding effects by downloading event data from CRSP for each firm and eliminate those firms with firm-specific events around our chosen dates. In total, 2 stocks on January 4th 2007, 2 stocks on January 9th 2007 and 1 stock on July 31st 2007 are eliminated due to acquisition/reorganization or splits and stock dividends. No additional activities of significance happened during any of our event dates that might affect our results by causing abnormal returns and which would need to be taken into account. We report the results of our study in two steps: (1) without any adjustments being made and (2) adjusted for outliers.

5. Results

5.1 Difference-in-difference estimation

5.1.1 Descriptive Statistics

Table 1 presents summary statistics for the difference in difference estimation. Panel A presents summary statistics for the whole sample of firms, whereas panel B and C presents summary statistics for two subgroups of the sample. We use firms' above/below the median of *prior lobbying expenditures*[17] (above/below $545,500) to form two classes; high lobbying firms and low lobbying firms.

Panel A shows mean annual lobbying expenditures of all firms of $1,908,772 before the law, compared with $2,783,771 after the law, amounting to an increase in annual lobbying expenditures of $874,999 (approximately 46%).[18] Panel B shows mean annual lobbying expenditures of high lobbying firms of $3,705,349 before the law, compared with $5,181,667 after the law, amounting to an increase in annual lobbying expenditures of $1,476,318 (approximately 40%).[19] Panel C shows mean annual lobbying expenditures of low lobbying firms of $142,476 before the law, compared with $426,289 after the law, amounting to an increase in annual lobbying expenditures of $283,813 (approximately 199%). [20]

Panel A, B and C all show that average profit margin, IBEI and ROA and ROE were higher pre law introduction than post law introduction. Furthermore, firms compromising the high lobbying group were on average approximately 3.2 times the market capitalization of the low lobbying firms and 4.4 times the total assets of the low lobbying firm pre law. The corresponding numbers post law were approximately 3.1 and 4.3, respectively.

[17] *Prior lobbying expenditures* refers to average lobbying expenditures during 2004-2007, that is, four years prior to the effective date of the HLOGA if not stated otherwise.
[18] Standard deviation increased from $3,746,942 to $4,965,097.
[19] Standard deviation increased from $4,677,737 to $6,127,988.
[20] Standard deviation increased from $219,267 to $885,701.

Table 3 presents summary statistics for lobbying expenditures for the different deciles. During 2004 to 2010, lobbying expenditures ranged from 0 to $49,200,000[21]. In 2008, the year when HLOGA came into effect, average lobbying expenses ranged from $14,169 in the 0th decile to $14,800,000 in the 10th decile, which represents a difference of $14,785,831. In the following years, average lobbying expenditures ranged from $140,548 to $14,200,000 in 2009 and $247,119 to $14,400,000 in 2010. On average, firms in the 10th decile actually decreased their lobbying expenses in year 2009 but the expenditures increased slightly again in 2010. Some interesting statistics are the increases of lobbying expenditures in year 2008, the first effective date of HLOGA. Firms in the 10th decile did on average increase lobbying expenditures by around 11% in year 2008 and the corresponding number for firms in the 9th decile was around 24%. Firms in the 1st and 2nd decile increased their lobbying expenditures by 106% and 70% respectively. Furthermore, firms that did not spend money on lobbying prior to HLOGA actually registered positive average lobbying expenditures in the years following the law.

Table 4 presents summary statistics for the lobbying expenditures of industries classified according to Fama-French 12 industry classification, which is used in the event study. Among our sample firms, those belonging to the Telecom industry lobbied the most on average, with average lobbying expenditures of $7,618,723 from 2004 to 2010. Furthermore, they were by far the industry with highest average lobbying expenditures after the introduction of HLOGA with expenses of $8,382,520 as compared to the second highest industry Energy with average expenditures of $5,129,885 post law. The majority of firms in our sample are, however, in the Business Equipment (Computers, Software, and Electronic Equipment) industry and the Finance industry having average lobbying expenditures during 2004 to 2011 of $1,767,364 and $1,767,945 respectively. These differences prove to us the importance of controlling for industry effects in our analysis.

5.1.2 Graphical Illustrations

We begin with a visual depiction of the effect of the introduction of the law. To begin with, it is apparent from figure 1 that overall, the growth of lobbying expenditures levelled of first in year 2009, a year after the introduction of the law. Lobbying expenditures actually increased on average in 2008, the first effective year of the law. Looking at figure 2, one can see that firms in the high lobbying group were the greatest contributors to change in trends in year 2009. Figure 3 further shows that firms with the highest *prior lobbying* expenditures are those with the strongest decline in growth rate of lobbying expenditure, a year after the law introduction. It is

[21] General Electric spent $49,200,000 in year 2010.

also evident that firms in the 10th decile experienced a downward trend in lobbying expenditures in 2009.[22] However, lobbying expenditures increased again in 2010.

When performing a difference-in-difference estimation the trends in the accounting measures for the treatment group and the control group must be similar for the time period before the introduction of the regulation in order to give accurate results. Differences in pre-trends between the control and treatment group can otherwise give misleading results that would make the difference-in-difference estimation incorrect. Therefore, we must take this into account if and then where eventual differences might occur when analyzing our results.

In Figure 4 through Figure 15 in the appendix, the averages of the four financial measures are plotted respectively in order to provide a good overview of the measures' trends over time. The financial measures are plotted first for the total sample of firms and then for both high and low lobbying groups, followed by the different deciles of groups. In Figure 4 through Figure 15 the dependent variable is defined as the financial measure of the current year.

Figure 4 plots average profit margin over time. There is an apparent change in average profit margin just around the introduction of the law, where the downward trend visible prior to HLOGA is interrupted and instead commences an even steeper downward trend. Of course, the possibility exists that this may have been caused by other macroeconomic factors occurring around 2007 and 2008 such as the latest financial crisis. Therefore, we examine whether the average profit margin decreased more or less for firms with higher lobbying expenditures prior to HLOGA. Figure 5 plots average profit margins for firms in the high and low lobbying group and figure 6 plots average profit margins for firms in the different deciles. Figure 5 shows that firms with lower *prior lobbying* expenditures experienced a somewhat stronger downturn in average profit margins than firms with higher *prior lobbying* expenditures. However, firms in the lower lobbying group had on average a higher profit margin before year 2008 and the pre-trends seem to differ slightly. However, in looking at figure 6 the divergence is much less apparent when comparing firms categorized in different deciles. However, there might be somewhat different pre-trends for the profit margin, which has to be taken into consideration since it might cause a bias in our results.

Figure 7 plots average income before extraordinary items over time. As with the profit margin, there is a clear change in average IBEI just around the introduction of the law, where the downward trend visible prior to HLOGA becomes even more downward sloping. Following the

[22] Average lobbying expenditures decreased by $600,000 from year 2008 to 2009.

same reasoning as with the profit margin, figure 8 and 9 examine the average IBEI for the subgroups high/low lobbying groups and groups based on deciles of *prior lobbying.* Solely based on graphical illustrations, it is not clear whether firms with high lobbying expenditures had a deviating IBEI than firms with lower lobbying expenditures post HLOGA. Figure 8 shows that firms in the high lobbying group have historically had a higher IBEI than firms in the low lobbying group. Furthermore, we conclude that the overall trend of the IBEI looks somewhat similar between the two groups. However, figure 9 shows that firms in the two highest deciles have seen a somewhat different pre-trend than the other firms, which might induce a bias that we will have to take into account.

Looking at figure 10, plotting average return on assets over time, one can see that prior to HLOGA there was a beginning of an overall downward trend among the S&P 500 firms. This trend was interrupted and replaced by a steeper downward trend in 2008, the year of the implementation of the law. Figure 11 illustrate the average return on assets for firm in the high and low lobbying groups. It is evident that the downward trend after the implementation fo the law was steeper for firms with lower *prior lobbying* expenditures. The graph shows that the pre-law downward trend for firms in the different groups were fairly similar, however we investigate this further by looking at firms in different deciles of *prior lobbying* in figure 12. The pre-trends remain similar when looking at different deciles, perhaps with an exception for firms in the 5th decile. Figures 13, 14 and 15 plots average return on equity over time. The trends observed are much similar to those of the return on assets. There is however, a somewhat larger divergence in pre-trends for the different groups of companies studied. We do suspect that these divergences are too large to be able to draw any inference from the regression results.

In looking at all figures we are able to conclude that the pre-trends between the groups look rather similar for most measures which reduces the problem of biased results due to differences in trends before HLOGA. However, trends differ slightly between high and low lobbying groups for the profit margin of the current year, which could bias the results. However, we believe the deviations not to be too problematic since the difference decreases when looking at trends attributable to deciles of *prior lobbying* expenditures. Differences in pre-trends regarding the return on equity are slightly more apparent, which must be taken into consideration when discussing our results. Looking at all figures we suspect there to be a lack of significant changes in the financial measure IBEI after the introduction of HLOGA since we do not observe any clear deviation from the trends between the groups after the introduction. We now proceed to regression results, which allow us to examine the robustness of these results by the inclusion of various controls.

5.1.3 Regression results

We present the results of the difference-in-difference estimation using the financial measure of the current year in Table 5 Panel A through Panel E. In Table 5 Panel A we see the results of the first difference-in-difference specification.

We can observe that there is a positive impact on the profit margin that is statistically significant on the one percent level using *rank* as the exposure measure. However, no statistical significance at the generally acceptable levels of significance[23] was obtained when using *prior lobbying* as a measure. The coefficient when *rank* is used as the measure is 0.38. The findings obtained above result in that the highest decile of firms will experience on average profit margins of 3.8 percentage units higher that *non-lobbying firms*. In Panel B through D we control for year effects, industry effects and size effects and observe a still positive impact on the profit margin on the five percent level for *rank.*

We observe a positive impact on the ROA using *rank* as the measure, a result that is statistically significant on the five percent level. The coefficient is 0.171. Conversely, using *prior lobbying*, the impact is still positive but not statistically significant. The statistically significant results remain the same when taking into account year dummies, industry fixed effects and size variable. When controlling for all control variables the coefficient is still 0.171 and significant on five percent level. These results indicate that a firm in the highest decile had on average a 1.71 percentage units higher change in ROA than *non-lobbying firms* as an effect of HLOGA regulation.

Looking at ROE the coefficients are positive for both measures but only statistically significant for *prior lobbying*. The coefficient for *prior lobbying* is 0.441 and statistically significant on the five percent level. Adding the other control variables in Panel B through Panel D, the statistical significance observed disappears when controlling for industry effects.

Regarding income before extraordinary items, the impact is negative but without statistical significance for any of the measurements of lobbying expenditures. Furthermore, when examining the lagged effects the year after the introduction of HLOGA, we find no statistically significant results for any financial measure at generally acceptable levels of significance, and therefore we do not display the results. One difference observed is that IBEI instead shows a positive coefficient.

[23] Statistically significant at the eight percent level.

5.1.4 Eventual Biases

In performing the difference-in-difference estimation we chose to study firms that were listed on the S&P 500 during the entire time period from 2005 to 2011. By excluding companies that were delisted during the sample period a survivorship bias could occur. As it can be reasonably assumed that no companies where forced into liquidation by the introduction of HLOGA, we believe that the bias induced by not including delisted firms has a minor effect on the results.

Furthermore, a survivorship bias could neglect the fact that some of the lobbying firms might be in financial distress. Such companies often have a large need to change policies and legislation in a more favourable way in order to improve their industry competitiveness and financial situation. By excluding delisted companies, an important part of the data might be missed. However, we argue that the main objective of lobbying is to enhance firms' opportunities, in terms of optimizing their results. Lobbyists are employed mainly to improve companies' performance, not to prevent them from filing for bankruptcy or negotiating bailouts. This assumption is strengthened by the fact that the top lobbying spenders are successful firms in rapidly growing industries.

The same reasoning also applies to particularly successful firms. Firms that have previously experienced high profits are able to spend more on lobbying and hence, further improve their results. However, we argue that a higher profit margin after tax is caused by beneficial tax payments, which in turn is caused by high lobbying activity.

5.1.5 Endogeneity

When investigating the effects of the introduction and implementation of HLOGA we must consider whether there is an endogeneity problem that might bias our potential results. Wooldridge (2009) argue that such biases may be caused by measurement error, simultaneity and omitted variables. We attempt to minimize the potential biases caused by endogeneity by performing a difference-in-difference estimation with HLOGA regulation representing an exogenous event and hence, the endogeneity problem should be reduced. Furthermore, Meyer (1995) argue that events such as policy changes allow researches to obtain exogenous variation in key explanatory variables which is useful for reducing concerns for omitted variables or other threats to validity.

Moreover, the risk for reverse causality should be fairly low in our study. Reverse causality would imply that, for example, company performance of companies with high lobbying expenses might be the initial reason for the introduction of HLOGA. This would mean that the Act was

introduced in the U.S. in order to improve financial performance as a result of American companies having experienced worsened financial performance in recent years. If this would be true, this would lead to reverse causality and bias results. However, we do not see any logical explanation for this and we argue that the implementation of the law was first and foremost a political matter with transparency as its prime argument.

Another problematic factor might be that lobbying is actually a proxy for political contacts in the U.S. legislative system. Research has been made regarding the value of political connections to corporations. Agrawal and Knoeber (2001) discovered that firms in need of political connections tend to have outside board directors with political backgrounds.[24] Further works in the line of research have been written by Faccio (2006), which discovers that firms with political connections enjoys privileges such as low taxation, easy access to debt financing and high market share. Albeit these findings are of importance, we believe that the amount of money spent of lobbying is a good and more quantifiable measure to study the effects of lobbying than political connections.

5.2 Event study

5.2.1 Results – Abnormal returns and cumulative abnormal returns

Looking at Table 6 Panel A to C in the appendix we observe mean abnormal returns and cumulative abnormal returns per decile for the three event dates, January 4th 2007, January 9th 2007 and July 31st 2007, with and without adjusting for outliers.

Examining our results from the event date January 4th 2007 not adjusting for outliers we see abnormal returns ranging from -0.45 to 0.47 percent when comparing mean values per decile. Cumulative abnormal returns range from -0.43 to 2.06 percent. After adjusting for outliers, abnormal returns range from -0.53 to 0.47 and cumulative abnormal returns range from -0.43 to 1.19 percent. Evidently, our results are not strongly affected by outliers in terms of magnitude, however, for some values the sign is changed when adjustments for outliers are made. Consequently, it is important to report regression results for both with and without adjustments being made.

Observing our results from the event date January 9th 2007 not adjusting for outliers we see abnormal returns ranging from -0.77 to 0.70 percent for all deciles. Cumulative abnormal returns range from -0.55 to 1.94 percent. When adjusting for outliers the abnormal returns

[24] Examples of companies that need political connections are those in intensively competitive industries or which contract with the government.

range from -0.46 to 0.72 percent and cumulative abnormal returns range from -0.9 to 1.22 percent. The numbers indicate that the magnitude of the absolute values is not too affected by outliers that have extreme abnormal returns or cumulative abnormal returns. However, looking at particularly the results for the 10th decile it is evident that outliers affect the sign of the abnormal and cumulative returns are affected by outlier adjustments, which highlights the importance of reporting regressions result both with and without adjusting for outliers.

Studying the results from the event date July 31st 2007 not adjusting for outliers we observe abnormal returns -0.19 to 0.67 percent for all deciles. Cumulative abnormal returns range from approximately -0.98 to 1.12 percent. When adjusting for outliers the abnormal returns range from -0.18 to 0.8 percent and cumulative abnormal returns range from -0.69 to 1.25 percent. As with the results for the event date January 9th 2007, the adjusting outliers do no affect the relative magnitude of the absolute values of abnormal returns or cumulative abnormal returns. However, in a number cases the sign of the results changes when adjusting for outliers. Once again, the importance of reporting results for both with and without outliers is evident.

5.2.2 Results – Regressions

Table 7, Panel A to F in the appendix present regression results from the event dates. Panel A to B report the results for January 4th 2007. Panel A, reporting results without adjustments for outliers, show that all three measurements have a negative impact on the abnormal return. However, they are not statistically significant. Furthermore, studying the effect on cumulative abnormal returns, no measurement of lobbying expenses shows significant results, and in addition, some coefficients are positive while some are negative. Adjusting for outliers in panel B, the coefficients for our lobbying measurements stay negative but, nonetheless, insignificant. However, adjusting for outliers and analysing cumulative abnormal returns ±1 day, the coefficient on *lobbying in the preceding year* becomes statistically significant on a five percent level and the coefficient is -0.055.[25] The other measurements give no statistical significance.

Panel C to D investigate the stock market reactions at the event date January 9th 2007. We can observe that there is a negative impact on the abnormal return that is statistically significant on the five percent level using *rank*, as well as, *lobbying in the preceding year* as the exposure measure. The coefficient for *rank* is approximately -0.05 indicating that a firm in the 10th decile will on average have a 0.45 percentage units lower abnormal return than a firm in the 1st decile.

[25] Without adjusting for outliers the coefficient was negative and significant on a 6.3 percent level. The increased significance was due to the elimination of Goodyear Tire & Rubber CO. with a cumulative abnormal return of 10.1 percent and member of the 7th decile.

The coefficient for *lobbying in the preceding year* is approximately -0.04 indicating that a 10 percent higher lobbying expenditures gives a 0.004 percentage units lower abnormal return on average. However, no statistical significance at the generally acceptable levels of significance was obtained when using *prior lobbying* as a measure. Panel B shows the results adjusted for outliers. The statistically significant negative impact on the average abnormal return remains with *lobbying in the preceding year,* while the negative impact with *rank* that was previously noted disappears.[26] We find no statistically significance at the generally acceptable level of significance when running regressions using the two cumulative abnormal returns measurements.

Panel C to D presents the result for the event date July 31st 2007. Looking at Panel C, we do not find any statistically significant results on the generally acceptable level of significance. However, all coefficients, but two for abnormal return, are negative. Adjusting for outliers in Panel D does not improve significance to generally acceptable levels.

5.2.3 External factors influencing the share price

When studying market returns there is a risk that other factors specific to companies within certain deciles of *prior lobbying* could affect the returns on the event date. If other important news are released on or surrounding the event dates it is difficult to assume that the abnormal returns are attributable to the events studied. This would, as a result, bias our results. Trying to control for such confounding effects, we have performed a news search in conjunction with the event and we have not been able to find any major news that we believe would bias our results. In addition, we eliminated firms undergoing acquisition/reorganization or splits and stock dividends on or surrounding the event dates.

Furthermore, in order to perform the event study we assumed that the information released on the event dates was new information to the market and that the information was immediately incorporated into share prices, as stated by the efficient market hypothesis. However, if some investors had insider information or some unique knowledge regarding the introduction and implementation of the HLOGA and its effects before the event dates, our results would not take into account the market's total reaction. In addition, the same problem would occur if there was a lag for investors to include the effects in their valuation. We have already argued that the event released on the event dates should be interpreted as new information and hence, we expect the

[26] The decreased significance was due to the elimination of Sprint Nextel Corp. with an abnormal return of -11.03 percent and member of the 9th decile.

efficient market hypothesis to hold. Furthermore, we have included cumulative abnormal returns in the event study aiming to capture effects due to potential leakage of information prior to the announcement of the different event, or potential lags to include information in the valuation of the stock.

5.2.4 Inferences with event-date uncertainty

MacKinlay (1997) demonstrate the issue of inference with event-date uncertainty. When performing an event study it is assumed that the event date can be identified with certainty. However, in some studies this has proven to be difficult. We have done extensive research trying to establish the correct event dates but we cannot be absolute certain that the market has not been informed prior to the official announcement dates. In order to circumvent this problem we have included cumulative abnormal returns ±1 days and ±3 days. However, there is a cost to expanding the event window such as decreasing the certainty of the abnormal returns being attributable to the event alone. Nevertheless, we argue in accordance with MacKinlay (1997) that the costs are worth bearing rather than to take the risk of missing the event.

5.2.5 Benchmark indices

There are several approaches to computing the estimated returns used to calculate abnormal returns (MacKinlay, 1997). On the basis that a market model represents a potential improvement over the constant mean return model, we have chosen to employ a statistical market model in our event study. We chose to use the value-weighted S&P 500 index as our market proxy since our sample firms are listed on the S&P 500. Alternatively, a multifactor model could have been used when approximating the normal returns. However, the gains from a multifactor model is small given that the purpose of the test is to approximate potential abnormal returns, rather than establishing the exact ones.

5.2.6 Nonsynchronous trading

MacKinlay (1997) introduces the concept of non-synchronous trading effects "that arise when prices, are taken to be recorded at time intervals on one length when in fact they are recorded at time intervals of other possibly irregular lengths". In our event study we use daily stock returns defined as the official closing price of each trading day, adjusted for subsequent capital actions. Since we assume that the time interval between two closing prices is of the same length every day we will give rise to a non-synchronous trading bias. However, this is a problem that is experienced by all event studies that use closing prices as daily prices and hence, we do not believe this will bias our results significantly.

6. Implications and conclusions

In order to analyse and explain the effects of the lobbying regulation, we argue it is preferable to initially analyse the short-term effects on company value caused by market's reaction in the conjunction with the introduction of the regulation. Thereafter, it is reasonable to analyse the long-term implications on firms' performances and lobbying activities.

6.1 Event Study

Studying the results for the event date January 4th 2007 we observe statistically significant negative cumulative abnormal returns with an event window of one day before and one day after the event using the measure of *lobbying in the preceding year*. This would indicate that the introduction of HLOGA was met by a negative market reaction, which translated into value decreases of different sizes for the companies affected by the introduction. The coefficient estimating the effect of lobbying is however rather small which translate into a small economical significance. For example, a 10% difference in lobbying expenses in 2006 would on average only affect the abnormal return by a 0.0055 percentage units decrease on the event date. In addition, the results are sensitive to outlier adjustments. When not adjusting for outliers, the results are statistically insignificant.

Examining the results from the event date January 9th 2007 before adjusting for outliers we observe statistically significant negative abnormal returns for two of our three measurements of lobbying expenses; *lobbying in the preceding year* and *rank*. This negative effect would indicate that the market reacts negatively to the introduction of HLOGA and that investors expect the regulation to lower company performance as well as to devalue the company's stock. The coefficients are, however, rather small and the economical significance is questionable. For instance, firms in the highest decile did on average experience 0.46 percentage units lower abnormal returns than a firm in the lowest decile. The results for *rank* are however sensitive to outliers and the statistical significance disappears when adjusting for outliers. Nonetheless, the statistical significance remains for *lobbying in the preceding year*.

The results for the event date July 31st 2007 show no statistically significant results for market reactions to HLOGA. This indicates that the market already had incorporated the information of the law into stock prices and that any information released when on the 31st of July was either already anticipated or old information. Since the House vote occurred about half a year after the introduction of the bill in the Senate we argue it is reasonable to make such an assumption.

The negative market responses we find in our study suggest that market participants view lobbying as a value-enhancing activity. As the exogenous event of the introduction and passage of the act increase the probability of future restriction on lobbying, market participants believe it will affect company performance by reduced lobbying expenditures or, perhaps, political influence. Our results are to some extent in line with previous research by Borisov, Goldman and Gupta (2011) which examine the effect of the "Lobbying Accountability and Transparency Act of 2006". The act strived to limit corruption in the political arena. Their results, using cumulative abnormal return with an event window of three days, are both statistically and economically more significant than ours despite the use of similar methodology examining the effect of two seemingly comparable regulations. Their conclusion is in accordance with their thesis; firms that spend more on lobbying experience a significant decrease in market value in response to the introduction of the legislation by the Senate.

The negative market reactions are also in line with research by Faccio (2006). The study concludes that firms receive benefits from political connections and that the value of these connections is priced in financial markets. It follows that if market participants believe these connections to be restricted they will react negatively and we should, as we to some extent do, observe negative abnormal and cumulative abnormal returns for companies affected by the change in regulation.

However, our results are somewhat weaker than those presented by Borisov, Goldman and Gupta (2011) and we advocate two different explanations for this. First, it is sensible to believe that market participants have learnt by experience from previous years that stricter regulations do not affect the performance of firms engaging in lobbying activities. This statement is further strengthened by research made after the implementation of HLOGA. For example, Bowie (2012) states that lobbying firms can exploit loopholes in taxation regulation and influence the tax code in order to avoid billions of taxes. In effect, some of the S&P 500 companies paid an effective federal income tax rate of less than half the statutory 35% corporate tax between 2008 and 2010. This study highlights the sustained profitability of spending a large amount on lobbying after the implementations of lobbying regulations and hence, these regulations do not seem to affect companies' performances.

Second, it is arguable to say that the weaker market reactions might be due to that market participants anticipated the introduction and passing of HLOGA. Thus the information was already partly incorporated into stock prices. The introduction and implementation of "The Lobbying Accountability and Transparency Act of 2006" could be considered as a starting point

for stricter lobbying regulation, making HLOGA an expected step in an already initiated process. It is therefore arguable that the market foresaw further restriction already before HLOGA was introduced.

To conclude, we do find statistically significant negative market reactions during the process of introducing and passing HLOGA. However, they are not of large economical significance and weaker than those observed for a comparable regulation in 2006. In addition, the robustness of our result could be questioned since they are, to some extent, affected by outlier adjustments. To examine if any or which of our explanations for the observed results are viable, it is sensible to turn to the implications and explanations of the long-term effect of the regulation.

6.2 Difference-in-difference estimation

6.2.1 Regression implications

From studying the regression results we observe a positive and statistically significant impact on the profit margin after controlling for year dummies, industry effects and size effects with magnitudes depending on a company's amount of *prior lobbying* expenditures.[27] This indicates that firms spending more on lobbying activities pre-law on average experience a larger increase in profit margin post-law than firms that spent less on lobbying. Moreover, the return on assets coefficient is positively statistically significant in all regressions indicating that firms with higher *prior lobbying* expenses experienced a positive change in ROA compared to firms with lower *prior lobbying* expenses after the implementation of the law. These results indicate that, for example, a firm in the highest percentile had on average 1.71 percentage units change in return on assets than *non-lobbying firms* as an effect of the regulation. However, these results are only obtained when using *rank* as a measure. The robustness of our results is therefore questionable as significant results were only observed when using one out of two of our lobbying expenditure measures.

The return on equity coefficient is positively statistically significant[28] before controlling for industry effects indicating that the change in the return on equity is sensitive to industry effects and is not explained by the regulation. The income before extraordinary items coefficient is not statistically significant at acceptable levels in any of the regressions. When performing regressions with lagged dependent variables we find that none of the financial measures' coefficients are statistically significant indicating that the effect of the new regulation was not

[27] These results are obtained when using *rank* as the measurement of lobbying expenditures.
[28] These results are obtained when using *prior lobbying expenditures* as a measure of lobbying expenditures.

affected by time lags. The results obtained must, however, be further discussed in conjunction with a discussion of the most recent financial crisis, which occurred simultaneously as the introduction and implementation of HLOGA. We will discuss this further in the next section.

6.2.2 The financial crisis 2008

The implementation of HLOGA occurred simultaneously as the beginning of the latest financial crisis, which adds another dimension to the analysis. However, we argue that the global economic crisis is a factor that is common for all firms listed on the S&P 500. Additionally, by controlling for industry effects we isolate our results from potential influences caused by particular industries being more or less affected by the crisis. In addition, by controlling for size effect, the most predominant difference between firms in the high lobbying group and firm in the low lobbying group, we control for the fact that companies of particular sizes might be able to manage the crisis better. Furthermore, we have focused on financial measures after tax since we argue, in accordance with previous research, that receiving tax benefits is the main incentive for engaging in lobbying activities. However, the difference-in-difference estimation does, in fact, partly analyse how well companies coped during the financial crisis depending on the amount spent on lobbying activities. Though, the difficulty caused by the fact that the financial crisis coincided with the implementation of HLOGA is that it is difficult to be certain what changes of firms' lobbying activities are attributable to stricter regulations and what simply is an effect of the weaker global economy at the time. We discuss and elaborate this in the next section.

6.2.3 Lobbying expenses

Figure 1 indicates that the growth in overall lobbying expenditure decreased in 2009, one year after HLOGA was introduced. Yet, we believe that the predominant factor that caused the lower growth was that the U.S. and firms listed on the S&P 500 were significantly affected by the latest financial crisis during the time period studied. As firms' profits decreased, they had to lower their costs. Several companies therefore decreased the money invested in lobbying in an attempt to improve their financial situation.

Conversely, according to other reports, firms might actually increase their lobbying expenditures when in financial distress and close to bankruptcy. Firms lobbying the most were more likely to get bailout agreements. The findings indicate that the amount of money spent on lobbying might increase during financial crises as firms seek to avoid bankruptcy (Igan et. al, 2011). For example, Google raised their lobbying efforts in response to an antitrust probe. The amount spent on lobbying is said to related entirely to the extent the federal government

intervenes in the financial market and public economy. Since the government's attempts to regulate markets and companies increases during financial crises, firms will lobby more.

Furthermore, researchers at the International Monetary Fund have discovered that lobbying by lenders and other U.S. financial interests contributed to the financial crisis. By lobbying against regulation of the financial market, the probability for a meltdown of the U.S. mortgage market increased. According to the report, "there was a clear association between the money affected financial firms spent on lobbying and the way legislators voted on the key bills considered before the crisis." Bills unfavourable to the financial industry were three times less likely to become a law than one promoting less regulation, in the period from 2000 to 2006 (Igan & Mishra, 2011). Moreover, the massive lobbying efforts against regulation of the financial market in the years preceding the financial crisis help explain the substantial increase in lobbying expenditure before 2009, particularly since a majority of the firms in our sample are in the finance industry.

Another possible explanation to the lowered growth in lobbying expenditure after 2008 is the contraction of the lobbying industry. The number of lobbyists has decreased steadily since 2007 as a result of the stricter regulation of their business (Open Secrets, 2011). Nonetheless, we consider the financial crisis to be the main reason for the observed lowered growth in lobbying expenditures after 2008. In fact, lobbying expenditures increased during 2008, the first effective year of HLOGA, as evident by looking at figures 1, 2 and 3. However, due to external factors such as the latest financial crisis it is difficult to isolate the potential effects on lobbying activities caused by the stricter regulation. However, we do agree with the view of Lowery and Gray (1997) suggesting that the restrictiveness of lobbying regulations does not seem to decrease lobbying activity. This view is further strengthened by that in 2006, when preceding legislation was passed, no decrease in the growth or level of lobbying expenditures was registered.

6.2.4 Consequences and conclusions

Following our reasoning in previous sections it is reasonable to assume that firms with higher *prior lobbying* expenses experienced a higher change in terms of financial measures affected by effective tax rates after the implementation of the regulation. This would indicate that firms still are able to reap the tax benefits, to the same extent as during previous years, even after stricter regulations on the market. This supports the idea presented in later research by Bowie (2012), who states that lobbying efforts leads to larger benefits in particular from beneficial taxes. However, we are cautious to state that such results are attributable to changes caused by HLOGA. Instead we recognize the possibility that the positive differences between firms with

different levels of *prior lobbying* expenditures observed could merely be a result of lobbying expenditures growing faster after January 1st 2008 for firms in the higher lobbying group than those in the lower. In looking at table 3, it is evident that firms in the lower deciles actually, in percentage, increased lobbying expenditures more in 2008 than firms in the higher deciles. However, earlier findings by Hill, Kelly and Van Ness (2009) suggest that the marginal benefit from lobbying efforts are, in fact, absolute and not in relative terms. They report statistically significant returns on investment of approximately $200 for every dollar spent on lobbying by S&P 500 companies that registered as clients in Lobbying Disclosure Filings. Again looking at table 3, it is apparent that firms in the higher deciles increased their lobbying expenditures significantly more in absolute terms in 2008 than firms in lower deciles. However, research by Richter, Samphantharak, and Timmons (2008) argue that an increase in lobbying expenditures by 1% in one year, reduces the effective tax rates in the range of 0.5 to 1.6 percentage points the following year. This complicates drawing inferences from the regression results. More in-depth qualitative research, which is beyond the scope of our thesis, has to be made in order to distinguish how and why firms lobbied more in 2007 and 2008, as well as what financial measures were affected. Albeit this questions our results still strengthens the assumption that the regulation did not reduce lobbying activity and that the slow-down in growth of lobbying expenses in 2009 was predominantly an effect of the weaker global economy at the time. Additionally, firms with zero *prior lobbying expenses* on average registered positive lobbying expenditures after the implementation of the law.

Our reasoning is not in line with the conclusions by Brinig, Holcomb and Schwartzstein (1991), which stated that firms with larger capacities to invest in lobbying benefits from lobbying regulations. Furthermore, they argue that increased costs would make it more difficult for those with fewer resources; however, we argue this problem not to be present among our sample of S&P 500 firms. Our findings and assumptions are more in line with research by Lowery and Gray (1997), which discard the findings of Brinig, Holcomb and Schwartzstein (1991). However, we cannot with certainty, solely based on quantitative results in our study, fully support their conclusions.

6.2.5 Comparison of long-term and short-term results

The difference-in-difference results are somewhat contradicting to the negative market reactions observed in the event study. In the long term, we do not distinguish any significant negative changes in company performance for firms with high lobbying expenditures after the introduction of the law. Furthermore, as already stated, we do not believe that the stricter regulation leads to overall decreases in lobbying expenditures. Assuming the difference-in-

difference study to uncover the actual company results, this would then indicate that market participants' expectations were later shown to be incorrect. The negative market reaction could have been due to lack of knowledge of the law's consequences or due to misinterpretation. This also suggests that market's reactions will probably be even weaker when studying future lobbying regulations similar to HLOGA since such regulations seem to have little effects on long-term lobbying activities and company performance. This would additionally explain the weaker market reactions observed for HLOGA than for the lobbying regulation introduced in 2006.

6.3 Concluding remarks

There is a consensus among researchers that higher lobbying expenses are beneficial for a company's financial performance.[29] We want to emphasize that our research indeed agree with, and contribute further to such consensus. Our study has aimed to complement previous research by analysing how lobbying regulations affect company's performance, value and lobbying activity; a field that has not yet been widely researched. We find some results indicating that companies with historically higher lobbying expenses experienced a positive change in terms of after tax financial measures following stricter regulations. However, we are cautious to state that such results are attributable to changes caused by HLOGA since our findings might be a result lobbying expenditures growing faster after January 1st 2008 for firms in higher lobbying groups than those in lower. In our thesis, we have found that firms spending more on lobbying seemed to manage the latest financial crisis better in the years 2007 to 2009 in terms of after tax financial measures.

Our findings are somewhat surprising indicating that in the long run the introduction of HLOGA seems to have had little or no effect on companies' lobbying activities. Companies consistently find new ways of lobbying and sustain political influence, hence enhancing their value and performance. However, we are aware of that our conclusion is sensitive to assumptions made about the overall effect of HLOGA in conjunction with the latest financial crisis. Nonetheless, the legislation has increased transparency and also strives to decrease corruptness. The effectiveness of the lobbying regulations to track undue or unethical activities is however arguable, but the regulations can, at least, shed some light over who is doing what, and document their influence. These objectives seem more politically than economically important. Current proposals for further restrictions imply that firms and lobbyists can expect more future

[29] Chen, Parsley and Yang (2010) find that on average, lobbying is positively related to accounting and market measures of financial performance. Hill, Kelly and Van Ness (2009), reported finding statistically significant returns on investment of approximately $200 for every dollar spent on lobbying by S&P 500 companies. Richter, Samphantharak, and Timmons (2008) argue that companies engaging in lobbying receive certain benefits.

lobbying regulation. We argue, however, that future regulation cannot be expected to hinder companies from spending large amounts on lobbying. The way regulation of lobbyists is designed today could be said to have small impact of lobbying activities and hence be of small importance for U.S. firms.

7. Further research

Since current research on lobbying regulation and its impact on company performance is limited, it would be interesting to see additional research addressing the subject. At present, countries with specific rules and regulations governing the activities of lobbyists are rare. We believe it would be interesting to compare result from the U.S. with other countries where comparable data is available. This would not only facilitate comparisons of different types of lobbying activities, but also open up the possibility to perform a more extensive study with an expanded sample. One possibility would be to look at German lobbying activities. Within the European Union the German Bundestag is unique in that it is the only Chamber that has specific and formal rules regarding the registration of lobbyists. The register is available to the public and published annually (Malone, 2004). Furthermore, the European Parliament and the European Union have recently agreed to establish a common Transparency Register. Even though there are several differences between lobbying in the U.S. and the EU, such as that EU officials are not elected and hence dependent on monetary contributions to their campaigns, we believe a comparison of the two would be of great interest.

We have chosen to study large firms listed on the S&P 500 throughout the years 2004 to 2011. It would be interesting to see future research addressing the same issues, but using a set of firms with different characteristics. Furthermore, the assumptions in our research are to some extent conditional on the implied effects of the most recent financial crisis. Therefore, it would be interesting to compare, strengthen or even challenge our results and conclusion with studies not as directly affected by the latest financial crisis.

We have studied the effect of HLOGA on accounting measures, market value and lobbying activities of U.S. firms. Nonetheless, the possibility exists that the lobbying regulation might have had other effects that are not accounted for in this thesis. These effects might be of great importance when considering the overall effects of the regulation. For example, the regulation might have been of importance for the political system and its transparency. However, Jansson argues that increased transparency legislation would make the system less democratic. This issue might be interesting to for further research.

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8.3 Interviews

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9. Appendix

Table 1 Panel A: Summary Statistics Difference-in-Difference Estimation Total Sample.

All firms	All mean/sd/ count	max/min	Post Law mean/sd/ count	max/min	Pre Law mean/sd/ count	max/min
Profit margin	0.0893 0.1035 2471	0.3801 -0.3594	0.0722 0.1127 1059	0.3801 -0.3594	0.1022 0.0940 1412	0.3801 -0.3594
ROA	0.0628 0.0646 2471	0.2702 -0.1647	0.0537 0.0680 1059	0.2702 -0.1647	0.0697 0.0612 1412	0.2702 -0.1647
ROE	0.1569 0.2372 2471	1.0672 -1.0911	0.1277 0.2755 1059	1.0672 -1.0911	0.1788 0.2011 1412	1.0672 -1.0911
IBEI in $thousand's	1,528.57 2,827.08 2471	17,046.00 -3,079.00	1,436.53 2,923.09 1059	17,046.00 -3,079.00	1,597.60 2,751.90 1412	17,046.00 -3,079.00
Total Assets in $thousand's	59,238.47 194,314.10 2471	2,264,909.00 750.74	65,855.44 219,801.20 1059	2,264,909.00 750.74	54,275.74 172,664.90 1412	2,187,631.00 810.29
Market cap in $thousand's	27,279.68 44,648.46 2301	504,239.60 548.75	24,956.27 40,772.72 991	397,234.10 548.75	29,037.30 47,309.81 1310	504,239.60 1,269.90
Lobbying Expenditures ($)	2,283,772 4,332,121 2471	49,200,000 0	2,783,771 4,965,097 1059	49,200,000 0	1,908,772 3,746,942 1412	35,700,000 0
Prior Lobbying Expenditures ($)	1,908,772 3,533,965 2471	27,000,000 0	- - -	- -	- - -	- -
Assets 2004 in $thousand's	47,443.19 143,885.80 2471	1,484,101.00 954.69	- - -	- -	- - -	- -

Table 1 Panel B: Summary Statistics Difference-in-Difference Estimation, Firms with prior lobbying expenditures *above* median in Sample.

High Lobbying firms	All mean/sd/ count	max/min	Post Law mean/sd/ count	max/min	Pre Law mean/sd/ count	max/min
Profit margin	0.0900 0.0963 1225	0.3801 -0.3594	0.0819 0.1040 525	0.3801 -0.3594	0.0960 0.0898 700	0.3801 -0.3594
ROA	0.0585 0.0608 1225	0.2702 -0.1647	0.0534 0.0628 525	0.2702 -0.1647	0.0623 0.0591 700	0.2702 -0.1647
ROE	0.1582 0.2255 1225	1.0672 -1.0911	0.1374 0.2520 525	1.0672 -1.0911	0.1738 0.2022 700	1.0672 -1.0911
IBEI in $thousand's	2,400.87 3,623.29 1225	17,046.00 -3,079.00	2,287.86 3,705.03 525	17,046.00 -3,079.00	2,485.63 3,561.06 700	17,046.00 -3,079.00
Total Assets in $thousand's	96,888.21 265,717.70 1225	2,264,909.00 810.29	107,458.40 300,830.50 525	2,264,909.00 846.61	88,960.56 235,896.90 700	2,187,631.00 810.29
Market cap in $thousand's	41,846.51 58,182.29 1128	504,239.60 548.75	38,260.86 52,760.45 483	397,234.10 548.75	44,531.57 61,836.68 645	504,239.60 2,409.85
Lobbying Expenditures ($)	4,338,056 5,395,032 1225	49,200,000 0	5,181,667 6,127,988 525	49,200,000 0	3,705,349 4,677,737 700	35,700,000 0
Prior Lobbying Expenditures ($)	3,705,349 4,331,865 1225	27,000,000 556,750	- - -	- -	- - -	- -
Assets 2004 in $thousand's	77,755.75 196,356.40 1225	1,484,101.00 954.69	- - -	- -	- - -	- -

Table 1 Panel C: Summary Statistics Difference-in-Difference Estimation, Firms with prior lobbying expenditures *below* median in Sample.

Low Lobbying firms	All mean/sd/ count	max/min	Post Law mean/sd/ count	max/min	Pre Law mean/sd/ count	max/min
Profit margin	0.0887 0.1101 1246	0.3801 -0.3594	0.0627 0.1200 534	0.3801 -0.3594	0.1082 0.0977 712	0.3801 -0.3594
ROA	0.0671 0.0680 1246	0.2702 -0.1647	0.0540 0.0728 534	0.2702 -0.1647	0.0769 0.0624 712	0.2702 -0.1647
ROE	0.1555 0.2482 1246	1.0672 -1.0911	0.1180 0.2967 534	1.0672 -1.0911	0.1836 0.2001 712	1.0672 -1.0911
IBEI in $thousand's	670.97 1,210.31 1246	14,833.00 -3,079.00	599.55 1,431.58 534	14,833.00 -3,079.00	724.54 1,010.94 712	10,418.00 -3,079.00
Total Assets in $thousand's	22,223.27 52,235.11 1246	730,906.00 750.74	24,953.64 59,566.81 534	730,906.00 750.74	20,175.50 45,913.63 712	558,562.00 810.97
Market cap in $thousand's	13,271.67 16,009.64 1173	180,220.30 715.93	12,306.44 16,454.96 508	180,220.30 715.93	14,009.03 15,633.26 665	162,222.50 1,269.90
Lobbying Expenditures ($)	264,110 618,901 1246	9,333,475 0	426,289 885,701 534	9,333,475 0	142,476 219,267 712	1,700,234 0
Prior Lobbying Expenditures ($)	142,476 167,512 1246	545,500 0	- - -	- -	- - -	- -
Assets 2004 in $thousand's	17,641.51 37,083.71 1246	356,808.00 1,026.34	- - -	- -	- - -	- -

Table 2: Cut-offs and summary statistics for deciles.

Prior lobbying expenditures **per decile**	**Mean**	**Min**	**Max**
0	0	0	0
1	27,438	2,006	55,000
2	121,053	65,000	185,000
3	267,821	192,500	362,500
4	448,290	365,000	545,500
5	746,935	556,750	886,414
6	1,133,795	892,532	1,425,000
7	1,829,874	1,440,000	2,195,395
8	2,735,361	2,220,000	3,291,322
9	4,465,374	3,295,104	5,808,750
10	11,600,000	5,860,750	27,000,000

Table 3: Summary statistics over *Lobbying Expenditures* per decile. Number of firms in parentheses.

Lobbying Expenditures ($) per Decile mean/max/min	2004	2005	2006	2007	2008	2009	2010
0	0	0	0	0	14,169	140,548	247,119
(59)	0	0	0	0	580,000	3,720,000	6,340,000
	0	0	0	0	0	0	0
1	22,733	14,400	18,534	55,500	114,741	167,784	220,335
(30)	120,000	90,000	100,000	220,000	520,000	1,400,000	1,360,000
	0	0	0	0	0	0	0
2	89,636	100,186	108,665	184,882	314,606	329,823	427,699
(31)	260,000	230,000	246,447	480,000	1,522,526	1,666,000	2,040,000
	0	0	0	0	0	0	0
3	249,031	226,026	260,666	335,139	575,784	503,396	658,908
(29)	1,180,000	540,000	520,000	1,110,000	3,020,000	2,325,088	2,840,000
	0	0	0	0	0	0	0
4	417,360	399,041	378,277	600,777	1,121,597	1,162,719	1,343,394
(29)	1,339,650	11,030,000	605,000	1,700,234	5,535,276	8,450,000	9,333,475
	0	0	60,000	27,000	110,208	0	0
5	550,251	651,845	808,408	947,424	1,173,998	1,262,464	1,258,343
(29)	1,062,609	1,060,000	1,654,000	1,735,655	3,747,500	3,740,000	4,897,500
	0	200,000	490,000	240,000	64,911	0	0
6	820,996	992,847	1,196,894	1,517,913	2,034,262	2,318,481	2,312,192
(30)	1,840,000	1,480,000	2,148,000	4,440,000	12,400,000	10,200,000	11,000,000
	0	0	400,000	440,000	235,000	330,000	350,000
7	1,663,468	1,751,968	1,793,365	2,123,833	2,514,818	2,881,591	2,905,832
(29)	2,719,620	2,870,000	2,565,000	2,580,000	5,816,000	9,888,250	6,570,000
	970,000	1,030,000	1,066,000	1,400,000	1,050,000	780,000	830,000
8	2,666,447	2,395,296	2,659,537	3,234,501	3,680,569	3,797,329	3,932,927
(30)	12,000,000	3,885,580	3,945,000	6,542,148	8,170,625	9,050,000	8,540,000
	1,090,000	0	0	0	0	0	0
9	3,670,665	4,214,751	4,637,573	5,195,167	6,438,159	7,315,830	7,372,493
(29)	6,257,000	6,153,486	9,248,422	7,672,000	14,500,000	18,200,000	19,800,000
	390,000	1,900,000	2,078,291	2,286,000	2,780,205	2,480,833	0
10	10,100,000	11,100,000	12,500,000	13,300,000	14,800,000	14,200,000	14,400,000
(28)	28,500,000	35,500,000	35,700,000	26,400,000	31,600,000	33,400,000	49,200,000
	0	0	0	0	190,000	105,250	0

Table 4: Lobbying Expenditures per *Fama - French 12 Industry Classification*.

Lobbying Expenditures ($) per industry	All mean/sd/ count	max/min/ sum	Post Law mean/sd/ count	max/min/ sum	Pre Law mean/sd/ count	max/min/ sum
1 NoDur	1,756,809.00	26,400,000.00	2,301,823.00	19,000,000.00	1,489,713.00	26,400,000.00
	3,905,653.00	0.00	4,121,219.00	0.00	3,955,224.00	0.00
	25.00	322,000,000.00		177,000,000.00		154,000,000.00
2 Durbl	1,972,977.00	10,700,000.00	1,971,681.00	9,355,000.00	1,973,950.00	10,700,000.00
	3,563,079.00	0.00	3,280,473.00	0.00	3,845,620.00	0.00
	5.00	69,100,000.00		29,600,000.00		39,500,000.00
3 Manuf	2,357,145.00	21,500,000.00	2,872,160.00	21,500,000.00	1,970,883.00	14,300,000.00
	4,073,866.00	0.00	5,001,415.00	0.00	3,170,700.00	0.00
	39.00	644,000,000.00		336,000,000.00		307,000,000.00
4 Energy	3,506,667.00	31,600,000.00	5,129,885.00	31,600,000.00	2,289,254.00	18,800,000.00
	6,088,011.00	0.00	7,919,365.00	0.00	3,873,182.00	0.00
	16.00	393,000,000.00		246,000,000.00		147,000,000.00
5 Chems	1,629,243.00	11,400,000.00	2,174,450.00	11,400,000.00	1,220,337.00	5,990,000.00
	2,177,137.00	0.00	2,735,695.00	0.00	1,546,106.00	0.00
	13.00	148,000,000.00		84,800,000.00		63,500,000.00
6 BusEq	1,767,364.00	22,600,000.00	1,997,031.00	22,600,000.00	1,647,493.00	18,100,000.00
	3,274,250.00	0.00	3,521,023.00	0.00	3,111,710.00	0.00
	59.00	742,000,000.00		353,000,000.00		389,000,000.00
7 Telcm	7,618,723.00	35,700,000.00	8,382,520.00	27,200,000.00	7,695,810.00	35,700,000.00
	8,591,170.00	0.00	8,959,312.00	0.00	9,233,102.00	0.00
	11.00	615,000,000.00		349,000,000.00		390,000,000.00
8 Utils	2,906,583.00	46,200,000.00	3,941,360.00	46,200,000.00	2,130,500.00	16,700,000.00
	4,872,880.00	0.00	6,433,646.00	0.00	3,057,033.00	0.00
	28.00	570,000,000.00		331,000,000.00		239,000,000.00
9 Shops	826,701.00	12,000,000.00	1,185,001.00	9,333,475.00	557,975.70	12,000,000.00
	1,591,038.00	0.00	1,955,004.00	0.00	1,188,576.00	0.00
	38.00	220,000,000.00		135,000,000.00		84,800,000.00
10 Hlth	3,180,900.00	29,600,000.00	3,889,863.00	29,600,000.00	2,649,177.00	24,600,000.00
	4,665,134.00	0.00	5,288,454.00	0.00	4,081,013.00	0.00
	28.00	623,000,000.00		327,000,000.00		297,000,000.00
11 Money	1,767,945.00	28,500,000.00	2,013,582.00	10,700,000.00	1,583,717.00	28,500,000.00
	2,727,818.00	0.00	2,508,716.00	0.00	2,872,699.00	0.00
	59.00	730,000,000.00		356,000,000.00		374,000,000.00
12 Other	2,532,577.00	49,200,000.00	3,117,771.00	49,200,000.00	2,093,682.00	26,600,000.00
	5,577,670.00	0.00	6,821,392.00	0.00	4,400,793.00	0.00
	32.00	567,000,000.00		299,000,000.00		268,000,000.00

1 Consumer NonDurables -- Food, Tobacco, Textiles, Apparel, Leather, Toys
2 Consumer Durables -- Cars, TV's, Furniture, Household Appliances
3 Manufacturing -- Machinery, Trucks, Planes, Off. Furn., Paper, Com Printing
4 Oil, Gas, and Coal Extraction and Products
5 Chemicals and Allied Products
6 Business Equipment -- Computers, Software, and Electronic Equipment
7 Telephone and Television Transmission
8 Utilities
9 Wholesale, Retail, and Some Services (Laundries, Repair Shops)
10 Healthcare, Medical Equipment, and Drugs
11 Finance
12 Other -- Mines, Constr, BldMt, Trans, Hotels, Bus Serv, Entertainment

For Figures 1-15 below, the annual data is presented for fiscal year ends each year and includes companies with fiscal year ends through March 31st of year t_{+1}.

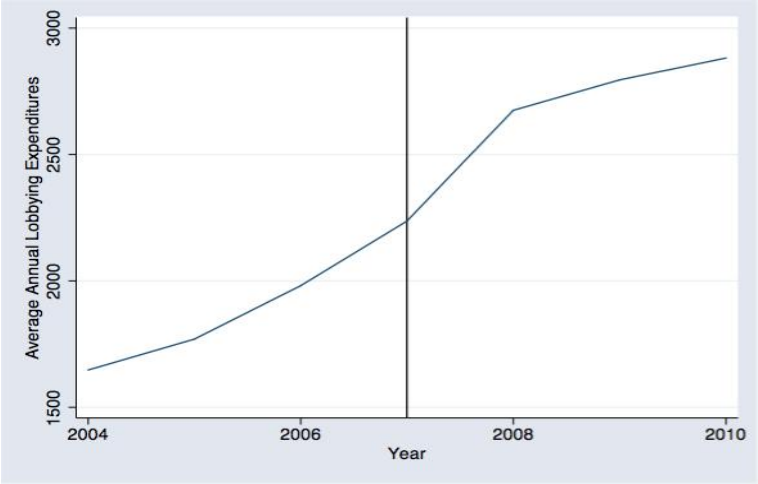


Figure 1: Average annual lobbying expenditures (in $thousand's) for all firms.

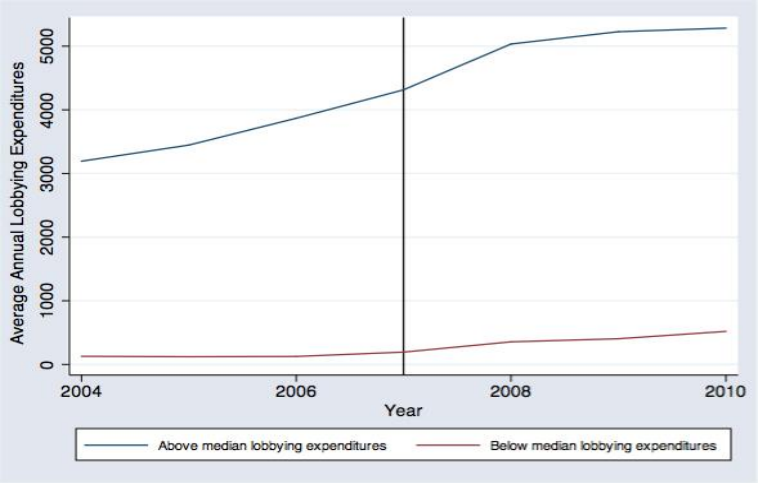


Figure 2: Average annual lobbying expenditures (in $thousand's) for firms with *prior lobbying expenditures* above/below median of sample.

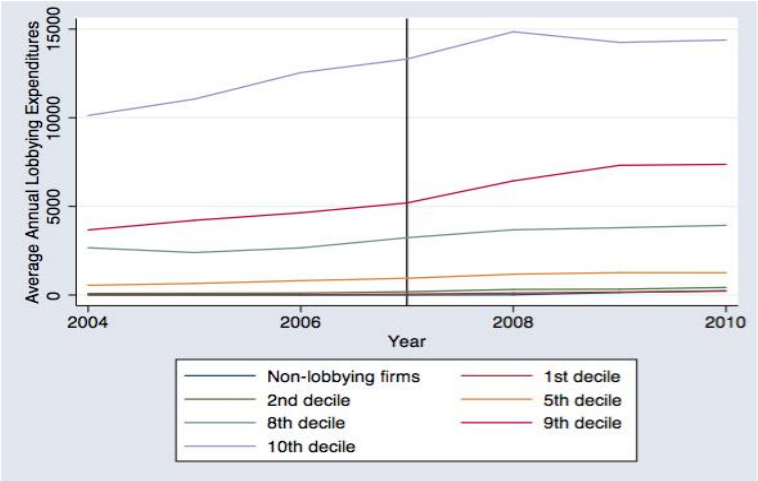


Figure 3: Average annual lobbying expenditures (in $thousand's) for firms in different deciles of *prior lobbying expenditures*. Non-lobbying firms having zero *prior lobbying expenditures*.

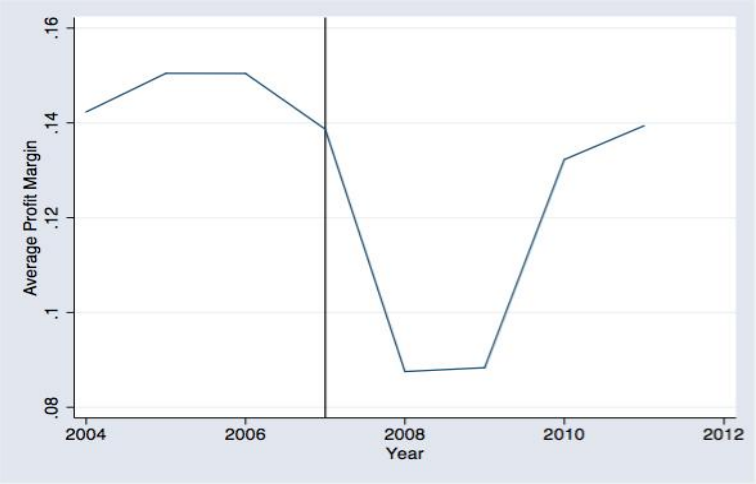


Figure 4: Average annual profit margin for all firms.

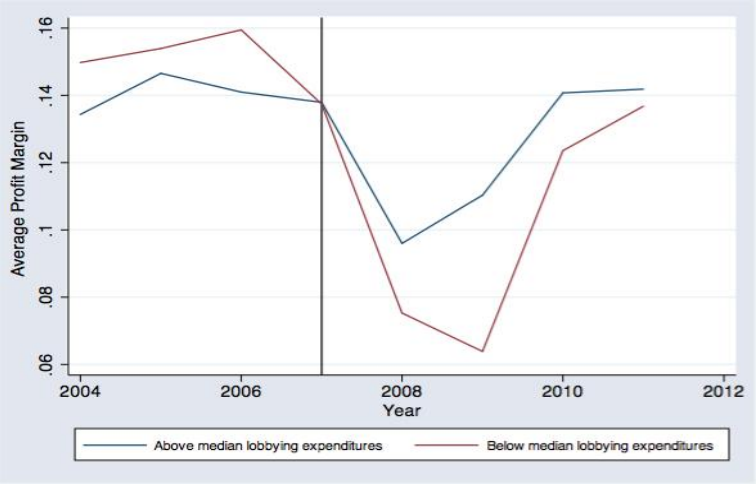


Figure 5: Average annual profit margin for firms with *prior lobbying expenditures* above/below median of sample.

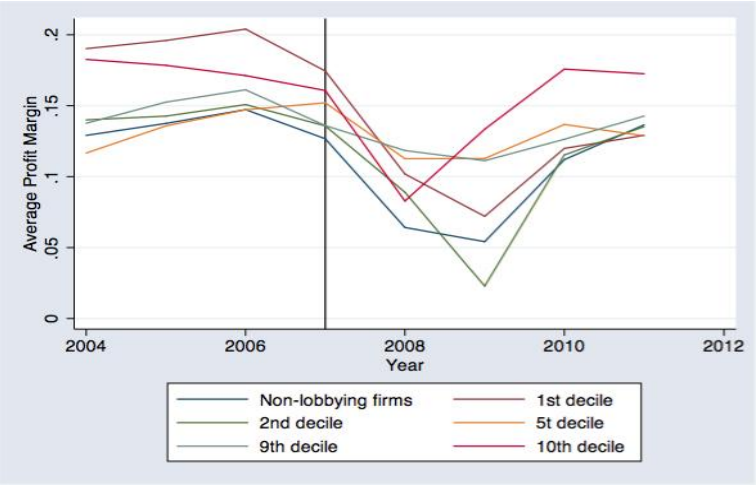


Figure 6: Average profit margin for firms in different deciles of *prior lobbying expenditures*. Non-lobbying firms having zero *prior lobbying expenditures*.

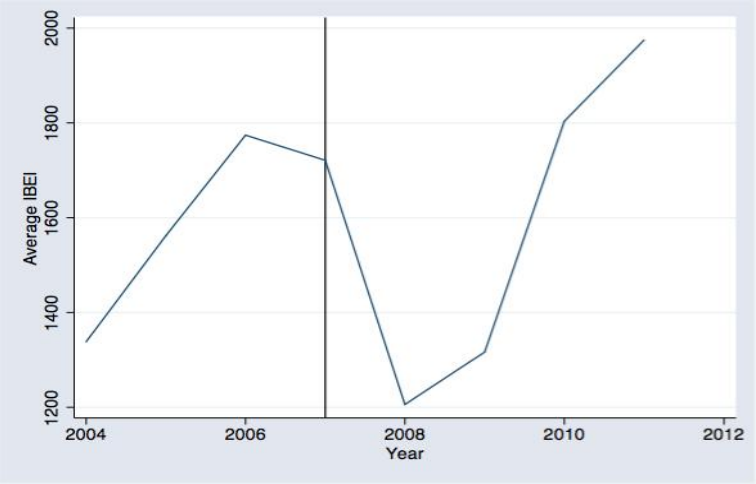


Figure 7: Average annual income before extraordinary items (in $thousand's) for all firms.

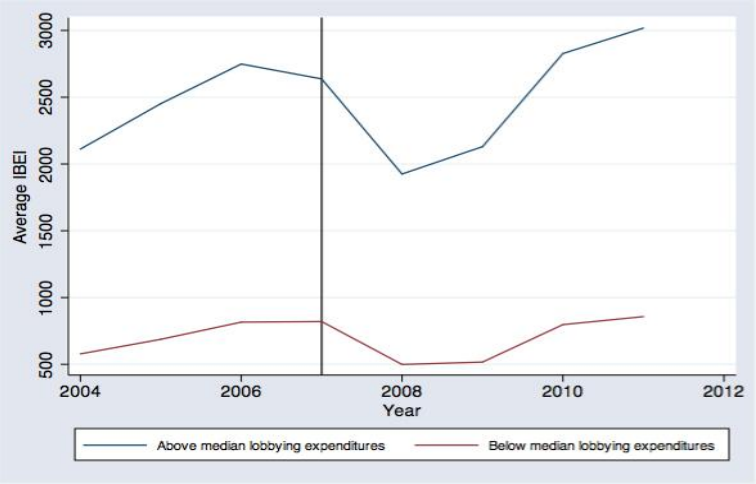


Figure 8: Average annual income before extraordinary items (in $thousand's) for firms with *prior lobbying expenditures* above/below median of sample.

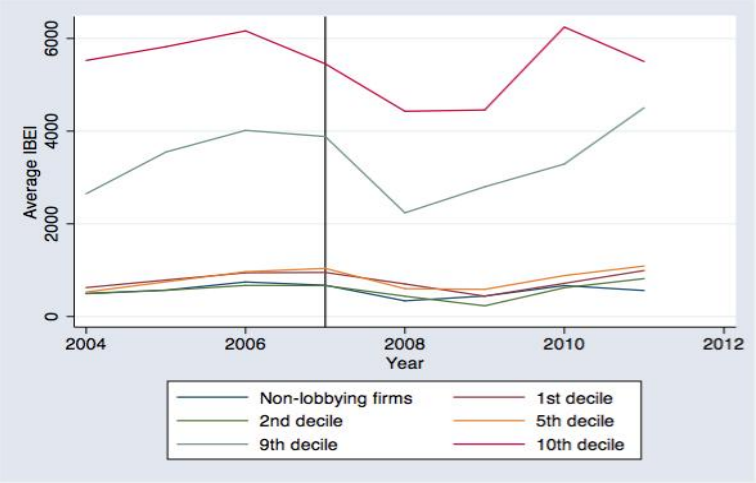


Figure 9: Average annual income before extraordinary items (in $thousand's) for firms in different deciles of *prior lobbying expenditures*. Non-lobbying firms having zero *prior lobbying expenditures*.

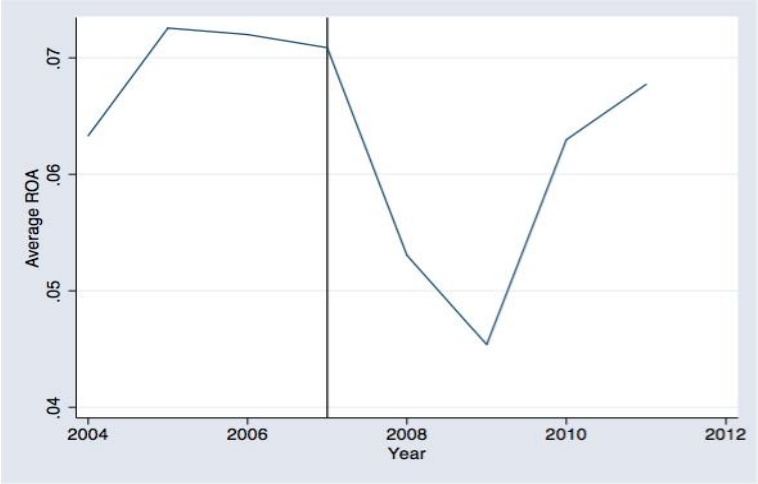


Figure 10: Average annual return on assets for all firms.

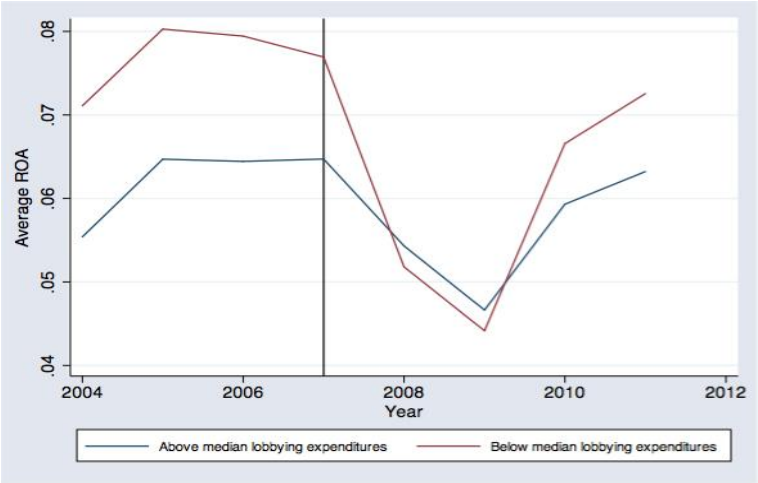


Figure 11: Average annual return on assets for firms with *prior lobbying expenditures* above/below median of sample.

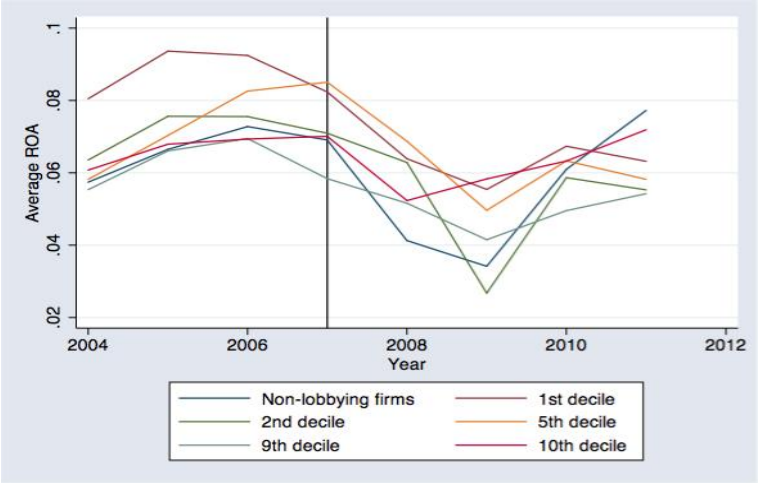


Figure 12: Average annual return on assets for firms in different deciles of *prior lobbying expenditures*. Non-lobbying firms having zero *prior lobbying expenditures*.

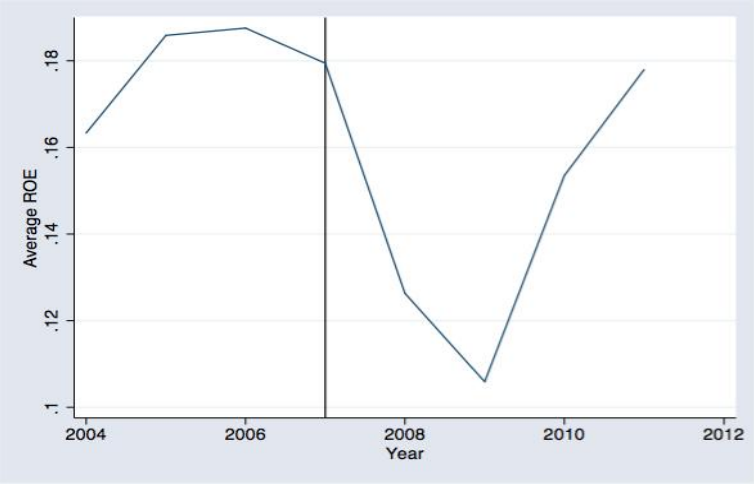


Figure 13: Average annual return on equity for all firms.

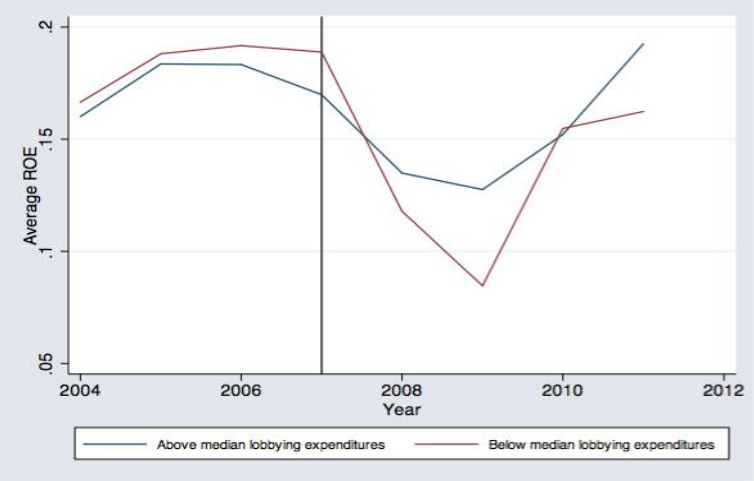


Figure 14: Average annual return on equity for firms with *prior lobbying expenditures* above/below median of sample.

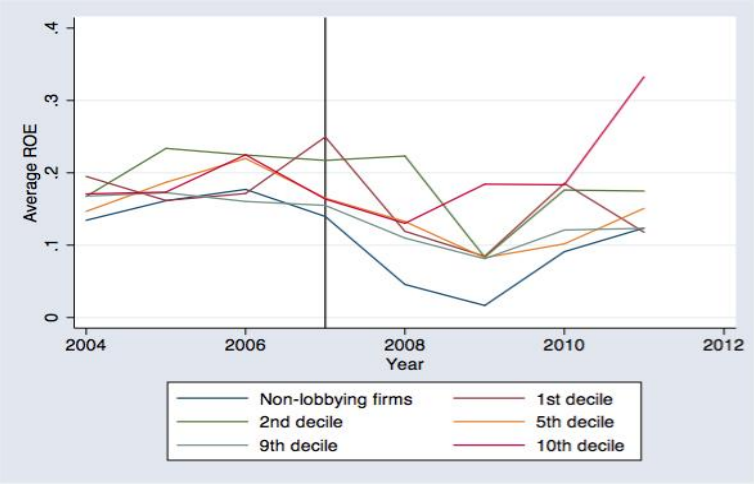


Figure 15: Average annual return on equity for firms in different deciles of *prior lobbying expenditures*. Non-lobbying firms having zero *prior lobbying expenditures*.

Table 5 Panel A: Effect of HLOGA for different posts *excluding year dummies*.

	(1) Profit margin %	(2) Profit margin %	(3) IBEI	(4) IBEI	(5) ROA %	(6) ROA %	(7) ROE %	(8) ROE %
Post×Prior lobbying	0.178		-6.035		0.068		0.441*	
	(1.88)		(-0.29)		(1.16)		(2.06)	
Post×Rank		0.380**		-29.460		0.171*		0.484
		(2.79)		(-0.69)		(2.07)		(1.51)
Year dummies	No	No	No	No	No	No	No	No
r^2	0.023	0.025	0.070	0.167	0.016	0.019	0.020	0.014
N	2471	2471	2471	2471	2471	2471	2471	2471

Table 5 Panel B: Effect of HLOGA for different posts *including year dummies*.

	(1) Profit margin %	(2) Profit margin %	(3) IBEI	(4) IBEI	(5) ROA %	(6) ROA %	(7) ROE %	(8) ROE %
Post×Prior lobbying	0.178		-6.035		0.068		0.441*	
	(1.88)		(-0.29)		(1.16)		(2.06)	
Post×Rank		0.380**		-29.460		0.171*		0.484
		(2.79)		(-0.69)		(2.08)		(1.51)
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
r^2	0.036	0.037	0.076	0.172	0.023	0.027	0.024	0.018
N	2471	2471	2471	2471	2471	2471	2471	2471

Table 5 Panel C: Effect of the HLOGA for different posts *including year dummies* and *industry fixed effects*.

	(1) Profit margin %	(2) Profit margin %	(3) IBEI	(4) IBEI	(5) ROA %	(6) ROA %	(7) ROE %	(8) ROE %
Post×Prior lobbying	0.178		-6.035		0.068		0.441	
	(1.83)		(-0.4)		(1.67)		(1.91)	
Post×Rank		0.380*		-29.460		0.171*		0.484
		(2.09)		(-0.8)		(2.08)		(1.43)
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
r^2	0.048	0.055	0.056	0.151	0.041	0.045	0.026	0.025
N	2471	2471	2471	2471	2471	2471	2471	2471

Table 5 Panel D: Effect of HLOGA for different posts *adjusting for total assets including year dummies* and *industry fixed effects*.

	(1) Profit margin %	(2) Profit margin %	(3) IBEI	(4) IBEI	(5) ROA %	(6) ROA %	(7) ROE %	(8) ROE %
Post×Prior lobbying	0.178		-6.035		0.068		0.441	
	(1.83)		(-0.4)		(1.67)		(1.91)	
Post×Rank		0.380*		-29.460		0.171*		0.484
		(2.09)		(-0.8)		(2.08)		(1.43)
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
r^2	0.052	0.056	0.403	0.403	0.042	0.048	0.026	0.025
N	2471	2471	2471	2471	2471	2471	2471	2471

t statistics in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

These tables reports coefficient estimates of different effects of the lobbying regulation. The dependent variable is the different posts: profit margin, ROA, ROE and IBEI. The columns report results from the specification $y = \alpha_0 + \alpha_1 Lobbying + \alpha_2 Post \times Lobbying + X + \varepsilon$ where the y variable is the different measures in columns (1)-(8), *Lobbying* is an exposure measure towards the law defined as either *prior lobbying* expenditures in columns (1), (3), (5), (7), or *rank* which is a ranking variable dividing firms into deciles based on *prior lobbying* in columns (2), (4), (6), (8). *Post* is a dummy variable taking on the value of one if the time period is after the new regulation and zero otherwise. *X* represents additional control factors, which vary depending on which panels is presented. The results in Panel D include year and industry effects as well as controls for size, defined as total assets in year 2004. ε is an error term.

Table 6 Panel A: *Abnormal* and *cumulative abnormal returns* for the event date 4th of January 2007 for deciles 1-10 excluding non-lobbying firms. Adjusting for *outliers in parentheses*.

	4th of January 2007		
	AR	**CAR±1**	**CAR±3**
1	-0.11%	-0.02%	0.15%
	(-0.11%)	(-0.02%)	(0.15%)
2	0.05%	0.17%	0.10%
	(0.05%)	(0.17%)	(0.10%)
3	0.29%	0.12%	2.06%
	(0.28%)	(0.02%)	(1.19%)
4	0.12%	0.02%	0.02%
	(0.11%)	(0.14%)	(0.09%)
5	-0.24%	-0.23%	-0.30%
	(-0.24%)	(-0.23%)	(-0.30%)
6	-0.45%	-0.26%	0.12%
	(-0.53%)	(-0.28%)	(-0.34%)
7	-0.30%	-0.04%	0.71%
	(-0.27%)	(-0.40%)	(0.04%)
8	0.47%	0.60%	0.64%
	(0.47%)	(0.60%)	(0.64%)
9	-0.26%	-0.06%	-0.21%
	(-0.19%)	(0.18%)	(0.19%)
10	0.10%	-0.28%	-0.43%
	(0.10%)	(-0.28%)	(-0.43%)

Table 6 Panel B: *Abnormal* and *cumulative abnormal returns* for the event date 9th of January 2007 for deciles 1-10 excluding non-lobbying firms. Adjusting for *outliers in parentheses*.

	9th of January 2007		
	AR	**CAR±1**	**CAR±3**
1	0.47%	0.13%	-0.24%
	(0.47%)	(0.13%)	(-0.24%)
2	0.23%	0.34%	-0.28%
	(0.23%)	(0.34%)	(-0.28%)
3	0.70%	1.94%	1.79%
	(0.72%)	(1.22%)	(0.93%)
4	0.09%	0.08%	0.02%
	(0.09%)	(0.08%)	(0.02%)
5	-0.05%	0.25%	-0.25%
	(-0.05%)	(0.25%)	(-0.25%)
6	0.25%	0.31%	-0.55%
	(-0.02%)	(-0.10%)	(-0.90%)
7	0.42%	0.98%	0.59%
	(0.40%)	(0.82%)	(0.25%)
8	0.17%	0.68%	0.23%
	(0.21%)	(0.56%)	(-0.30%)
9	-0.77%	-0.52%	-0.12%
	(-0.46%)	(-0.70%)	(-0.07%)
10	-0.05%	-0.09%	-0.20%
	(0.01%)	(0.07%)	(0.31%)

Table 6 Panel C: *Abnormal* and *cumulative abnormal returns* for the event date 31st of July 2007 for deciles 1-10 excluding non-lobbying firms. Adjusting for *outliers in parentheses*.

	31st of July 2007		
	AR	**CAR±1**	**CAR±3**
1	0.02% (0.02%)	0.63% (0.63%)	0.52% (0.52%)
2	-0.10% (0.22%)	-0.11% (0.32%)	-0.67% (0.20%)
3	-0.05% (0.00%)	-0.64% (0.39%)	-0.98% (0.33%)
4	0.28% (0.31%)	0.31% (0.68%)	0.08% (0.69%)
5	0.13% (0.13%)	0.78% (0.78%)	0.37% (0.37%)
6	0.01% (0.09%)	-0.26% (0.13%)	-0.55% (0.25%)
7	0.67% (0.80%)	1.12% (1.25%)	0.43% (0.88%)
8	0.54% (0.54%)	0.57% (0.57%)	0.50% (0.50%)
9	-0.15% (-0.09%)	-0.10% (0.00%)	-0.42% (0.00%)
10	-0.19% (-0.18%)	-0.19% (-0.36%)	-0.26% (-0.69%)

Table 7 Panel A: Effect of HLOGA on stock market at event date **January 4th** 2007.

	(1) AR %	(2) AR %	(3) AR %	(4) CAR±1 %	(5) CAR±1 %	(6) CAR±1 %	(7) CAR±3 %	(9) CAR±3 %	(10) CAR±3 %
Prior lobbying	-0.024			0.025			0.105		
	(-0.33)			(0.23)			(0.66)		
Lobbying in preceding year		-0.024			-0.054			-0.039	
		(-1.32)			(-2.05)			(-0.78)	
Rank			-0.022			0.003			0.024
			(-0.53)			(0.03)			(0.23)
FirmSize	0.026	0.036	0.036	0.020	0.113	0.038	-0.222	-0.080	-0.165
	(0.46)	(0.62)	(0.67)	(0.20)	(1.33)	(0.44)	(-1.59)	(-0.7)	(-1.2)
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
r^2	0.001	0.004	0.001	0.001	0.007	0.000	0.004	0.003	0.002
N	288	288	288	288	288	288	288	288	288

Table 7 Panel B: Effect of HLOGA on stock market at event date **January 4th** 2007 when *adjusting for outliers.*

	(1) AR %	(2) AR %	(3) AR %	(4) CAR±1 %	(5) CAR±1 %	(6) CAR±1 %	(7) CAR±3 %	(9) CAR±3 %	(10) CAR±3 %
Prior lobbying	-0.024			0.017			0.038		
	(-0.33)			(0.16)			(0.28)		
Lobbying in preceding year		-0.025			-0.055*			-0.070	
		(-1.29)			(-2.2)			(-2.00)	
Rank			-0.021			0.001			0.006
			(-0.51)			(0.02)			(0.07)
FirmSize	0.030	0.041	0.039	0.034	0.124	0.047	-0.072	0.053	-0.047
	(0.48)	(0.65)	(0.66)	(0.3)	(1.22)	(0.47)	(-0.64)	(0.57)	(-0.39)
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
r^2	0.001	0.004	0.001	0.001	0.008	0.001	0.001	0.007	0.000
N	284	284	284	284	284	284	284	284	284

Table 7 Panel C: Effect of HLOGA on stock market at event date **January 9th** 2007.

	(1) AR %	(2) AR %	(3) AR %	(4) CAR±1 %	(5) CAR±1 %	(6) CAR±1 %	(7) CAR±3 %	(9) CAR±3 %	(10) CAR±3 %
Prior lobbying	-0.067			0.053			0.252		
	(-1.41)			(0.44)			(2.09)		
Lobbying in preceding year		-0.040*			0.018			0.068	
		(-2.28)			(0.44)			(1.46)	
Rank			-0.051*			-0.008			0.119
			(-2.23)			(-0.12)			(1.56)
FirmSize	-0.027	-0.033	-0.011	-0.172	-0.150	-0.115	-0.416*	-0.285	-0.370*
	(-0.45)	(-0.72)	(-0.20)	(-0.82)	(-0.92)	(-0.6)	(-2.47)	(-1.81)	(-2.52)
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
r^2	0.011	0.017	0.013	0.004	0.004	0.004	0.014	0.008	0.009
N	288	288	288	288	288	288	288	288	288

Table 7 Panel D: Effect of HLOGA on stock market at event date **January 9th** 2007 when *adjusting for outliers.*

	(1) AR %	(2) AR %	(3) AR %	(4) CAR±1 %	(5) CAR±1 %	(6) CAR±1 %	(7) CAR±3 %	(9) CAR±3 %	(10) CAR±3 %
Prior lobbying	-0.070			-0.007			0.172		
	(-1.44)			(-0.08)			(1.69)		
Lobbying in preceding year		-0.042*			-0.016			0.024	
		(-2.38)			(-0.52)			(0.80)	
Rank			-0.047			-0.030			0.084
			(-1.91)			(-0.62)			(1.11)
FirmSize	-0.034	-0.040	-0.027	-0.021	-0.006	0.016	-0.199*	-0.079	-0.169
	(-0.54)	(-0.82)	(-0.47)	(-0.29)	(-0.12)	(0.23)	(-2.40)	(-0.80)	(-1.91)
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
r^2	0.021	0.031	0.022	0.000	0.001	0.002	0.008	0.001	0.005
N	281	281	281	281	281	281	281	281	281

Table 7 Panel E: Effect of HLOGA on stock market at event date **July 31st** 2007.

	(1) AR %	(2) AR %	(3) AR %	(4) CAR±1 %	(5) CAR±1 %	(6) CAR±1 %	(7) CAR±3 %	(9) CAR±3 %	(10) CAR±3 %
Prior lobbying	0.022			-0.217			-0.216		
	(0.34)			(-1.56)			(-1.01)		
Lobbying in preceding year		-0.012			-0.100			-0.076	
		(-0.47)			(-1.92)			(-0.90	
Rank			0.022			-0.116			-0.110
			(0.59)			(-1.39)			(-0.83)
FirmSize	-0.028	0.006	-0.040	0.469	0.409	0.448	0.623	0.534	0.596
	(-0.21)	(0.05)	(-0.31)	(1.55)	(1.61)	(1.60)	(1.62)	(1.67)	(1.55)
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
r^2	0.001	0.001	0.001	0.023	0.025	0.019	0.015	0.013	0.013
N	288	288	288	288	288	288	288	288	288

Table 7 Panel F: Effect of HLOGA on stock market at event date **July 31st** 2007 when *adjusting for outliers*.

	(1) AR %	(2) AR %	(3) AR %	(4) CAR±1 %	(5) CAR±1 %	(6) CAR±1 %	(7) CAR±3 %	(9) CAR±3 %	(10) CAR±3 %
Prior lobbying	0.024			-0.160			-0.175		
	(0.37)			(-1.71)			(-1.10)		
Lobbying in preceding year		-0.004			-0.051			-0.021	
		(-0.16)			(-1.12)			(-0.24)	
Rank			0.018			-0.114			-0.133
			(0.53)			(-1.84)			(-1.19)
FirmSize	-0.054	-0.028	-0.059	0.234	0.162	0.260	0.344	0.220	0.383
	(-0.41)	(-0.26)	(-0.47)	(1.94)	(1.72)	(2.20)	(1.92)	(1.44)	(1.84)
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
r^2	0.001	0.001	0.002	0.015	0.010	0.017	0.008	0.004	0.010
N	277	277	277	277	277	277	277	277	277

t statistics in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

These tables reports coefficient estimates of market reactions of the lobbying regulation the different events dates. The dependent variable is the defined as either abnormal returns, cumulative abnormal returns ±1day, or cumulative abnormal returns ±3day. The columns report results from the specification $y = \alpha_0 + \alpha_1 Lobbying + FirmSize + I + \varepsilon$ where the *y* variable is the different measures in columns (1)-(10), *Lobbying* is an exposure measure towards the law defined as either *prior lobbying* expenditures in columns (1), (4), (7), *lobbying in the preceding year* in columns (2), (5), (9) that is lobbying expenditures in year 2006 or *rank* which is a ranking variable dividing firms into deciles based on *prior lobbying* in columns (3), (6), (10). *FirmsSize* is total assets in year 2006, and *I* represents industry fixed effects. ε is an error term.