

Voluntary Initiatives and Regulatory Pressure: What the US Stock Market Tells us

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Abstract

This paper investigates the interdependence of voluntary corporate environmental programs and regulatory pressure. The Waxman-Markey Bill in 2009 came as a surprise and brought the US economy on the brink of a CO_2 emission trading system. We use this event to study whether firms with memberships in voluntary environmental programs focused on carbon emissions are rewarded by the stock market if the likelihood of federal legislation targeting carbon emissions is suddenly increased. The results will shed light on investor's expectations of climate change policies and their value perception of voluntary carbon reduction programs. Previous studies show that firms exhibit negative abnormal stock returns for announcing membership in some of these programs, suggesting that the market associates significant costs to this venture. It would therefore only seem rational for firms to join such programs in anticipation of new regulation.

1 Introduction

It does not seem likely that an agreement on a global framework to tackle climate change is achieved anytime soon. Notably the United States as the

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leading nation in greenhouse gas emissions lacks federal legislations that address carbon emissions. Yet, on 26 June 2009 just after 7pm, an underestimated bill caught the US off guard. The United Nations Climate Change Conference, taking place in Copenhagen later in December, might produce a substantial agreement after all. For on that day, the US House of Representatives very narrowly passed H.R. 2454: The "American Clean Energy and Security Act of 2009", dubbed the Waxman-Markey Bill. This bill aimed to cap CO_2 emissions in the US by means of an Emission Trading System. Even though the Senate eventually defeated the bill later on, its success in the House of Representatives unexpectedly and substantially increased the likelihood of federal carbon legislation in the US.

By means of an event study, this paper addresses the question whether being prepared for regulation pays off. More precisely, we analyze whether US firms which during passage of the Waxman-Markey Bill were corporate members of voluntary environmental initiatives were rewarded by the financial markets in light of the unanticipated rise of likelihood of federal legislation. If this is the case, one motivation for firms to join such voluntary programs might be of instrumental nature, namely preparation for new regulation. On that note, Bruce Braine, vice president of strategic policy analysis for American Electric Power (AEP) commented on the announcement of Chicago Climate Exchange (CCX) that it will shut down its operations in November 2010: "Many of us were doing this not only to make voluntary commitments, but as a way that we could get prepared for a mandatory future. [...] We were learning the ropes, learning about trading and trying to become more proficient in reducing our carbon footprint over time." AEP was a founding member of CCX.¹

There is reason to believe that the mere membership in voluntary programs is perceived as detrimental from an investor's point of view. For the years 2002 to 2008, Fisher-Vanden and Thorburn (2011) conducted an event study and analyzed immediate stock market reactions to firm announcements of joining the Climate Leaders (CL) program of the US Environmental Protection Agency. The authors also accounted for the firms' announcements of binding emission reduction targets. In the seeming absence of regulatory pressure, these firms were vigorously penalized by the stock markets upon announcing their membership.

This short term market reaction raises the question why firms would consider voluntarily joining such programs in the first place. Either the interest of investors and joining firms are not aligned or they do not hold the same beliefs about the upside of joining such programs. Even with similar beliefs about the long run benefit of membership in certain programs, investors and managers might be optimizing over different time horizons. More short-sighted investors than managers might explain the observed negative

¹National Geographic, daily news, November 3 2010

market reaction observed by Fisher-Vanden and Thorburn (2011), because binding partnerships do entail considerable opportunity costs in the short run. On the other hand, if investors perceive voluntary carbon reduction programs as an appropriate training ground for an imminent mandatory carbon market, stock market reactions in case of an abrupt increase in the likelihood of federal legislation should be favorable.

Our contribution to the literature is twofold. First, we employ an event study methodology to investigate the financial repercussions of the Waxman-Markey Bill. This framework allows for a conclusive inference of the impact of the bill. Gans and Hintermann (2011) answer the same question in a difference-in-differences framework. Although their results are very telling, we argue that our approach allows for more conclusive results and thus contributes complementary evidence. Second, we expand the sample of analyzed firms and, in addition to CCX members, include CL firms. It is instructive to reveal if the market deems some type of voluntary commitment as a more effective preparation for future regulation.

The rest of the paper is structured as follows. The next section provides background information on the Waxman-Markey Bill, the two voluntary environmental programs in our sample, and the related literature. Section 3 lays out the event study methodology, followed by the description of our data in Section 4. Results are presented in Section 5, and the last section concludes.

2 Background

2.1 Waxman-Markey

H.R. 2454, the "American Clean Energy and Security Act of 2009" was a bill to propose, among other things, the introduction of a cap and trade system which would regulate the emission of greenhouse gases in the United States, in particular CO_2 . Remaining the last industrialized country solely oriented towards voluntary programs, the bill was to replace existing voluntary action with mandatory legislation. Under the bill, over the next 40 years carbon emissions would be increasingly capped up to 83% of 2005 levels. Allocated with certain CO_2 allowances, the regulated firms would be free to trade their pollution rights at market prices. Although constituting most prominent element of the legislation, the contents of the bill extend beyond the cap and trade system. It was a comprehensive policy to address climate change. As such, it included requirements of "creating a combined energy efficiency and renewable electricity standard and requiring retail electricity suppliers to meet 20% of their demand through renewable electricity and electricity savings by 2020" and "setting a goal of, and requiring a strategic plan for, improving overall U.S. energy productivity by at least 2.5% per year by 2012

and maintaining that improvement rate through 2030”.²

After months of negotiations, on Friday June 26 2009 at 7:17 p.m. the House of Representatives passed the bill by a vote of 219 to 212. The outcome remained uncertain to the end and stirred up subsequent emotions, pointing towards a controversial and unforeseen decision. The media response proclaimed the legislation as historic for the United States and a victory for the Obama administration. Although it remained to be seen whether the Senate would approve the bill as well, the decision of the House of Representatives left the country stunned and raised questions about the immediate impact on the economy. For some time, there was plausible reason to believe that firms would face substantial costs in terms of CO_2 reduction efforts in the near future.

2.2 Chicago Climate Exchange and Climate Leaders

In 2003, the Chicago Climate Exchange (CCX) launched trading operations of the first cap and trade system in North America with 13 charter members that made voluntary but legally binding commitments to reduce six different types of greenhouse gas emissions.³ As part of its cap and trade scheme the CCX relied on a carbon offset program with its own offset standard and independent verification. Overall, the exchange had around 400 members with annual membership fees ranging from 1,000-60,000 USD, depending on firm size and membership type. In November 2010, CCX announced that it would cease trading carbon credits, arguing that firms were no longer interested in trading emission credits in the absence of government legislation.⁴ The low price of CO_2 emission allowances indicates that the firms’ emission reduction targets were not very stringent and that therefore firms expected and indeed did over comply with their commitments. A further source of the cheap emission allowances might also be the criticized weak additionality requirement of CCX (Kollmuss et al., 2008).

The Climate Leaders Greenhouse Gas Inventory Protocol was based on the Greenhouse Gas Protocol (GHG Protocol) developed by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD). It covered six major GHGs emissions categorized into direct emissions (known as Scope 1), indirect emissions (known as Scope 2), and offered the reduction of optional emissions (known as Scope 3). Climate Leaders was an industry-government partnership initiated by the US Environmental Protection Agency (EPA) that worked with companies to de-

²<http://www.govtrack.us/congress/bills/111/hr2454>, visited on October 9 2012

³CCX Fact Sheet, December 2011. https://www.theice.com/publicdocs/ccx/CCX_Fact_Sheet.pdf, visited on January 14 2013

⁴Financial Times, November 1, 2010. <http://www.ft.com/intl/cms/s/0/3fe91576-e5de-11df-af15-00144feabdc0.html#axzz2HwilGa00>, visited on January 14 2013

velop comprehensive climate change strategies. Upon becoming a partner, EPA assisted the company in developing inventory and inventory management plans (generally within one year). Partners then set a corporate wide domestic or global 5-10 year GHG reduction goal and reported annual inventory data to EPA. In addition, partners were to document their progress toward the goal (Tonkonogy and Oliva, 2007).

At the CCX, four types of reduction goals were eligible: absolute, normalized, indexed, or carbon neutrality. EPA evaluated proposed reduction goals from partners requiring an aggressive reduction compared to the projected GHG performance for the sector. Partners were allowed to develop their own GHG mitigation offset projects or purchase certified mandatory or voluntary GHG reductions, provided that the projects adhered to approved EPA methodologies. According to EPA, partners were sure to receive high level recognition via participating in meetings, public outreach, or press events Tonkonogy and Oliva (2007). On September 15, 2000, EPA announced their decision to shut down the program in light of the new developments in regulatory and voluntary initiatives.

2.3 Related Literature

There are two studies that are related to our paper. In the aforementioned event study by (Fisher-Vanden and Thorburn, 2011) the authors investigate between 1993 and 2008 the announcement effects for firms joining the Climate Leaders (CL) program as well as the Coalition for Environmentally Responsible Economies (CERES). Table 1 presents an overview of their events. While Fisher-Vanden and Thorburn do not discover any significant market reaction for joining CERES, they do find negative abnormal returns for announcing membership in the CL program. In particular, on the day of the announcement, stock market returns of respective firms plummet by one percent more than what was to be expected. Announcing a binding CO_2 target incurred an additional penalty of 1.1 percent. The study stresses three other findings. First, there are higher negative announcement returns for firms with few shareholder rights and for firms with high Market-to-Book ratios, indicating that investors deem growth firms to bear higher membership opportunity costs in terms of environmental investments. Second, for portfolios of industry rival stocks identified by the same four-digit SIC industry code the announcement returns are not significant. Third, firms are more likely to join CL if they exhibit hostile shareholder governance or if they have a good former environmental record. In addition, a higher number of climate related shareholder resolutions in the past make for a higher likelihood for firms to join CL.

Gans and Hintermann (2011) conducted a study that directly relates to our paper. They investigate the stock return behavior of member firms of the Chicago Climate Exchange (CCX) on a monthly basis. Table 2 presents

Table 1: Climate Leaders (CL) and CERES

Selection Criteria	CL	Ceres	Total
Members 2008	181	73	254
Identified Firms (Listed in US)			195
Announcement dates			148
Announcement of GHG reduction goal for CL			47
Confounding Events			78
Announcements	74	20	117
GHG goal announcement	23		

an overview of Gans and Hintermann’s events. Contrary to Fisher-Vanden and Thorburn, Gans and Hintermann find no abnormal returns for firms announcing their membership to the CCX. In direct relation to our paper, they additionally investigate the financial impact of the Waxman-Markey Bill on members of the CCX and find significant positive effects. Gans and Hintermann interpret these findings as a market reward for being prepared for future regulation, which seems to have been the firm’s incentive to join CCX in the first place.

Our study picks up on this result and adds to the conclusiveness of the statistical inference by applying a more fitting methodology and expanding the sample. (Gans and Hintermann, 2011) make use of a sophisticated difference-in-differences framework, which however is unusual in the context of unexpected events. Brown and Warner (1980) document the problem of monthly data by illustrating that event for a non-parametric sign tests the degree of misspecification is severe. The large time window associated with monthly market data and the lack of confounding events raise issues about the identification of the return effect attributable to the Waxman-Markey Bill. In a well-known replication study, McWilliams and Siegel (1997) have illustrated the importance of accounting for confounding effects. We argue that the surprising nature of the passing of the Waxman-Markey Bill lends itself exceptionally well to conducting an event study.

3 Methodology

The statistical inference in an event study relies on three assumptions (McWilliams and Siegel, 1997): Market efficiency, no anticipation of the event and that there are no confounding effects during the event window. We measure the effect of the unexpected rise in likelihood of environmental regulation on firms that have pledged environmental attention through membership in binding initiatives by means of an event study. Event studies use financial market information (often stock prices) to deduce the effect of a specific event on the value of a

Table 2: Chicago Climate Exchange (CCX)

Member type	Gans & Hintermann	Mollet & Ilic
All members	109	109
Cities, states and universities	Majority of non listed	20
Listed on a US stock market	55	60
ADRs & Subsidiaries	-	6
Announcement date	34	-
Confounding Events	-	17
Final Sample	32	27

firm. This approach has the advantage that a causal chain can be isolated, linking the impact on stock prices convincingly to the event in question. It is important to note that this specific event was unexpected; otherwise investors had most likely already priced in its potential impact on firm value. Event studies have become an indispensable tool in econometrics, offering a statistical causal effect if potential confounding events can be ruled out. MacKinlay (1997) gives a comprehensive overview of the history, theory, and application of event studies in economics. The measurement of the impact is carried out by calculating the so-called abnormal stock return. The abnormal stock return is the observed return minus the normal return during a specified event window, where the normal return is the return that one would expect to occur if the event had not taken place. The abnormal return $AR_{i\tau}$ is given by equation 2, where $E(R_{i\tau}|X_\tau)$ is the expectation of return $R_{i\tau}$ given X_τ .

$$AR_{i\tau} = R_{i\tau} - E(R_{i\tau}|X_\tau) \quad (1)$$

In financial economics, the normal return is often modeled via the market model, which relates the market return to the return of interest. In a nutshell, the market model isolates the fraction of the return that is associated with the market return, rendering the return of interest more informative. The parameter estimates of the market model are calculated in an Ordinary Least Square framework on the basis of a preceding estimation window. In this study we add the daily Fama-French factors from the Fama-French three factor model (Fama and French, 1992, 1993)⁵ as explanatory variables to the market return, because Kolari and Pynnonen (2010) have illustrated that this model achieves the highest reduction of residual cross-correlation. The event itself succeeds the estimation window and is placed inside the event window, during which the observed returns are compared to

⁵Downloaded from Kenneth French's website: http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html

the expected ones. If the event that changed expectations can not be clearly identified for example due to gradual information leakage, researchers usually analyze a longer event window around the event $\tau = 0$. However, a long time serie of $AR_{i\tau}$ comes with the disadvantage of diminished power of the test statistics. Additionally, a long event window is difficult to reconcile with the notion of market efficiency and it makes controlling for confounding events more costly. Contrary to long-horizon event studies, the test statistics of short-horizon event studies are generally less sensitive to the benchmark model of normal returns and issues of cross-sectional or time-series dependence of abnormal returns (Kothari and Warner, 2007). We define the event day, Friday 26 June 2009, as $\tau = 0$ and set the estimation window from $\tau = T_0 + 1$ to $\tau = 0$, including $\tau = 0$. The event day is included in the estimation window because the vote took only place a 7pm and therefore after the stock exchanges are closed. The event window is set narrowly after the event day, considering the change in closing returns from $\tau = 0$ to the next two trading days $\tau = 0+1$ and $\tau = 0+2$. For this event windows the average cumulative abnormal returns $ACAR[0,1]$ and $ACAR[0,2]$ are formed.

For economic interpretation the raw returns are usefull, but Patell (1976) has already stressed that returns scaled by their standard deviation are better for statistical testing purpose. The standardized cross-sectional residuals test proposed by Boehmer et al. (1991) has the advantage of beeing robust towards event induced variance inflation. As proposed by MacKinlay (1997), clustering can be accommodated either by a portfolio approach, allowing for cross correlation of the abnormal returns, or by analyzing the abnormal returns without aggregation, e.g. by including a dummy for the event day in a multivariate regression model. But the later approach has two drawbacks: the test will have except in special cases poor finite sample properties and little power against reasonable alternatives. Kolari and Pynnonen (2010) propose a modification of the test statistic developed by Boehmer et al. (1991) that is suited to clustering. Their statistic increases the cross sectional variance used by Boehmer et al. (1991) by an adjustment for the average covariance of the error terms in the estimation window.

In all the statistics we present, we use the variance that is adjusted for sampling error of the estimated coefficients of the form:

$$\sigma^2(AR_{i\tau}) = \sigma_{\epsilon_i}^2 * [1 + x_t'(X'X)^{-1}x_t] \quad (2)$$

4 Data

We restrict our analysis to two prominent US voluntary programs and investigate whether these programs were perceived differently by investors in the light of an increased likelihood of federal legislation adressing carbon emissino. We analyze the announcement effect of the Waxman-Markey

bill on both CCX and CL members. Gans and Hintermann have kindly provided us with their CCX database and data on their selection process. They identified 55 CCX members that are listed in the US and pinned down 34 announcements. Their final sample consists of 32 firms however. We have compiled nearly the same CCX firms but do not have to restrict ourselves to membership announcements. We start with the same database as Gans and Hintermann. Of the 109 observations, 20 are government affiliated and consist of cities, states, or universities. From the remaining 89 observations, we find listings for 60 in the US. These listings include eleven American Depositary Receipts (ADRs) and subsidiaries owned by a listed mother company. The list of identified firms including ADRs and subsidiaries encompasses 31 firms from the final sample of Gans and Hintermann, who included one other firm: AGL Resources Inc. The CL member AGL Hydro Partnership is a subsidiary of AGL Energy, an Australian firm which is not a subsidiary of AGL Resources as identified by Gans and Hintermann. Our preferred sample is constructed by dropping the ADRs and subsidiaries and leaves us with 46 firms as illustrated in Table 5. Using a conservative assessment of confounding events, we drop 12 more firms from this sample, yielding a final sample of 27 CCX firms. Table 2 compares the CCX sample construction of Gans and Hintermann (2011) to ours.

We complement our database with CL firms and their partnership status. Table 1 lists the dataset construction of Fisher-Vanden and Thorburn's. Whereas Fisher-Vanden and Thorburn identify the announcement effect of firms joining CL (and CERES), we identify the effect of the Waxman-Markey Bill on existing CL members. Our database starts with the listed CL members retrieved from the US Environmental Protection Agency as of 8 May 2009.⁶ Of the 264 members at this point in time, we focus on the 19 achiever and 87 setter firms. The other 158 so-called developer firms are by definition at a very early stage of their membership. Their status hardly qualifies as an advantage if actually faced with the Waxman-Markey Bill. What is more, a lot of the developer firms have later opted out of the program, questioning their motivation and their commitment in the first place. Because the EPA announced only on September 15, that it would discontinue the climate leader program, the firms must have had some other motivation.⁷ We do not have detailed membership status for 26 June 2009, the day of the passing of the Waxman-Markey Bill, but Table 3 illustrates the development of membership status. Note in particular the change in the number of firms in the different membership stages from 8 May 2009 to 1 August 2010.

Event studies assume that any abnormal return is the sole result of

⁶Obtained through www.archive.org on November 6 2012 via web.archive.org/web/20090508120744/http://epa.gov/climateleaders/partners/index.html

⁷[urlhttp://www.epa.gov/climateleadership/documents/partners_letter_15sep2010.pdf](http://www.epa.gov/climateleadership/documents/partners_letter_15sep2010.pdf), visited on December 9 2012

the unexpected event in question. It is therefore crucial to ensure that during the event window, no other major unexpected events have confounded the returns. Otherwise, we would mistakenly attribute these effects to the Waxman-Markey Bill. To this end, we have conducted a comprehensive analysis of confounding events for an event window of 26 June 2009 (Friday) through 30 June 2009 (Tuesday). The Waxman-Markey Bill passed narrowly at 7:17 p.m on Friday, June 26th 2009⁸ and stock exchanges usually close at 4pm e.g. NYSE and Nasdaq. Because news of this event can not have leaked by insider information before and the weekend follows the event, we can set the event-window and therefore the search for confounding events narrowly. For each firm in our database, we have searched LexisNexis for unexpected announcements that were published in major US news outlets and which were likely to affect market value during the event window. From the 106 firms sporting either achiever or setter partnership status, we managed to find US listings for 60 firms. From these we drop six ADRs and members that have only a listed mother company. With a very conservative rule for confounding events we drop 17 firms. This leaves us with a sample of 37 Climate Leader members. Table 5 illustrates that 8 firms are have a membership in both, the CCX and the CL program.

Table 3: Climate Leader Membership Development

Date	# Firms	Achievers	Setters	Developers
28.03.2008	162	11	69	82
21.05.2008	172	11	69	92
03.01.2009	249	18	85	146
08.05.2009	264	19	87	158
01.08.2010 *	191	26	93	72
13.02.2011	183	32	100	51

* Retrieved on September 20 2012 from:

<http://www.epa.gov/climateleadership/documents/directory.pdf>

All other dates are from lists as retrieved from www.archive.org

5 Results

We estimate abnormal returns for the pooled sample of CCX and CL members as well as for the members of these two voluntary environmental programs separately. Table 5 presents in the final row the number of firms we use in each sample. Following MacKinlay (1997) we start by estimating abnormal returns for these three samples without adjusting jet for time

⁸<http://www.govtrack.us/congress/bills/111/hr2454>, visited on October 9 2012

Table 4: Comparison - Gans & Hintermann (G&H) and Mollet & Ilic (M&I)

	G&H	M&I	M&I incl.	Market Data
Members	109	109		109
Cities, States, Universities	20	20		20
Listed on a US stockmarket	55	61		61
Financial Data available	-	-		57
Confounding Events (CFE)	-	9 or 15		9 or 15
ADRs	-	8		7
Subsidiary of a US listed mother company	-	7		6
Strange Return Index (RI)	-	-		4
Announcement dates	34	-		-
Final Sample G&H	32	-		-
Intersection with G&H		31		27
Intersection with G&H, dropping CFE		26 or 23		25 or 22
Intersection with G&H, dropping CFE, ADRs & Susidiaries		20 or 18		19 or 17
Intersection with G&H, dropping CFE, ADRs, Susidiaries & strange RI		-		18 or 16
Final Sample M&I		34 or 39		29 or 34

J&I Nr. of firms as of June 26 2009

From: Worksheet "overview" in CERES&CL.v6.xlsx

clustering and potential event induced variance increase. We use an estimation window of 151 days prior to the event that ends on Friday, June 26 2009. Table 6 shows the average cumulated abnormal returns (ACAR) as calculated for Monday, 28 June 2009. For the CCX sample we find an average of 0.6% positive daily abnormal return but the t-statistic shows that it is not significant. Also the CL sample has an positive but much lower average mean return. Interestingly the ACAR over a 2 day event window spanning from Monday to Tuesday 28 June 2009 become substantially larger for the CCX and the CL sample as shown in Table 7. The t-statistic increases and is even slightly significant for the CCX sample. The so far presented abnormal returns are useful for their economic interpretation, but the statistical properties of scaled abnormal returns have better statistical properties. Therefore and due to the same event for all our sample firms, we will implement in the next steps the modification of the Boehmer et al. (1991) test statistic proposed by Kolari and Pynnonen (2010). Additionally we check the robustness of our results for different estimation windows. Our current estimation window starts in fall 2008 when the financial crisis hit. This certainly increases the variance of our estimates substantially, making meaningful inference more complicated.

The exploration of the cross-section of abnormal returns remains to be done. We have compiled a promising set of data for this task, including information on membership status in the environmental programs as well as the usual accounting data.

6 Conclusion

Does the market consider memberships in voluntary environmental programs a worthwhile firm venture in light of an unexpected rise in the likelihood of future regulation? Empirical studies show that the mere announcement of such memberships has mixed effects on stock prices. If detectable, such

Table 5: Nr. of Firms according to Environmental Programs

	CL&CCX	CCX	CL
Identified	108	57	65
Without ADRs & Subsidiaries	81	39	54
Without Confounding Events	55	27	36

Table 6: Estimation Window:20nov2008 - 26jun2009

ACAR[0,1] in %	CL&CCX	CCX	CL
Mean	0.386	0.603	0.185
Median	0.669	0.831	0.541
t-statistic	0.865	0.865	0.359
Nr. of Observations	55	27	36

Table 7: Estimation Window 20nov2008 - 26jun2009

ACAR[0,2] in %	CL&CCX	CCX	CL
Mean	0.397	0.970	0.527
Median	0.512	1.147	0.337
t-statistic	1.347	1.742	0.450
Nr. of Observations	55	27	36

effects could be attributable to different beliefs of investors and firms about the benefit of membership or different intentions altogether. Having said that, the reaction on existing members in light of new regulation sheds light on the question which kind of initiatives, if any, are considered more advantageous in terms of preparation. In turn, this reaction is also indicative of the firms' decisions to join in the first place. In addition, as Gans and Hintermann (2011) put it, a positive market reaction for member firms questions a voluntary pursuit to curb greenhouse gas emissions. At the same time, the reaction might be instructive for future regulation as it alludes which instruments might prove more efficient for this task.

Our study analyzes the immediate effect of the Waxman-Markey Bill on stock prices for members of two voluntary but legally binding US environmental initiatives, Climate Leaders and the Chicago Climate Exchange. The bill intended to establish a mandated carbon market in the US and unexpectedly passed the vote in the House of Representatives in June 2009, temporarily inducing a credible economic threat in the form of investment costs. We argue that the surprising nature of the passing lends itself to conducting an event study. In accounting for confounding events, the interpretation of the cumulative abnormal returns of the initiative members will allow for conclusive inferences of the impact on members' stock prices that is uniquely traceable to the bill. In the statistical inference we will have to carefully treat event-clustering and variance inflation. In the light of the financial crisis and US financial market reaching bottom around end February 2009, the robustness of our results to different estimation windows must be scrutinized as well.

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