

Stockholm School of Economics

Department of Finance

Bachelor Thesis

Spring 2012

Institutional Activism and Firm Performance

- An event study in Sweden

^α Kerim Celebi

^β Martin Stenlund

Abstract

This paper investigates abnormal returns around the announcement of activism (flaggings) and analyzes the ex post performance of firms that have been targeted by Swedish institutional activists. The sample period ranges from 2000 to 2012. When running regressions and non-parametrical tests, we find that there is a significant positive average (median) difference of 4.57% (3.39%) in cumulative abnormal returns between active and passive investors over a three day event window. This result is consistent with the idea that the market anticipates a long term value improvement due to activism. However, we find no significant improvement in operational performance ex post activism after having compared institutional activists target firms' operational performance with their industry peers' operational performance. Furthermore, this suggests that the positive and significant difference in cumulative abnormal returns between active and passive investors is either due to a media bias, or that it takes longer time for institutional activists to add shareholder value.

Keywords: Institutional activism, event study, corporate governance, firm performance, abnormal return

Tutor: Ramin Baghai

Date submitted: May, 24 2012

^α 21877@student.hhs.se

^β 22062@student.hhs.se

Acknowledgements

We would like to thank out tutor Ramin Baghai for his guidance in the process of writing this thesis. We would also like to thank Lecturer Håkan Lyckeberg and Associate Professor Per-Olov Edlund for statistical support. Furthermore, we wish to express our gratitude towards the Swedish Financial Supervisory Authority (Finansinspektionen) and Carnegie Investment Bank AB for giving us access to market and company data.

Table of Contents

1. Introduction.....	5
2. Previous literature.....	10
3. Data	12
3.1 Thesis question 1 – Estimating CAR.....	12
3.2 Thesis question 2 – Analyzing firm performance	12
3.2.1 The measures	13
3.3 Data issues.....	13
4. Methodology	14
4.1 Thesis question 1 – Estimating CAR.....	14
4.1.1 Testing thesis question 1	15
4.1.2 Level 1 tests.....	16
4.1.3 Level 2 tests.....	16
4.2 Comparing medians.....	17
4.2.1 Level 1 tests.....	17
4.2.2 Level 2 tests.....	18
4.3. Arguments for non-parametrical tests	18
4.3.1 Understanding the Mann-Whitney U-test.....	19
4.3.2 Applying the Man-Whitney U-test.....	20
4.4 Thesis question 2 – Estimating firm performance.....	20
4.4.1 Comparing medians.....	21
4.4.2 Regressions.....	21
5. Background	23
5.1 Flagging rule.....	24
6. The Lindex example.....	25
7. Results	26
7.1 Thesis question 1 – Analyzing/Comparing CAR	26
7.1.1 Level 1 tests – Testing for significance of flagging CAR	26
7.1.2 Level 2 tests.....	26
7.2 Market overreaction	27
7.3 Extraordinary stock picking abilities.....	28
7.4 Eventual biases	29
7.4.1 Nonsynchronous trading.....	29

7.4.2 External factors.....	30
7.5 Thesis question 2 - Activism intervention and firm performance	30
7.5.1 Eventual biases - endogeneity	31
8. Conclusions	32
9. References	33
9.1 Literature	33
9.2 Webpages	33
9.3 Flagging	34
10. Appendix	36
10.1 Tables	36
10.2 Understanding the institutional activists	52
10.2.1 Cevian Capital	52
10.2.2 Investor	54
10.2.3 Industrivärden.....	54
10.2.4 Investment AB Kinnevik.....	55
10.2.5 Investment AB Öresund	55

1. Introduction

Some investors look for a catalyst in their investments - in our style of investment we are the catalyst." A key question is 'What is the margin potential?' We are looking to see where we can add revenues. We are looking to increase the operating margin and return on capital.

– Christer Gardell, CO-Founder Cevian Capital¹

Critics and regulators have for a long time questioned whether institutional activism benefits shareholders in the long run. They argue that institutional activists make long term shareholder value erode by urging managers to emphasize short term projects and short term valuation metrics in order to gain from short term stock price increases. Previous studies have attempted to answer these critiques by investigating the effects of activist intervention on target firms' long term operational performance. Alon Brav (2008) finds that that abnormal return around the announcement of hedge fund activism is approximately 7%. This is consistent with the hypothesis that hedge fund activism in the US creates long term shareholder value. They find that companies that have been targeted by hedge fund activists outperform their industry peers in terms of higher operating margins and return on assets (labeled ROA) two years after activist intervention. Moreover, they find that target firms experience instant increases in payout ratio and higher CEO turnover after activism².

Despite the question marks around this topic, not much time has been invested to come up with solid answers, nevertheless in Sweden. In Sweden, firms are by law responsible for announcing how much they own in another company at latest one day after they have accumulated shares over 5%, 10%, 15%, 20%, 25%, 30%, 50%, 66 2/3% or 90% in another company. This implies that firms can hold a 4.99% stake in another company without the public's awareness. When they cross the 5% threshold, however, they are by law responsible for announcing how much they own in that particular company to the Swedish Financial Supervisory Authority³. This is called a flagging.

This essay seeks to investigate how the stock market reacts to Swedish institutional activism and whether Swedish institutional activists add long term shareholder value. This essay can

¹ <http://www.thehedgefundjournal.com/magazine/200712/profiles/operational-activists-cevian-are-catalysts-for-corporate-change.php>

² Alon Brav, Wei Jiang, Frank Partnoy, and Randall Thomas, 2008, Hedge Fund Activism, Corporate Governance, and Firm Performance, the journal of finance 2008

³ <http://www.fi.se/Regler/Borsbolag/Flaggning/>

therefore be broken down into two parts. The first part examines the cumulative abnormal return (labeled CAR) around the announcement of activism. The second part attempts to find out whether institutional activists create long term shareholder value by investigating the effects on target firms' industry adjusted performance one and two years after activism intervention.

We believe that there is a positive CAR associated with flaggings (just like Alon Brav finds in the US) made by Swedish institutional activists. We provide two alternative "thesis hypotheses" to this positive CAR: 1) Swedish institutional activists add long term shareholder value in their target firms through smart strategic decision making from within the board, thus increasing operating margins and ROA. 2) The positive CAR that arises when an activist investor flags is due to a media bias, that is, Swedish institutional activists do not add any long term shareholder value. However, the market anticipates that they add fundamental value because media gives these activist investors much attention in the newspapers.

In order to be able to answer the first question, we calculate abnormal returns on and around the announcement of activism and compare it with abnormal returns to flaggings made by passive institutional investors such as mutual funds and pension funds. Our intention with this is to find out whether the shareholder value of activists' target firms earns a premium for being perceived or anticipated to gain shareholder value due to activism. A positive CAR associated with activist flaggings which is significantly higher than CARs of flaggings by passive investors indicates that the stock market anticipates Swedish institutional activists to add shareholder value.

We answer the second question by comparing ROA (defined as EBITDA/Lagged Assets), operative margins (defined as EBITDA/Sales) and Net asset turnover rate (defined as operating revenue/(shareholder funds + non-current liabilities)) of activists' target firms one and two years after they have been targeted by activist investors with one year before. We then compare improvements in these key ratios with improvements in the key ratios of their industry peers (matched along same industry/size dimensions) to find out whether they have outperformed their industry peers or not. A company might for instance perform better because the whole industry is doing better. It is therefore of great importance to analyze relative (industry adjusted) performance.

In Sweden, activism has been determined by a very small amount of institutions. Naturally, these have been given much attention in media. The Swedish institutional investors that this

essay examines are the following: Investor AB, Investment AB Öresund, Investment AB Kinnevik, Industrivärden AB and Cevian Capital. All of these are investment companies except for Cevian Capital which is an activist hedge fund.

When analyzing CARs, we find that the average (median) cumulative abnormal return for activist flaggings is 4.89% (3.27%) in our main event window $\{t_{-1}: t_1\}$. We still find a positive average (median) CAR of 2.82% (2.15%) for activist flaggings at $\{t_{-1}: t_1\}$ after having removed outside values above (below) the 95th (5th) percentile. For mutual funds and pension funds, the average (median) CAR ranges from 0.49% (-0.1%) and 0.12% (0.16%) respectively.

The positive and significant difference in CARs between active investors and passive investors could imply two things: 1) That the stock market perceives that these activist investors are very skilled at identifying undervalued stocks. 2) That they are anticipating these activists to add long term shareholder value through smart strategic decision making from the board.

In order to find out whether the positive CAR arises due to activists being perceived to be skilled at identifying undervalued stocks or due to them being perceived to add long term shareholder value, we compare the flaggings of activists to those of passive mutual funds and passive pension funds. Like activists, mutual funds and pension funds seek undervalued companies. Due to this, the positive and significant difference in activist flaggings' CAR and mutual funds' flaggings' CAR could be seen as an indication that the market anticipates institutional activists to add long term shareholder value. We find a difference in average (median) CAR of 4.4% (3.39%) between activist flaggings and mutual fund flaggings. The non-parametrical tests that we run show that the differences in median CAR of 3.39%, 1.71% and 0.45% between institutional activists' flaggings and mutual funds' flaggings are significant at $\{t_{-1}: t_1\}$, $\{t_0: t_1\}$ and $\{t_0: t_{10}\}$ respectively. Moreover, the simple regressions that we run confirm this further as they indicate that there is a significant difference between active and passive investors' flaggings CAR by 4.57%, 6.56 %, 6.72%, 2.39% and 4.05% on average, at $\{t_{-1}: t_1\}$, $\{t_{-5}: t_5\}$, $\{t_{-10}: t_{10}\}$, $\{t_0: t_1\}$ and $\{t_0: t_{10}\}$ respectively. When removing outside values above (below) the 95th(5th) percentile, the difference in average flagging CAR between active and passive investors is significant at $\{t_{-1}: t_1\}$ (and at $\{t_0: t_1\}$ if we winsorize rather than remove outside values).

Since there is a significant difference in average (median) CAR between activist investors and mutual funds of 4.4% (3.39%) at $\{t_{-1}: t_1\}$, it seems as though the market anticipates Swedish institutional activists to add fundamental value. Whether this perception is empirically justified or not relates to the second part of our thesis.

After running regressions and comparing medians, we find no significant relationship between activism intervention and improved operational performance. That is, activist target firms do not significantly outperform their competitors matched along the same industry/size dimensions. This could imply two things: 1) that Swedish activist investors do not add long term shareholder value. 2) That it takes longer time for smart board decision making to show up in the financial figures. The second scenario could be consistent with the average (median) CAR of 4.89% (3.27%) that arises around the announcement of activist intervention (over a three day event window). The first scenario, on the other hand, implies that investors are misinformed or biased by media that gives the activist investors too much attention, resulting in a significant and high average and median flagging CAR.

Another potential explanation is related to previous studies that conclude that hedge fund activist investors create long term shareholder value whilst mutual fund and pension funds who take an activist approach fail to do so (Alon Brav 2008)⁴. As the market might be aware of this, it has a more positive reaction towards investments by hedge fund activists and a less positive reaction towards investments made by passive mutual funds and pension funds that are more regulated and need to maintain a diversified portfolio⁵. This implies that they cannot focus on value improvement of a specific target firm as much as a hedge fund. These organizational and legal differences might be important in understanding the differences in average and median flagging CAR.

Although the event window $\{t_{-1}: t_1\}$ is our main case, we run regressions and compare medians for alternative time windows as well, those are: $\{t_{-5}: t_5\}$, $\{t_{-10}: t_{10}\}$, $\{t_0: t_1\}$ and $\{t_0: t_{10}\}$. The reason why we are not solely focusing on narrow event windows is that longer event windows could capture effects of a non-instant market reaction. For example, a wider event window can capture effects of buying pressure caused by the acquirer itself prior to the flagging as well as effects associated with insider trading, that is, investors who are acting on information which has not yet been made public. An implication of insider trading is that an

⁴ Alon Brav, Wei Jiang, Frank Partnoy, and Randall Thomas, 2008, Hedge Fund Activism, Corporate Governance, and Firm Performance, *the journal of finance* 2008

⁵ http://wiki.answers.com/Q/What_is_the_difference_between_hedge_funds_and_mutual_funds

event study on a very short event window such as $\{t_{-1}: t_1\}$ does not incorporate the total market reaction, since part of the market has already started to react to the prior to the event window. However, extending the event window increases the issue of endogeneity. In an event window such as $\{t_{-10}: t_{10}\}$ (a total time period of 21 days), the results could be biased by idiosyncratic factors such as quarterly reports or other firm specific news. By narrowing down the event window to $\{t_{-1}: t_1\}$ and by subtracting index returns from stock returns, we remove macroeconomic risk factors, and limit endogeneity issues.

Although this is not our main focus, we also examine whether one can profit by acting on flaggings. We test whether it is possible to earn a positive CAR by going long in the target stocks on the flagging date and selling it the day after the flagging date. We find that there is a significant average (median) CAR of 2.49% (1.57%). This suggests that whenever one reads about an activist flagging in Sweden, one should buy it and hold it for one day. Since the average (expected) return is significant and positive, this might also suggest that the stock market does not react instantly to the announcement of activist intervention. This questions the validity of the efficient market hypothesis.

2. Previous literature

Alon Brav (2008) finds that the abnormal return around the announcement of hedge fund activism is approximately 7%. He argues that this is consistent with the fact that hedge fund activists in the US add fundamental value. Moreover, he finds that target firms' payout ratios increase by approximately 0.3 to 0.5 percentage points and that book value of leverage increases by approximately 1.4 percentage points. He argues that both of these changes are consistent with a reduction of agency problems as less excess cash limits the ability for CEOs to engage in empire building, and higher leverage (implying higher interest costs) subjects managers to increased market discipline (due to higher bankruptcy risk). Furthermore, they observe that hedge fund activists in the US employ highly incentivized managers to run their companies. This is obvious as the CEO turnover rate increases by 10 percentage points. In addition, the average CEO pay declines by one million dollars more than their industry peers. Target firms' operating profitability measured in the form of EBITDA/Lagged Assets and EBITDA/Sales, both in excess of their industry peers increase by 0.9 to 1.5 and 4.7 to 5.8 percentage points, respectively, two years after intervention. This implies that hedge fund activists add fundamental value since their target firms outperform their industry peers in terms of operating profitability two years after activism intervention⁶.

In contrast to Alon Brav's findings, Bernard Black (1998) finds that activist mutual funds and activist pension funds do not achieve any significant effects on target firms' performance⁷. Neither do Roberta Romano (2001)⁸ and Daily, Johnson, Ellstrand and Dalton (1996)⁹.

Romano notes that state and pension funds can have political, rather than profit maximization incentives (Romano 1993)¹⁰. This implies that they have their own dilemma of agency costs which reduces their ability to act as effective monitors. Black (1998) argues that institutional investors do not significantly add value due to activist investors being somewhat passive. He argues that this low level of activism in turn is a result of institutions spending a

⁶ Alon Brav, Wei Jiang, Frank Partnoy, and Randall Thomas, 2008, Hedge Fund Activism, Corporate Governance, and Firm Performance, *the journal of finance* 2008

⁷ Black, Bernard S., 1998, Shareholder activism and corporate governance in the United States, in Peter Newman, ed.: *The New Palgrave Dictionary of Economics and the Law* (Palgrave Macmillan: New York, NY)

⁸ Romano, Roberta, 2001, Less is more: Making institutional investor activism a valuable mechanism of corporate governance, *Yale Journal of Regulation* 18, 174–251.

⁹ Daily C.M. Johnson, J.L., Ellstrand, E.E and Dalton, D.R 1996, Institutional Investor Activism: Follow the Leaders? Working paper. Purdue university

¹⁰ Romano, Roberta, 1993, Public pension fund activism in corporate governance reconsidered, *Columbia Law Review* 93, 795–853.

trivial amount of money in order to obtain a position within the board. Moreover, he notes that these kinds of activists do not even seem to bother with costly proxy fights. The activist institutions find it difficult to act jointly when organizing to influence managers' behavior¹¹. They do in addition struggle with information costs in deciding what government issues needs to be fixed.

Like Black (1998), Roberta Romano (2001) finds no significant impact of shareholder activism on corporate performance. Romano (2001) does however not agree with Black's argument that proposals by activist institutions do not add fundamental value due to their low expenditure level. On the contrary, Romano argues that it is due to the specific objectives of their activism. The objectives that activists stress seem to have no relationship whatsoever with increased firm value. Instead of focusing on long term strategic issues, proposals by shareholder activists have focused on corporate governance mechanisms such as reforming board structure, confidential voting, enhancing board independence and limiting executive compensation. However, previous researches on such reforms show no relationship with increased value. Moreover, there are many private pension funds and mutual funds that do not engage in activism, as they are trying to free-ride on the expenditures and hard work of activist public pension funds (Romano 2001)¹².

Alon Brav (2008) argues that mutual funds and pension funds' inability to affect target firms performance is due to differences in organizational structures. Hedge funds are not as heavily regulated as mutual funds. They can hold very concentrated portfolios with a small amount of companies making up for the larger part of the portfolio, and use leverage and derivatives to accumulate ownership. Having fewer companies in the portfolio is an advantage to hedge funds as they can spend more time on governance related issues. In addition, hedge funds employ managers that they incentivize with bonus programs in order to increase their target firms' operational performance (Alon Brav 2008)¹³.

¹¹ Black, Bernard S, 1998, Shareholder activism and corporate governance in the United States, in Peter Newman, ed.: *The New Palgrave Dictionary of Economics and the Law* (Palgrave Macmillan: New York, NY)

¹² Romano, Roberta, 2001, Less is more: Making institutional investor activism a valuable mechanism of corporate governance, *Yale Journal of Regulation* 18, 174–251.

¹³ Alon Brav, Wei Jiang, Frank Partnoy, and Randall Thomas, 2008, Hedge Fund Activism, Corporate Governance, and Firm Performance, *the journal of finance* 2008

3. Data

3.1 Thesis question 1 – Estimating CAR

This study focuses on flaggings made by Swedish institutional activists and only takes flaggings from the following investors into account: Cevian Capital, Investor, Industrivärden AB, Investment AB Kinnevik and Investment AB Öresund. Our flagging data consists of 25 activist flaggings, 28 pension fund flaggings and 31 mutual fund flaggings. The flaggings have been selected from a time period of 2000 to 2012. It is important to note that we only include the first flagging made by the activist. That is, we are not interested in flaggings when an investor already owns for example 14% of a company and accumulates enough shares to flag at the 15% level. We are only interested in their first flagging (usually at the 5% ownership level) in that particular target firm. The event dates, that is, flagging dates, have been gathered from the Swedish Financial Supervisory Authority's (Finansinspektionen's) database and through an extensive news search on flaggings and activist firms' press releases. Stock and index prices around the flagging date have been gathered manually from NASDAQOMX¹⁴ and YAHOO Finance¹⁵. Indexes have been selected with regards to the specific exchange the stock was registered at. For stocks quoted at the Stockholm stock exchange, the OMXS30 index was used. For foreign stocks, the corresponding country's stock index was used.

3.2 Thesis question 2 – Analyzing firm performance

We have collected accounting data from the Orbis database¹⁶ on a year by year basis over five years. To be more specific, the key ratios have been gathered at the time of activist intervention, one and two years after activist intervention, and one and two years prior to activist intervention. We have done this for almost all of the activist target firms. Activist interventions that were too recent (that is 2011 onwards) have been excluded in this part of the thesis since they have not yet made any accounting data (annual reports) available for 2012, that is, data post activism. The excluded observations are "Seamless", "Transcom" and "Bilfinger".

¹⁴ <http://www.nasdaqomxnordic.com/>

¹⁵ <http://finance.yahoo.com/>

¹⁶ <http://www.bvdinfo.com/products/company-information/international/orbis>

In order to analyze the relative performance, the target firms have been matched with competitors in the same industry/size dimensions. We have gathered accounting data from their industry peers the same way as we did with the target firms, that is, from Orbis database.

3.2.1 The measures

In order to measure operating performance, we use ROA (EBITDA/Lagged Assets) and operating margins (EBITDA/Sales). Both of them are for the most part unaffected by nonoperational factors like taxes and leverage. This is important as target firms are not always located in the same country, implying that they probably have different taxing policies which we do not want to bias our results. This also reduces endogeneity issues as we do not have to worry about leverage and taxes as omitted variables in our regressions. Therefore, using the EBITDA measure seems to be more adequate compared to Net income. We also analyze Net asset turnover rates (operational revenue / (shareholder funds + non-current liabilities)).

3.3 Data issues

When comparing medians using non-parametrical tests, we do not have to worry about outside values. This is however not the case when running regressions. The observations “ABB” and “Seamless” are for instance large outside values, both with CARs of over 25% at $\{t_{-1}: t_1\}$. We therefore run regressions including as well as excluding outside values. We do this by removing flaggings with CARs above (below) the 95th (5th) percentile. Furthermore, we have also winsorized outliers at the 99th (1st) percentiles.

4. Methodology

As stated earlier, this essay can be broken down into two parts. The first part investigates the stock market's reaction to activist intervention by comparing cumulative abnormal returns around flaggings made by institutional activists with cumulative abnormal returns around flaggings made by passive investors such as mutual funds and pension funds. The second part attempts to find out whether activism creates long term shareholder value by analyzing the effects of activism on target firms' operating performance in terms of ROA, operating margins and Net asset turnover.

4.1 Thesis question 1 – Estimating CAR

We analyze the stock market's reaction to each flagging by generating abnormal returns on and around the event dates. The abnormal return is defined as the “ex post return” of a security minus its expected return (MacKinlay 1997)¹⁷.

$$AR_{it} = R_{it} - E(R_{it}|X_t)$$

R_{it} is the actual return and $E(R_{it}|X_t)$ is the expected return. There are two different models that can be used to estimate the expected return variable $E(R_{it}|X_t)$. That is, the constant mean return model (where X_t is a constant), or the market model where X_t is the market (index) return. We use the market model approach:

$$R_{it} = a_i + B_{it} * R_{mt} + E_{it} \text{ where } E(E_{it}) = 0 \text{ and } VAR(E_{it}) = \sigma_{Ei}^2$$

Using the market model, the sample abnormal return is:

$$AR_{it} = R_{it} - \hat{a}_i - \hat{B}_i * R_{mt}$$

In order to use this approach, we assume that the beta of the stocks in our samples equal 1 and that a_i equal 0. We believe these assumptions to be valid since the event window that we apply is very short. Moreover, the market model is considered to be an improvement over the constant mean return model. This is because it reduces the variance of the abnormal return by removing the portion of the return that is due to variation in the market's return (MacKinlay

¹⁷ A. Craig Mackinlay 1997, Event studies in Economics and Finance, Journal of Economic Literature, Volume 35, Issue 1(Mar1997), 13-39

1997)¹⁸. Long story short, in order to generate abnormal returns for each flagging, we simply deduct the market return from the stock return. Index returns are used as proxies for market return.

In order to generate abnormal returns for each flagging, we need the actual return of each stock and its corresponding index return around the event date. We generate actual stock and market (index) returns by using daily close prices. When using an event window of $\{t_{-1}: t_1\}$, we retrieve close prices one day before the flagging, the close price on the flagging and the close price one day after the flagging for each stock and its corresponding index. Dividing close prices at t_1 , with t_0 , and t_0 with t_{-1} generates two separate stock and index returns for each flagging on and around the event date. Then, we simply subtract the market return (index return) from the stock return to generate the abnormal return. We repeat this task for the other event windows as well, such as $\{t_{-5}: t_5\}$, $\{t_{-10}: t_{10}\}$ and $\{t_0: t_1\}$ and $\{t_0: t_{10}\}$

We then sum these two abnormal returns at each flagging to generate cumulative abnormal returns. The assumption that you need to make in order to aggregate abnormal returns of each flagging to one single CAR per flagging is that there is not any clustering, implying that event windows do not overlap (MacKinlay 1997)¹⁹. The CAR for flagging nr i at $\{t_{-1}: t_1\}$ is:

$$CAR_i(t_{-1}, t_{+1}) = \sum_{t=-1}^{t_1} AR_{it}$$

4.1.1 Testing thesis question 1

When examining how the market reacts to flaggings from institutional activists, we compare activist flaggings' CAR with the CAR of mutual funds and pension funds' flaggings. But before we do that, we test whether the CARs of these three groups' flaggings are, on a standalone basis, significantly different from zero. One can do that by testing whether cumulative stock returns on and around the event date are different from cumulative market (index) returns. We do this by running regressions and by comparing medians using non parametrical tests.

¹⁸ A. Craig Mackinlay 1997, Event studies in Economics and Finance, Journal of Economic Literature, Volume 35, Issue 1(Mar1997), 13-39

¹⁹ Ibid.

4.1.2 Level 1 tests

The level 1 test is testing whether cumulative stocks returns around the flagging date are significantly higher than cumulative index returns within the specified event window. Our null hypothesis is that the event has no impact on the behavior of returns (CARs equal zero), within the specified event window with the alternative hypothesis being that the event has an impact on the behavior of returns (CARs are different from zero).

In order to test this, we run two types of regressions, one simple regression, and one multiple regression in which we control for size (defined as the target firm's total book value of assets at the event date). The idea with this is to find out whether firms of small size generate higher CARs than firms of large size, or vice versa.

- Simple regression: $\widehat{CAR} = \hat{B}_0 + \hat{B}_1 * X_1$ where the explanatory variable X_1 is a dummy variable that takes the value of 1 for cumulative stocks returns and 0 for cumulative index returns.
- Multiple regression: $\widehat{CAR} = \hat{B}_0 + \hat{B}_1 * X_1 + \hat{B}_2 * X_2$ where X_2 is a size-variable. These regression results are reported, with as well as without outside values, in tables VI and VII.

4.1.3 Level 2 tests

The level 2 test compares activist flaggings with passive investors' (defined as mutual funds and pension funds) flaggings, and is testing whether average and median differences in CARs between these groups' flaggings are significant. Our null hypothesis in this case is that there is no significant difference in average CAR between these three groups: activists, passive mutual funds and passive pension funds with the alternative hypothesis being that there is a significant difference in average CARs.

We run two different regressions. First, we run a simple regression where the flagging CAR is used as the explained variable. The explanatory variable is a dummy variable that takes the value of 1 if the observation is an activist flagging and zero if the observation is a flagging made by a passive investor (mutual fund or pension fund).

- Simple regression: $\widehat{CAR} = \hat{B}_0 + \hat{B}_1 * X_1$ where the explanatory variable X_1 is a dummy variable that takes the value of 1 for activist flaggings and zero for passive investors flaggings.

We believe that a simple regression is sufficient in answering the first thesis question as the event window is very small. Thus, we do not believe endogeneity, in the form of omitted variables, to be an issue. We have also searched for news around the flagging dates to find out whether there might have been other firm specific events that could bias the results, and we have found nothing we deemed important.

However, we still run a second regression where we control for size. The size variable is measured by the target firm's asset size.

- Multiple regression: $\widehat{CAR} = \hat{B}_0 + \hat{B}_1 * X_1 + \hat{B}_2 * X_2$ where X_2 is a size-variable.

We repeat this procedure excluding outside values. We do this by excluding outside values above (below) the 95th (5th) percentile. This could also be seen as an attempt to try to normalize return distributions. Furthermore, we winsorize at the 99th (1st) percentiles.

4.2 Comparing medians

In addition to running regressions, we apply a non-parametrical methodology to compare the median CAR of activist flaggings with the median CAR of mutual fund and pension fund flaggings.

4.2.1 Level 1 tests

The level 1 test is testing whether abnormal returns of activist flaggings, mutual fund flaggings and pension fund flaggings separately are significant. It does this by testing whether median cumulative stock returns are significantly higher than median cumulative index returns for different event windows.

Our null hypothesis is that the median difference is zero, with the alternative hypothesis being that it is different from zero.

4.2.2 Level 2 tests

The level 2 test is testing whether the difference in median CAR between activists and passive investors is significant.

Our null hypothesis in this case is that there is no difference in median CAR between institutional activists, passive mutual funds and passive pension funds with the alternative hypothesis being that there is a significant difference in median CAR.

4.3. Arguments for non-parametrical tests

There are several reasons as to why we, in addition to running regressions, include non-parametrical tests and compare medians.

The methodology of linear regression analysis might not be optimal when we have a small sample size. Linear regression analysis rests on a number of assumptions including the implied one that the central tendency of the examined population can be described by its mean. While this is true for symmetric distributions it is not for nonsymmetrical distributions (skewed distributions). In our case, we have fewer than the least amount of observations required (30) to be able to assume approximate normal distributions of our sample distributions using the central limit theorem²⁰.

Due to this uncertainty, we run skewness and kurtosis tests in order to examine whether the samples of stock and index returns are normally distributed or not. Our null hypothesis is that stock returns of activist flaggings, mutual fund flaggings and pension fund flaggings are normally distributed. The alternative hypothesis in this case is that they are not normally distributed. The results of skewness and kurtosis tests were strongly in favor of the alternative hypothesis, that is, our sample distributions are not normally distributed. We found that the distribution for activist targets stock returns were skewed to the right and had high kurtosis. The p-values range between 0 – 1.19 % for activist observations which is strongly in favor of the alternative hypothesis. The fact that return distributions are skewed to the right probably relates to our two major outlier observations, “ABB” and “Seamless” who both feature CARs of around 25% each at $\{t_{-1}: t_1\}$.

²⁰ <http://stattrek.com/sampling/sampling-distribution.aspx>

Furthermore, since stock returns are not normally distributed, all ordinary least squares (OLS) assumptions required to run regressions are not fulfilled. In order to get around this issue, one can run non-parametrical tests and compare differences in median CAR between activist flaggings and passive investors' flaggings to find out whether there is any significant difference in median CAR. The consistent and straightforward way that we have applied hypothesis testing is hence through a methodology that neatly gets around these bindings; the Mann Whitney U-test. The main advantage with comparing medians in our case is that it gets around the problem of our two large outliers, "ABB" and "Seamless".

However, since the normality assumption is not the most important OLS assumption, we still find it appropriate to use regression analysis. The OLS estimators could still be the best linear unbiased estimators (BLUE)²¹. We also remove outside values as an attempt to normalize the distribution of stock and index returns.

4.3.1 Understanding the Mann-Whitney U-test

The Mann-Whitney U-test is a test that lets the central tendency of a sample be described by its median rather than by its mean. It is a non-parametric statistical hypothesis test that can be applied for assessing whether one of two samples of independent observations tends to have larger values than the other. In contrast to the somewhat "strong" assumptions underlying the methodology of regression analysis this methodology merely implies a few assumptions²²:

- 1) The distributions for the test variable are identical for the two populations (except for their medians).
- 2) All the observations from both groups are independent of each other.
- 3) The responses are ordinal (i.e. one can at least say, of any two observations, which is the greater)

Compared to a two sample t-test (which could be an alternative to the Mann-Whitney test), this non-parametric methodology brings the advantages of being robust in the sense that it is relatively insensitive to outliers. Moreover, a Mann-Whitney U-test uses ranks only, and in

²¹ Wooldridge, J. M. (2009), *Introductory Econometrics: A Modern Approach*. 4th Ed. Canada: South-Western Cengage Learning.

²² Newbold, Carlson, Thorne (2010), *Statistics for business and Economics*, 7th Ed. Global Edition, Pearson

contrast to the two sample t-test, this methodology does not require the in many cases unrealistic assumption of normality for very small sample sizes.

While it could be reasonable to anticipate that a flagging event in one company could cause a share price reaction in another one (this is increasingly likely if the firms are related to one another in some sense, for example belong to the same industry), we deem this kind of bias to be highly unlikely and not a factor of concern as we apply these tests on our samples. As there are different acquirers, and as time in-between flaggings are measured in years and months rather than in days and seconds, it become reasonable to anticipate that any possible bias arising from dependency in-between flaggings become nonexistent or at least negligible.

Although this methodology brings a lot of advantages, a potential weakness with the non-parametrical test at level 1 is that stock returns and index return might not be completely independent of each other.

4.3.2 Applying the Man-Whitney U-test

We implement the Mann Whitney U-test in many levels throughout this thesis, and although the test is being applied several times and in both parts of the thesis, the purpose and the methodology is the same throughout the study; to obtain a probability value that can be used to say something about the results.

The procedure of applying it can be broken down into three major steps. First, the two corresponding samples are ranked and pooled into groups. Secondly, the average rank in each of the two groups is calculated. Thirdly, statistical formulas and tables are applied to determine the probability of observing such a discrepancy in ranks. All this is done in either Excel or in Stata.

4.4 Thesis question 2 – Estimating firm performance

In order to find out whether activism adds fundamental value or not, we compare institutional activists' target firms to their competitors (matched according to same industry/size category). We then calculate changes in key ratios of activist target firms to changes in the same key ratios of their industry peers one and two years after activism and compare it with one year

prior to activism. As in thesis question one, we do this in two ways, through regression analysis and by comparing medians using non-parametrical tests.

4.4.1 Comparing medians

We compare the median change in the key ratios (the key ratios described in the data section of activist target firms to median change in the same key ratios of their industry peers). The reason as to why we do this is as we explained above, that we have too few observations to assume normality using the central limit theorem. For each target firm and their industry peers, we quantify the change in for instance ROA (EBITDA/Lagged Assets) one year after activism. Then we compare the median change in ROA for activists' target firms and their industry peers. We repeat the same task and analyze the effects of activism two years after activist intervention by comparing the key ratios with one year prior to activism.

4.4.2 Regressions

We use a matching methodology where we match activist target firms to competitors in the same industry/size category. This reduces endogeneity issues in terms of omitted variable bias and allows us to use a simple regression.

Moreover, activist target firms' key ratios (such as ROA) are on a year by year basis reduced by their industry peers average key ratio (average ROA). We are therefore making a direct year by year comparison between activist targets firms' ROA and their industry peers' average ROA. In order to find out whether the ROA of activist targets' post activism improve more than their industry peers' ROA post activism, we use an explanatory variable that takes the value of 1 for observations one year after activism and 0 for observations one year prior to activism.

In the simple regression, the dependent variable is a key ratio (e.g. ROA or operating margins) and the explanatory variable is a post activism dummy variable that takes the value of 1 for observations one year after activism and 0 for one year before activism. We do this for EBITDA/Lagged Assets, EBITDA/Sales, and for Net asset turnover rate. We then repeat this process with the difference that the post activism variable (the explanatory variable) takes

the value of 1 for observations two years after activism and 0 for one year prior activism. Through this, we try to find out how the relative performance of activist target firms develops one and two years after activism in comparison to one year prior to activism. Furthermore, we also compare average key ratios of one and two years post activism with the average key ratios of the years t_0 and t_{-1} .

5. Background

Europe has a long history of passive corporate ownership. Companies in Europe have, as a result, been unexposed to the market of corporate control. Moreover, approximately €1.7 trillion, or 15% of European market cap is anticipated to be stuck in value-destroying ownership structures. The value potential is unexploited due to overcapitalization, entrenched boards and management and inefficient corporate structures. These unexploited markets provide great opportunities for activists firms such as Cevian Capital, Investor, Industrivärden, Investment AB Öresund and Investment AB Kinnevik to act as well informed monitors²³.

“The best place for shareholders, perhaps in the world, is the Nordics,”

- Harlan Zimmerman , senior partner Cevian Capital²⁴.

In the Nordics, the board is selected by a nomination committee which is made up of the largest shareholders, along with a chairman who has to be independent or a non-executive. Annual elections are held for all directors participating in the board. Leading shareholders participating in the nomination committees propose their candidates at companies' shareholder meetings. This system is helpful to activist investors who wish to replace board members who take a passive approach or are simply not good enough²⁵.

In the US however, CEOs are in many cases also chairmen. The nomination committee that chooses the company's board is made up of directors who owe their positions to the CEO. Moreover, board elections tend to be staggered. This means that only one part of the board is up for election, meaning that all directors are not replaceable. Proposing new candidates without running public proxy battles seems very difficult²⁶.

²³ <http://www.thehedgefundjournal.com/magazine/200712/profiles/operational-activists-cevian-are-catalysts-for-corporate-change.php>

²⁴ http://articles.marketwatch.com/2010-11-19/investing/30710685_1_nomination-committee-shareholders-board-slate

²⁵ Ibid.

²⁶ Ibid.

5.1 Flagging rule

In Sweden, firms are by law responsible for announcing how much they own in another company at latest one day after they have accumulated shares over 5%, 10%, 15%, 20%, 25%, 30%, 50%, 66 2/3% or 90% in another company²⁷. In this essay, we are only interested in the first flagging (usually at the 5% level).

²⁷ <http://www.fi.se/Regler/Borsbolag/Flaggning/>

6. The Lindex example

An example of successful activism intervention is Cevian Capital's (Cevian) investment in the Swedish clothing retailer Lindex. After having analyzed Lindex for a few months, Cevian found that the main issues with Lindex were a loss-making business in Germany (that accounted for 10% of Lindex's sales) and costs that had risen seven years straight. Although closing down the stores was an expensive process (due to the leases and the following redundancy costs), the payback period was also estimated to be short, ranging from one and a half to two years. They therefore concluded that closing down the German stores would eventually add value to Lindex.

Having come to this conclusion, Cevian decided to go ahead with the investment and bought 10% in one go, making them the largest shareholder of Lindex. Three months after their investment, Christer Gardell (the CO-founder of Cevian Capital) joined the board of Lindex and let three long standing board members step down. They proceeded by closing down unprofitable stores in Germany which they replaced with new profitable stores in the Czech Republic and the Baltic states. Moreover, they developed a new store format which eventually would allow Lindex to enter smaller cities in Scandinavia. With this, they started adding about 25 new stores a year. About seven executives joined from the "best in class" Hennes & Mauritz (H&M) at divisional level, one of which was appointed new CEO of Lindex. They were in addition all incentivized with options. After having implemented these cost cutting and revenue enhancement plans, Cevian managed to transform Lindex from a slow growth, very low margin company to a rapidly growing, high margin business. To be more exact, Cevian managed to increase the operating margins from 4.5% to 14% in three years.²⁸.

²⁸ <http://www.thehedgefundjournal.com/magazine/200712/profiles/operational-activists-cevian-are-catalysts-for-corporate-change.php>

7. Results

As explained in the methodology section, there are five event windows that we test: $\{t_{-1}: t_1\}$, $\{t_{-5}: t_5\}$, $\{t_{-10}: t_{10}\}$, $\{t_0: t_1\}$ and $\{t_0: t_{10}\}$. We consider $\{t_{-1}: t_1\}$ to be the main event window since the CARs of the longer event windows might be biased by firm specific news.

7.1 Thesis question 1 – Analyzing/Comparing CAR

7.1.1 Level 1 tests – Testing for significance of flagging CAR

As table V, Panel A shows, there is a positive and significant difference in median cumulative stock returns and median cumulative index returns for institutional activists' flaggings at: $\{t_{-1}: t_1\}$ and $\{t_0: t_1\}$ of 2.17% and 1.18% respectively. For passive investors such as mutual funds and pension funds, however, we find no significant difference in median cumulative stock returns and median cumulative index returns, indicating that the market does not expect any fundamental value increase from mutual funds and pension funds. This is further strengthened by both the simple and multi-regressions that we run, shown in table VI and VII, which show that there is a positive and significant relationship between activist flaggings and CAR for event windows $\{t_{-1}: t_1\}$, $\{t_0: t_1\}$, $\{t_{-5}: t_5\}$ of 4.89%, 2.49% and 7.41% on average. They are still significant when excluding outside values above (below) the 95th (5th) percentiles. This supports the idea that the investors anticipate institutional activists in Sweden to add fundamental value, hence leading to positive and significant average CARs on and around the flagging dates.

We run multi-regressions as well where we include firm size as an additional variable and we find no significant relationship between firm size and CAR, that is, CAR does not seem to vary with firm size.

7.1.2 Level 2 tests

As table III in the appendix indicates, we observe that activist flaggings exhibit high average and median cumulative abnormal returns at the time of flagging in comparison to passive investors. Table V, panel B shows that the difference in median CARs of 3.39% and 1.71% between activists and mutual funds is very significant (with p-values less than 1%) at $\{t_{-1}: t_1\}$ and $\{t_0: t_1\}$ respectively. This does not hold true for the other event windows. When

running regressions (table VIII, panel A) however, we find that there is a highly positive and significant difference in the behavior of returns between institutional activists and passive institutions for all event windows that we use ($\{t_{-1}: t_1\}$, $\{t_{-5}: t_5\}$, $\{t_{-10}: t_{10}\}$, $\{t_0: t_1\}$ and $\{t_0: t_{10}\}$). The significant differences in CAR are on average 4.7%, 6.56 %, 6.72 %, 2.39% and 4.05% respectively. When excluding outside values (table 8, Panel B), this holds true only for our main event windows $\{t_{-1}: t_1\}$ (and $\{t_0: t_1\}$ if winsorized at the 1% level).

These results are consistent with the idea that the market anticipates a long term value improvement due to activism. However, there are other potential explanations as to why we observe positive and significant CARs associated with the announcement of activism intervention.

The reason as to why passive mutual funds' and pension funds' flaggings experience very low CARs could also be related to previous studies (Black and Romano²⁹) that have found that mutual funds and pension funds following activists' agendas do not add any fundamental value. As many investors might be aware of this, CARs around the flagging date are not significantly different from zero.

7.2 Market overreaction

One could argue that the reason as to why we observe such a high average and median CAR is buying pressure caused by the institutional activist accumulating shares. This hypothesis is strengthened by the fact that we observe a run up of 12.3% in trading volume (see table X) prior to the flagging date. However, if the price impact is solely due to overreaction, we would observe negative cumulative abnormal returns shortly after the flagging. We test whether this is the case or not and we do not observe any reversal in CARs 10 days after the flagging date. This implies that there is probably no market overreaction.

Furthermore, it is important to highlight that market reactions are probably a biased estimate of the anticipated benefits from successful activism. If the market overestimated the value of successful activism, institutional activists in Sweden would have no incentive whatsoever to proceed with a costly process of activist intervention. As a result, stock prices probably adjust to a level that takes into account the expected gains from activism adjusted for the probability

²⁹ Black, Bernard S., 1998, Shareholder activism and corporate governance in the United States in Peter Newman, ed.: *The New Palgrave Dictionary of Economics and the Law* (Palgrave Macmillan: New York, NY)

that institutional activists in Sweden proceed with their activism plans and succeed. This implies that the market probably underestimates the value of ex post successful activism. Else, there would be no incentive for institutional activists in Sweden to engage with value improvement in their target firms³⁰.

7.3 Extraordinary stock picking abilities

Another potential explanation to why we observe such high CARs could be institutional activists' extraordinary ability to identify undervalued companies. Institutional activists like for instance Cevian Capital could have generated positive returns to their investors due to their ability to identify undervalued companies, and not because they were adding any fundamental value to their target firms. Their neat reputation for adding long term shareholder value could therefore be a result of them being skilled at identifying undervalued companies.

Considering this hypothesis, the stock market reacts positively to the flaggings in our sample due to the announcement of information that these institutional activists have identified an undervalued stock, not to the announcement of information that they will add long term shareholder value.

In order to be able to separate these two different effects apart, we need to compare institutional activists' flaggings to passive institutions flaggings, such as mutual funds and pension funds that have similar abilities and the same intention to identify undervalued companies, but do not add value through activism. This is why we do Level 2 tests. As such, we compare CARs of activist flaggings with CARs of flaggings by passive investors. As table V, panel B shows, we find a positive and significant difference in median CARs between these two groups of 3.39% and 1.71% for event windows $\{t_{-1}: t_1\}$ and $\{t_0: t_1\}$ respectively. This suggests that a large part of the observed high CAR is due to the market's anticipation that institutional activists in Sweden add fundamental value to the firms they invest in. A weakness with this comparison is however, that one could argue that investors do not anticipate mutual funds to be able to identify undervalued companies to the same extent as institutional activists since mutual funds have a track record of underperforming index on

³⁰ Bond, Philip, Itay Goldstein, and Edward S. Prescott, 2007, Market based regulation and the informational content of prices, Working paper, University of Pennsylvania.

average³¹. In addition, there are legal aspects which require mutual funds to hold a diversified portfolio of stocks meaning they cannot spend as much time analyzing individual stocks as investment companies or activist hedge funds like Cevian Capital³². As a result, it could be difficult to fully comprehend whether activist flaggings experience positive abnormal returns due to the market's anticipation that they add fundamental value or to their perception that the activist firm has identified an undervalued company. The comparison that we make, however, attempts to answer this question.

7.4 Eventual biases

7.4.1 Nonsynchronous trading

A phenomenon that could bias our results is known as nonsynchronous trading. It results from the assumption that multiple time series are simultaneously sampled when the sampling, on the contrary, is nonsynchronous³³. The daily prices that we used to calculate stock and index returns are closing prices. Closing prices of different securities do not need to be set simultaneously. As an example, assume that the returns to the ABB stock and the Faberge stock are independent and that Faberge trades less frequently than ABB. If news affecting the aggregate stock market arrives near the close of the market, it is more likely that ABB's end of day close price will reflect this information than Faberge because Faberge might not even trade after the news' arrival. Naturally, Faberge will respond to this information the next day, but the fact that there is a lag in its response induces spurious correlations between the daily returns of closing prices of ABB and Faberge. This should not bias our results since all our flaggings occur at different points in time.

We do not believe this potential bias to have any significant effect on the results because the event windows that we use are relatively short, implying that the amount of time intervals that may vary in length is only a few.

³¹ http://articles.businessinsider.com/2012-03-12/markets/31151169_1_index-funds-large-cap-growth-funds-stock-funds

³² http://wiki.answers.com/Q/What_is_the_difference_between_hedge_funds_and_mutual_funds

³³ <http://press.princeton.edu/books/lo/chapt4.pdf>

7.4.2 External factors

In theory, there could have been other firm specific news that could bias the results of the event study. An example of this could be quarterly reports released on or around the event date. This would make it difficult for us to determine whether the CARs are attributable to the specific event or to the news. In order to address this issue, we performed a news search on and around the event dates and we could not find any major news being released that could lead to a bias.

Moreover, if information about the flagging released on the event date is not immediately incorporated into the share price, that is, there is a time lag, the event study would not incorporate the total market reaction. This is also why we have included wider event windows as a complement to the shorter ones, although wider event windows might be exposed to larger risk of being biased by other factors such as quarterly reports.

Investors with insider information are another issue that could bias the results of the event study. Since they would buy shares prior to the event date itself, part of the market would start reacting to the flagging prior to the flagging date, implying that a very narrow event window would not incorporate the total market reaction.

Another possible bias that could arise relates to the market portfolio proxy. Abnormal returns would be slightly different if another index had been used in Sweden (for instance OMXS100). However, we do not believe this to be of importance as the indexes are highly correlated, and most of the target firms are large cap. As a result, we believe that the OMXS30 is an adequate proxy.

7.5 Thesis question 2 - Activism intervention and firm performance

The next part of the essay attempts to come up with an answer as to whether institutional activists in Sweden add fundamental value or not one and two years after activism intervention. When comparing target firms with competitors in the same industry/size dimensions, we find that the median development of ROA is negative, presented by table XII. Operating margins and Net asset turnover for activist target firms increase more than their industry peers. However, as table XII also displays, none of these effects are significant. Like the non-parametrical tests, the regressions that we run show no significant relationship between operational firm performance one and two years after activism compared to one year

prior to activism, see table XIII. The results are still insignificant when comparing the mean key ratios post activism (mean of for example ROA one and two years post activism) with the mean key ratio pre activism (mean of ROA at the years t_0 and t_{-1}).

There are two implications to this. This suggests that either it takes longer time for smart board decision making to show in the financial figures, or activist investors do not add value, implying that the positive CAR is due to a media that gives the Swedish institutional activists too much attention. Both of these conclusions are interesting. The first conclusion is consistent with the high average (median) CAR that is observed whilst the second conclusion is an indication of investor irrationality and that media has a large impact on stock prices.

7.5.1 Eventual biases - endogeneity

Potential bias is an issue that might be caused by factors such as omitted variables, measurement error and simultaneity³⁴. When comparing medians using non-parametrical tests, the issue of omitted variables might arise. That is, there might be omitted variables such as specific industry effects and leverage that could bias the results. In order to address this issue, we run regressions where target firms are compared to competitors in the same industry/size dimensions. In addition, the performance parameters that we use such as EBITDA/Lagged Assets and EBITDA/Sales are largely unaffected by differences in taxes and leverage. This is important as some of the firms operate in different countries and have different taxing policies. Through this matching procedure, we try to minimize the effect of omitted variables.

³⁴ Wooldridge, J. M. (2009), *Introductory Econometrics: A Modern Approach*. 4th Ed. Canada: South-Western Cengage Learning.

8. Conclusions

Institutional activists' flaggings exhibit a significantly higher CAR than both mutual funds and pension funds' flaggings do with and without outside values over the three day event window. This result is consistent with the idea that the market anticipates Swedish institutional activists to add shareholder value.

We find no significant difference in institutional activists' target firms' operational performance compared to the operational performance of their respective industry peers, matched according to the same industry/size dimensions. There are two different implications to this. This suggests that it either takes longer time for smart board decision making to show up in the financial figures or that Swedish institutional activists do not add value, implying that the positive CAR is due to media giving these flaggings too much attention. Both of these conclusions are interesting. The first conclusion is consistent with the high average (median) CAR that is observed whilst the second conclusion is an indication of investor irrationality and that media has a large impact on stock prices.

This study could be done more accurate by including more countries such as Norway, Denmark and Finland and focus on the Nordics instead of Sweden. Through this, one could increase the sample size, and the findings would be made more general and less country specific. With a larger sample size, one could also examine the cross section of the abnormal returns, that is, how abnormal returns are associated with the stated objectives of institutional activists. For instance, activism that aims to improve target firms' business strategy could be associated with a high CAR whilst activism that aims to address capital structure issues such as payout ratio might be associated with a low CAR. Furthermore, it would also be interesting to add more parameters such as contracted CEO pay, CEO-pay-for performance and payout ratio (dividends + share repurchases) to find out whether institutional activists attempt to reduce agency costs of target firms.

9. References

9.1 Literature

Alon Brav, Wei Jiang, Frank Partnoy, and Randall Thomas, (2008), “Hedge Fund Activism, Corporate Governance, and Firm Performance”, the journal of finance

Newbold, Carlson, Thorne (2010), “Statistics for business and Economics”, 7th Ed. Global Edition, Pearson

Wooldridge, J. M. (2009), “Introductory Econometrics: A Modern Approach”, 4th Ed. Canada: South-Western Cengage Learning

Romano, Roberta, (2001), “Less is more: Making institutional investor activism a valuable mechanism of corporate governance”, Yale Journal of Regulation 18, 174–251

Romano, Roberta, (1993), “Public pension fund activism in corporate governance reconsidered”, Columbia Law Review 93, 795–853

A. Craig Mackinlay, (1997), Event studies in Economics and Finance, Journal of Economic Literature, Volume 35, Issue 1(Mar1997), 13-39

Black, Bernard S, (1998), “Shareholder activism and corporate governance in the United States”, Peter Newman, edition, The New Palgrave Dictionary of Economics and the Law (Palgrave Macmillan: New York, NY)

Bond, Philip, Itay Goldstein, and Edward S. Prescott, (2007), “Market based regulation and the informational content of prices”, Working paper, University of Pennsylvania

Daily C.M. Johnson, J.L., Ellstrand, E.E and Dalton, D.R, (1996), “Institutional Investor Activism: Follow the Leaders?” Working paper. Purdue university

9.2 Webpages

<http://www.nasdaqomxnordic.com/>

<http://finance.yahoo.com/>

<http://stattrek.com/sampling/sampling-distribution.aspx>

<http://www.fi.se/Regler/Borsbolag/Flaggning/>

<http://www.thehedgefundjournal.com/magazine/200712/profiles/operational-activists-cevian-are-catalysts-for-corporate-change.php>

<http://www.investorab.com/en/default.htm>

<http://www.oresund.se/english.html>

<http://www.industrivarden.se/en/>

<http://www.kinnevik.se/en/>

<http://www.investorschronicle.co.uk/2012/04/05/comment/no-free-lunch/who-is-cevian-4LA77D7zEtfA6ypcc1gy9L/article.html>

<http://simonkerrhfblog.blogspot.se/2011/01/cevian-capital-ii-ranks-high-on-2010.html>

<http://www.fundweb.co.uk/myners-to-be-chairman-at-activist-investor/1031846.article>

<http://press.princeton.edu/books/lo/chapt4.pdf>

http://wiki.answers.com/Q/What_is_the_difference_between_hedge_funds_and_mutual_funds

http://articles.marketwatch.com/2010-11-19/investing/30710685_1_nomination-committee-shareholders-board-slate

http://articles.businessinsider.com/2012-03-12/markets/31151169_1_index-funds-large-cap-growth-funds-stock-funds

<http://press.princeton.edu/books/lo/chapt4.pdf>

<http://www.ceviancapital.com/>

<http://www.bvdinfo.com/products/company-information/international/orbis>

9.3 Flaggings

<https://newsclient.omxgroup.com/cdsPublic/viewDisclosure,action?disclosureId=386669&language=sv>

<https://newsclient.omxgroup.com/cdsPublic/viewDisclosure,action?disclosureId=290397&language=sv>

<https://newsclient.omxgroup.com/cdsPublic/viewDisclosure,action?disclosureId=308608&language=sv>

<https://newsclient.omxgroup.com/cdsPublic/viewDisclosure,action?disclosureId=362499&language=sv>

<https://newsclient.omxgroup.com/cdsPublic/viewDisclosure.action?disclosureId=401222&lang=sv>

<https://newsclient.omxgroup.com/cdsPublic/viewDisclosure.action?disclosureId=456574&lang=sv>

<https://newsclient.omxgroup.com/cdsPublic/viewDisclosure.action?disclosureId=376094&lang=sv>

<http://www.industrivarden.se/Press/Pressmeddelanden/2006/Industrivarden-FLAGGNINGSMEDDELANDE-Tandberg>

<http://www.industrivarden.se/Press/Pressmeddelanden/2006/Industrivarden-FLAGGNINGSMEDDELANDE-Hemtex>

<http://www.industrivarden.se/Press/Pressmeddelanden/2002/Industrivarden-forvarvar-15-procent-av-aktierna-i-Ossur/>

[http://bors.affarsvarlden.se/afvbors,sv/site/news/news_article.page?magic=\(cc%20\(id%20urn:newsml:six,se:20100521:DIR](http://bors.affarsvarlden.se/afvbors,sv/site/news/news_article.page?magic=(cc%20(id%20urn:newsml:six,se:20100521:DIR)

<http://www.danskebank.com/en-uk/press/News/Press-releases-and-company-announcements/Company%20announcement>

<http://www.danskebank.com/en-uk/press/News/Press-releases-and-company-announcements/Company%20announcement/Group/Pages>

<http://www.telegraph.co.uk/finance/newsbysector/epic/wos/7852554/Activist-Cevian-builds-up-stake-in-plumber-Wolseley.html>

<http://www.affarsvarlden.se/hem/nyheter/article2550646,ece>

http://www.alacrastore.com/storecontent/Datamonitor_Mergers_and_Acquisitions-Cevian_Capital_acquires_3_stake_in_Panalpina_World_Transport-2052-24263

<http://www.dn.se/ekonomi/cevia-capital-blir-ny-storagare-i-volvo>

<http://www.dn.se/ekonomi/cevians-intag-lyfter-swedbank>

http://www.svd.se/naringsliv/amaranth-ny-storagare-i-lindex_112402,svd

<http://www.affarsvarlden.se/hem/nyheter/article2540500,ece>

http://ir.investorab.com/index.php?p=press&s=detail&afw_id=1130798&afw_lang=sv

<http://ir.investorab.com/files/press/investor/investor-press-2002-11-05-083400-sv.pdf>

<http://www.dn.se/ekonomi/kinnevik-ny-storagare-i-seamless>

http://ir.investorab.com/index.php?p=press&s=detail&afw_id=1043713&afw_lang=sv

10. Appendix

10.1 Tables

Table I

Sample characteristics - Cumulative returns

For five different event windows, this table provides summary statistics of cumulative returns around the announcement of a flagging event. The event-day is defined as “t”. For each event window, and for both the target firm and its corresponding index, we report the number of observations in each sample, their respective median cumulative returns (50th percentile), means, minimum, maximum, skewness, kurtosis and standard deviation in separated columns.

Descriptive statistics - Cumulative returns								
Window (days)	(1) No. of obs.	(2) Median	(3) Mean	(4) Min	(5) Max	(6) Skewness	(7) Kurtosis	(8) St.Dev.
<u>(t-1) to (t+1)</u>								
Activists' targets	25	0.0286	0.0512	-0.0320	0.2654	1.8753	6.3425	0.0664
Corresponding Index	25	0.0068	0.0023	-0.0822	0.0331	-1.5906	5.8443	0.0262
Mutual funds' targets	31	-0.0016	0.0010	-0.0909	0.1544	0.9904	4.3741	0.0522
Corresponding Index	31	-0.0018	-0.0039	-0.0897	0.0421	-1.0826	5.5495	0.0254
Pension funds' targets	28	0.0017	-0.0004	-0.1413	0.1255	-0.0812	3.5259	0.0548
Corresponding Index	28	-0.0034	-0.0016	-0.0685	0.1157	0.9384	4.6542	0.0377
<u>(t-5) to (t+5)</u>								
Activists' targets	25	0.0523	0.0896	-0.1841	0.6146	1.6033	5.1224	0.1915
Corresponding Index	25	0.0217	0.0154	-0.0870	0.1269	0.1309	2.9159	0.0479
Mutual funds' targets	31	-0.0244	0.0116	-0.1661	0.3067	0.9639	3.7002	0.1067
Corresponding Index	31	0.0028	0.0011	-0.0885	0.1142	0.4033	3.9983	0.0394
Pension funds' targets	28	0.0021	-0.0083	-0.1624	0.0906	-0.7179	3.8126	0.0535
Corresponding Index	28	-0.0014	-0.0017	-0.2658	0.2866	0.0871	3.6016	0.1207
<u>(t-10) to (t+10)</u>								
Activists' targets	25	0.0548	0.0891	-0.3762	0.6707	1.0577	5.1854	0.2148
Corresponding Index	25	0.0376	0.0216	-0.2013	0.1323	-1.3674	6.0442	0.0686
Mutual funds' targets	31	-0.0125	0.0193	-0.2291	0.2732	0.1871	3.0479	0.1194
Corresponding Index	31	0.0063	0.0105	-0.1032	0.1447	0.4620	4.3539	0.0472
Pension funds' targets	28	-0.0135	-0.0339	-0.4977	0.2964	-0.8841	4.3347	0.1602
Corresponding Index	28	-0.0008	-0.0248	-0.2582	0.1474	-0.6961	2.9360	0.0964
<u>(t) to (t+1)</u>								
Activists' targets	25	0.0142	0.0250	-0.0393	0.1948	1.9699	7.7344	0.0474
Corresponding Index	25	0.0024	0.0001	-0.0500	0.0643	0.4525	6.0710	0.0206
Mutual funds' targets	31	0.0000	-0.0060	-0.1020	0.0761	-0.4925	4.1792	0.0364
Corresponding Index	31	0.0006	0.0003	-0.0306	0.0430	0.4860	2.6215	0.0187
Pension funds' targets	28	0.0098	0.0096	-0.0674	0.0820	0.0925	2.3885	0.0398
Corresponding Index	28	0.0002	0.0005	-0.0571	0.0487	0.0779	3.8904	0.0227
<u>(t) to (t+10)</u>								
Activists' targets	25	0.0339	0.0518	-0.2751	0.4481	0.8622	6.6369	0.1274
Corresponding Index	25	0.0198	0.0131	-0.2124	0.1351	-1.5772	8.3638	0.0623
Mutual funds' targets	31	-0.0149	-0.0137	-0.3127	0.0879	-1.5975	7.8454	0.0788
Corresponding Index	31	0.0077	0.0046	-0.0802	0.1437	0.5107	2.8048	0.0539
Pension funds' targets	28	0.0387	0.0251	-0.3098	0.1361	-1.8106	7.3828	0.0918
Corresponding Index	28	0.0173	0.0089	-0.1512	0.1688	-0.3241	4.8431	0.0618

Table II

Skewness and kurtosis tests for normality

For five different event windows, and for each of the activists' target samples, the mutual funds' target samples and the pension funds' target samples, this table provides skewness and kurtosis tests for normality regarding their distributions. The event day is defined as "t". The No. of obs. column states the number of observations in each sample. The Skewness column states each distribution's skewness, the Kurtosis column states each distribution's kurtosis. In the 4th and 5th column test statistics for skewness and kurtosis are reported separately. The two Joint columns combines the two test-statistics from the Pr(Skewness), and Pr(Kurtosis) columns into an overall test statistic stated in the P-value column. The null hypothesis is that each distribution is normally distributed.

Skewness and kurtosis tests for normality							
Window	(1)	(2)	(3)	(4)	(5)	(6)	
(days)	No. of obs.	Skewness	Kurtosis	Pr(Skewness)	Pr(Kurtosis)	Adjusted Chi Sqr	P-Value
<u>(t-1) to (t+1)</u>							
Activists' targets	25	1.8753	6.3425	0.0003	0.0053	15.32	0.0005
Mutual funds' targets	31	0.9904	4.3741	0.0181	0.0656	7.79	0.0204
Pension funds' targets	28	-0.0812	3.5259	0.8361	0.2582	1.43	0.4904
<u>(t-5) to (t+5)</u>							
Activists' targets	25	1.6033	5.1224	0.0013	0.0242	11.99	0.0025
Mutual funds' targets	31	0.9639	3.7002	0.0208	0.1940	6.42	0.0404
Pension funds' targets	28	0.0871	3.6016	0.8245	0.2285	1.62	0.444
<u>(t-10) to (t+10)</u>							
Activists' targets	25	1.0577	5.1854	0.0201	0.0222	8.87	0.0119
Mutual funds' targets	31	0.1871	3.0479	0.6214	0.5672	0.59	0.743
Pension funds' targets	28	-0.8841	4.3347	0.0381	0.0720	6.77	0.0338
<u>(t) to (t+1)</u>							
Activists' targets	25	1.9699	7.7344	0.0002	0.0012	17.54	0.0002
Mutual funds' targets	31	-0.4925	4.1792	0.2052	0.0891	4.56	0.1024
Pension funds' targets	28	0.0925	2.3885	0.8137	0.6241	0.3	0.8626
<u>(t) to (t+10)</u>							
Activists' targets	25	0.8622	6.6369	0.0508	0.0038	9.9	0.0071
Mutual funds' targets	31	-1.5975	7.8454	0.0006	0.0009	16.88	0.0002
Pension funds' targets	28	-1.8106	7.3828	0.0003	0.0016	16.97	0.0002

Table III**Descriptive statistics - Cumulative abnormal returns**

This table tabulates a summary of activist targets' cumulative abnormal returns, mutual fund targets' cumulative abnormal returns and pension fund targets' cumulative abnormal returns. The No. of obs. column reports each sample's number of observations. The Median, Mean, Min and Max columns report each samples' median, mean, minimum and maximum reported cumulative abnormal returns respectively. The Skewness and the Kurtosis columns report skewness and kurtosis for each sample distribution. Reported in the last column is standard deviation for each sample.

Descriptive statistics - Cumulative abnormal returns								
Window (days)	(1) No. of obs.	(2) Median	(3) Mean	(4) Min	(5) Max	(6) Skewness	(7) Kurtosis	(8) St.Dev.
<u>(t-1) to (t+1)</u>								
Activists' targets	25	0.0327	0.0489	-0.0239	0.2647	1.7998	6.0897	0.0671
Mutual funds' targets	31	-0.0012	0.0049	-0.0615	0.1653	1.3556	5.1983	0.0495
Pension funds' targets	28	0.0016	0.0012	-0.0881	0.0879	0.0853	3.2005	0.0375
<u>(t-5) to (t+5)</u>								
Activists' targets	25	0.0294	0.0742	-0.1230	0.5288	1.6729	5.0070	0.1710
Mutual funds' targets	31	0.0069	0.0105	-0.1811	0.2011	0.3175	2.9585	0.0894
Pension funds' targets	28	-0.0033	0.0066	-0.2078	0.2577	0.6260	4.2236	0.0971
<u>(t-10) to (t+10)</u>								
Activists' targets	25	0.0277	0.0676	-0.1749	0.6093	1.8184	6.2144	0.1767
Mutual funds' targets	31	-0.0064	0.0089	-0.2212	0.2508	0.1087	2.5498	0.1159
Pension funds' targets	28	0.0018	-0.0091	-0.2453	0.2168	-0.5165	2.9881	0.1097
<u>(t) to (t+1)</u>								
Activists' targets	25	0.0157	0.0249	-0.0231	0.2093	2.6675	11.2443	0.0463
Mutual funds' targets	31	-0.0060	-0.0062	-0.0895	0.0587	-0.1082	3.5174	0.0322
Pension funds' targets	28	0.0131	0.0091	-0.0505	0.0716	0.0472	3.6183	0.0272
<u>(t) to (t+10)</u>								
Activists' targets	25	0.0009	0.0386	-0.0627	0.4332	2.3202	8.6493	0.1087
Mutual funds' targets	31	-0.0036	-0.0183	-0.2539	0.1103	-1.2071	6.2007	0.0670
Pension funds' targets	28	0.0191	0.0162	-0.1586	0.1158	-0.5138	2.8786	0.0673

Table IV

Descriptive statistics - Cumulative abnormal returns (excl. outliers)

This table presents a summary of activist targets' cumulative abnormal returns, mutual fund targets' cumulative abnormal returns and pension fund targets' cumulative abnormal returns. In contrast to Table III, this table excludes "outliers", i.e. observations located further away as of the 5th and the 95th percentile, relative to the sample distributions' medians. The No. of obs. column report each sample's number of observations. The Median, Mean, Min and Max columns report each samples' median, mean, minimum and maximum reported cumulative abnormal returns respectively. The Skewness and the Kurtosis columns report skewness and kurtosis for each sample distribution. Reported in the last column are standard deviations for each sample.

Descriptive statistics - Cumulative abnormal returns (excl. outliers)								
Window (days)	(1) No. of obs.	(2) Median	(3) Mean	(4) Min	(5) Max	(6) Skewness	(7) Kurtosis	(8) St.Dev.
<u>(t-1) to (t+1)</u>								
Activists' targets	22	0.0215	0.0282	-0.0239	0.0803	0.1924	2.0201	0.0321
Mutual funds' targets	28	-0.0008	0.0038	-0.0485	0.1015	0.9642	3.9022	0.0381
Pension funds' targets	26	0.0044	0.0067	-0.0410	0.0879	0.6281	2.8653	0.0326
<u>(t-5) to (t+5)</u>								
Activists' targets	22	0.0171	0.0184	-0.1230	0.1844	0.1790	2.6841	0.0755
Mutual funds' targets	29	0.0084	0.0219	-0.0971	0.2011	0.7254	2.8243	0.0801
Pension funds' targets	25	-0.0022	0.0118	-0.0729	0.2019	1.5062	4.8207	0.0698
<u>(t-10) to (t+10)</u>								
Activists' targets	22	0.0219	0.0144	-0.1749	0.2163	0.0250	3.6593	0.0850
Mutual funds' targets	29	-0.0064	0.0085	-0.1815	0.2173	0.1155	2.4359	0.1021
Pension funds' targets	25	0.0143	0.0172	-0.1493	0.2168	0.0750	3.0545	0.0823
<u>(t) to (t+1)</u>								
Activists' targets	22	0.0110	0.0117	-0.0231	0.0508	0.0060	2.2081	0.0193
Mutual funds' targets	29	-0.0056	-0.0015	-0.0443	0.0587	0.6038	3.0195	0.0272
Pension funds' targets	25	0.0132	0.0112	-0.0256	0.0627	0.5887	3.7064	0.0196
<u>(t) to (t+10)</u>								
Activists' targets	22	-0.0021	0.0066	-0.0627	0.0880	0.0469	1.8961	0.0458
Mutual funds' targets	28	-0.0007	-0.0040	-0.0818	0.1103	0.2894	2.6436	0.0472
Pension funds' targets	26	0.0191	0.0191	-0.0827	0.1059	-0.1094	1.9752	0.0571

Table V

Non parametric cumulative return comparisons

This table provides non-parametric comparisons of activist targets' median cumulative returns compared to their corresponding indexes' median cumulative returns, for five different event windows around the announcement of a flagging event. In the No. of obs. column each sample's number of observations is stated. Median (50th percentile) cumulative returns are stated in the Median column. Rank sums are stated as actual and expected in the Actual and Expected columns, and the P-value columns states the test-statistic for each median comparison. In a similar fashion, and for the same event windows, Panel B compares activist target's median cumulative returns, with the cumulative returns of mutual fund targets and pension fund targets, respectively. * and ** indicates statistical significance at the 10% and 5% levels.

Panel A: Non Parametric comparison of median cumulative returns																	
Window (days)	(1) Activists' targets vs Index					(2) Pension funds' targets vs Index					(3) Mutual funds' targets vs Index						
	No. of obs.	Median	Ranksum		P-value	No. of obs.	Median	Ranksum		P-value	No. of obs.	Median	Ranksum		P-value		
			Actual	Expected				Actual	Expected				Actual	Expected			
<u>(t-1) to (t+1)</u>																	
Activists' targets	25	0.0286	815	637.5		28	0.0017	815	798		31	-0.0016	961	976.5			
Index	25	0.0068	460	637.5		28	-0.0034	781	798		31	-0.0018	992	976.5			
Diff in cumulative returns		0.0217**			0.0006		0.0051			0.7806		0.0002			0.8273		
<u>(t-5) to (t+5)</u>																	
Activists' targets	25	0.0523	723	637.5		28	-0.0014	804	798		31	-0.0244	925	976.5			
Index	25	0.0217	552	637.5		28	0.0021	792	798		31	0.0028	1028	976.5			
Diff in cumulative returns		0.0305*			0.0971		-0.0035			0.9217		-0.0272			0.4684		
<u>(t-10) to (t+10)</u>																	
Activists' targets	25	0.0548	701	637.5		28	-0.0135	800	798		31	-0.0125	1000	976.5			
Index	25	0.0376	574	637.5		28	-0.0008	796	798		31	0.0063	953	976.5			
Diff in cumulative returns		0.0172			0.2179		-0.0128			0.9739		-0.0187			0.7408		
<u>(t) to (t+1)</u>																	
Activists' targets	25	0.0142	766	637.5		28	0.0098	869	798		31	0.0000	1028	976.5			
Index	25	0.0024	509	637.5		28	0.0002	727	798		31	0.0006	925	976.5			
Diff in cumulative returns		0.0118**			0.0126		0.0096			0.2446		-0.0006			0.4684		
<u>(t) to (t+10)</u>																	
Activists' targets	25	0.0339	702	637.5		28	0.0387	905	798		31	-0.0149	923	976.5			
Index	25	0.0198	573	637.5		28	0.0173	691	798		31	0.0077	1030	976.5			
Diff in cumulative returns		0.0141			0.2108		0.0214*			0.0795		-0.0227			0.4513		
Panel B: Non Parametric comparison of activist targets' median cumulative returns versus passivist targets' cumulative returns																	
Window (days)	(1) Activist targets vs mutual fund targets					Window (days)	(2) Activists targets vs pension fund targets					Window (days)	(2) Activists targets vs pension fund targets				
	No. of obs.	Median CAR	Ranksum		P-value		No. of obs.	Median CAR	Ranksum		P-value		No. of obs.	Median CAR	Ranksum		P-value
			Actual	Expected					Actual	Expected					Actual	Expected	
<u>(t-1) to (t+1)</u>																	
Activists' targets	25	0.0327	902	712.5		<u>(t-1) to (t+1)</u>	25	0.0327	850	675		<u>(t-1) to (t+1)</u>	25	0.0327	850	675	
Mutual funds' targets	31	-0.0012	694	883.5		Activists' targets	28	0.0016	581	756		Pension funds' targets	28	0.0016	581	756	
Diff. in CAR		0.0339**			0.0018	Diff. in CAR		0.0311**			0.0018	Diff. in CAR		0.0311**			0.0018
<u>(t-5) to (t+5)</u>																	
Activists' targets	25	0.0294	785	712.5		<u>(t-5) to (t+5)</u>	25	0.0294	757	675		<u>(t-5) to (t+5)</u>	25	0.0294	757	675	
Mutual funds' targets	31	0.0069	811	883.5		Activists' targets	28	-0.0033	674	756		Pension funds' targets	28	-0.0033	674	756	
Diff. in CAR		0.0225			0.2321	Diff. in CAR		0.0327			0.144	Diff. in CAR		0.0327			0.144
<u>(t-10) to (t+10)</u>																	
Activists' targets	25	0.0277	782	712.5		<u>(t-10) to (t+10)</u>	25	0.0277	739	675		<u>(t-10) to (t+10)</u>	25	0.0277	739	675	
Mutual funds' targets	31	-0.0064	814	883.5		Activists' targets	28	0.0018	692	756		Pension funds' targets	28	0.0018	692	756	
Diff. in CAR		0.0340			0.252	Diff. in CAR		0.0259			0.2542	Diff. in CAR		0.0259			0.2542
<u>(t) to (t+1)</u>																	
Activists' targets	25	0.0110	892	712.5		<u>(t) to (t+1)</u>	25	0.0110	742	675		<u>(t) to (t+1)</u>	25	0.0110	742	675	
Mutual funds' targets	31	-0.0060	704	883.5		Activists' targets	28	0.0131	689	756		Pension funds' targets	28	0.0131	689	756	
Diff. in CAR		0.0171**			0.0031	Diff. in CAR		-0.0021			0.2326	Diff. in CAR		-0.0021			0.2326
<u>(t) to (t+10)</u>																	
Activists' targets	25	0.0009	824	712.5		<u>(t) to (t+10)</u>	25	0.0009	689	675		<u>(t) to (t+10)</u>	25	0.0009	689	675	
Mutual funds' targets	31	-0.0036	772	883.5		Activists' targets	28	0.0191	742	756		Pension funds' targets	28	0.0191	742	756	
Diff. in CAR		0.0045*			0.0661	Diff. in CAR		-0.0183			0.803	Diff. in CAR		-0.0183			0.803

Table VI

Simple regressions – Cumulative return comparisons

For five different event windows, this table provides simple regression results of comparisons of cumulative stock returns for activist targets compared to their corresponding index, mutual fund targets compared to their corresponding index, and pension fund targets compared to their corresponding index, with and without “outliers” (observations located further away as of the 5th and the 95th percentile, relative to the sample distributions’ medians). Panel A reports results including outlier observations while Panel B reports results excluding outliers. The columns report results from the specification: $\overline{CAR} = \hat{\beta}_0 + \hat{\beta}_1 * X_1$ where the explanatory variable X_1 is a dummy variable that takes the value of 1 for cumulative stocks returns and 0 for cumulative index returns. * and ** indicates statistical significance at the 10% and 5% levels.

Panel A: Simple regressions on cumulative stock return versus cumulative index return (incl. outliers)												
Window (days)	(1) Activist targets' cumulative returns vs index				(2) Mutual fund targets' cumulative returns vs index				(3) Pension fund targets' cumulative returns vs index			
	Coef.	St.Error	t	P-Value	Coef.	St.Error	t	P-Value	Coef.	St.Error	t	P-value
<u>(t-1) to (t+1)</u>												
Stock return dummy	0.0489**	0.0143	3.42	0.001	0.0049	0.0104	0.47	0.641	0.0012	0.0126	0.1	0.922
Intercept	0.0023	0.0101	0.23	0.82	-0.0039	0.0074	-0.53	0.598	-0.0016	0.0089	-0.18	0.856
Obs.				50				62				56
R ²				0.1962				0.0036				0.0002
<u>(t-5) to (t+5)</u>												
Stock return dummy	0.07412*	0.0395	1.88	0.066	0.0105	0.0204	0.51	0.61	0.0066	0.0249	0.26	0.793
Intercept	0.0154	0.0279	0.55	0.583	0.0011	0.0144	0.08	0.938	-0.0083	0.0176	-0.47	0.639
Obs.				50				62				56
R ²				0.0685				0.0044				0.0013
<u>(t-10) to (t+10)</u>												
Stock return dummy	0.0676	0.0451	1.5	0.14	0.0089	0.0231	0.38	0.702	-0.0091	0.0353	-0.26	0.799
Intercept	0.0216	0.0319	0.68	0.502	0.0105	0.0163	0.64	0.524	-0.0248	0.0250	-0.99	0.325
Obs.				50				62				56
R ²				0.0447				0.0025				0.0012
<u>(t) to (t+1)</u>												
Stock return dummy	0.0249**	0.0103	2.41	0.02	-0.0062	0.0074	-0.85	0.401	0.0091	0.0087	1.05	0.3
Intercept	0.0001	0.0073	0.01	0.989	0.0003	0.0052	0.05	0.96	0.0005	0.0061	0.09	0.932
Obs.				50				62				56
R ²				0.1082				0.0118				0.0199
<u>(t) to (t+10)</u>												
Stock return dummy	0.0386	0.0284	1.36	0.18	-0.0183	0.0171	-1.07	0.291	0.0162	0.0209	0.78	0.441
Intercept	0.0131	0.0201	0.66	0.515	0.0046	0.0121	0.38	0.708	0.0089	0.0148	0.6	0.552
Obs.				50				62				56
R ²				0.0372				0.0186				0.011
Panel B: Simple regressions on cumulative stock return versus cumulative index return (excl. outliers)												
Window (days)	(1) Activist targets' cumulative returns vs index				(2) Mutual fund targets' cumulative returns vs index				(3) Pension fund targets' cumulative returns vs index			
	Coef.	St.Error	t	P-Value	Coef.	St.Error	t	P-Value	Coef.	St.Error	t	P-value
<u>(t-1) to (t+1)</u>												
Stock return dummy	0.0282**	0.0090	3.15	0.003	0.0038	0.0098	0.39	0.698	0.0067	0.0118	0.56	0.575
Intercept	0.0027	0.0063	0.43	0.669	-0.0054	0.0069	-0.78	0.436	0.0009	0.0083	0.11	0.914
Obs.				46				56				52
R ²				0.191				0.0219				0.0063
<u>(t-5) to (t+5)</u>												
Stock return dummy	0.0184	0.0205	0.9	0.375	0.0219	0.0203	1.08	0.285	0.0118	0.0210	1.06	0.293
Intercept	0.0086	0.0145	0.59	0.556	0.0004	0.0144	0.03	0.977	0.0027	0.0148	0.18	0.854
Obs.				46				56				52
R ²				0.0188				0.1543				0.23
<u>(t-10) to (t+10)</u>												
Stock return dummy	0.0144	0.0298	0.48	0.632	0.0085	0.0227	0.75	0.459	0.0172	0.0310	0.56	0.581
Intercept	0.0115	0.0211	0.55	0.589	0.0105	0.0162	0.65	0.52	-0.0218	0.0219	-0.99	0.325
Obs.				46				56				52
R ²				0.0056				0.0097				0.0064
<u>(t) to (t+1)</u>												
Stock return dummy	0.0117**	0.0071	2.46	0.018	-0.0015	0.0051	-0.27	0.791	0.0112	0.0087	1.29	0.204
Intercept	-0.0025	0.0050	-0.5	0.617	-0.0012	0.0035	-0.34	0.739	0.0011	0.0061	0.17	0.863
Obs.				46				56				52
R ²				0.1234				0.0013				0.0334
<u>(t) to (t+10)</u>												
Stock return dummy	0.0066	0.0141	1.05	0.297	-0.0040	0.0127	0.29	0.769	0.0191	0.0153	1.62	0.112
Intercept	0.0225**	0.0098	2.31	0.026	-0.0032	0.0088	-0.36	0.718	0.0089	0.0109	0.82	0.418
Obs.				46				56				52
R ²				0.0247				0.0016				0.0498

Table VII

Multiple regressions – Cumulative return comparisons

For five different event windows, this table provides multiple regression results of comparisons of cumulative stock returns for activist targets to their corresponding index, mutual fund targets compared to their corresponding index, and pension fund targets compared to their corresponding index, with and without “outliers” (observations located further away as of the 5th and the 95th percentile, relative to the sample distributions’ medians). Panel A reports results including outlier observations while Panel B reports results excluding outliers. The columns report results from the specification: $\overline{CAR} = \hat{\beta}_0 + \hat{\beta}_1 * X_1 + \hat{\beta}_2 * X_2$ where the explanatory variable X_1 is a dummy variable that takes the value of 1 for cumulative stocks returns and 0 for cumulative index returns, X_2 is a size-variable. All regressions control for the size of the target firms. * and ** indicates statistical significance at the 10% and 5% levels.

Panel A: Simple regressions on cumulative stock return versus cumulative index return (incl. outliers)												
Window (days)	(1) Activist targets' cumulative returns vs index				(2) Mutual fund targets' cumulative returns vs index				(3) Pension fund targets' cumulative returns vs index			
	Coef.	St.Error	t	P-Value	Coef.	St.Error	t	P-Value	Coef.	St.Error	t	P-value
(t-1) to (t+1)												
Stock return dummy	0.0489**	0.0143	3.42	0.001	0.0049	0.0104	0.47	0.641	0.0012	0.0126	0.1	0.922
Intercept	0.0023	0.0101	0.23	0.82	-0.0039	0.0074	-0.53	0.598	-0.0016	0.0089	-0.18	0.856
Obs.				50				62				56
R ²				0.1962				0.0036				0.0002
(t-5) to (t+5)												
Stock return dummy	0.07412*	0.0395	1.88	0.066	0.0105	0.0204	0.51	0.61	0.0066	0.0249	0.26	0.793
Intercept	0.0154	0.0279	0.55	0.583	0.0011	0.0144	0.08	0.938	-0.0083	0.0176	-0.47	0.639
Obs.				50				62				56
R ²				0.0685				0.0044				0.0013
(t-10) to (t+10)												
Stock return dummy	0.0676	0.0451	1.5	0.14	0.0089	0.0231	0.38	0.702	-0.0091	0.0353	-0.26	0.799
Intercept	0.0216	0.0319	0.68	0.502	0.0105	0.0163	0.64	0.524	-0.0248	0.0250	-0.99	0.325
Obs.				50				62				56
R ²				0.0447				0.0025				0.0012
(t) to (t+1)												
Stock return dummy	0.0249**	0.0103	2.41	0.02	-0.0062	0.0074	-0.85	0.401	0.0091	0.0087	1.05	0.3
Intercept	0.0001	0.0073	0.01	0.989	0.0003	0.0052	0.05	0.96	0.0005	0.0061	0.09	0.932
Obs.				50				62				56
R ²				0.1082				0.0118				0.0199
(t) to (t+10)												
Stock return dummy	0.0386	0.0284	1.36	0.18	-0.0183	0.0171	-1.07	0.291	0.0162	0.0209	0.78	0.441
Intercept	0.0131	0.0201	0.66	0.515	0.0046	0.0121	0.38	0.708	0.0089	0.0148	0.6	0.552
Obs.				50				62				56
R ²				0.0372				0.0186				0.011
Panel B: Simple regressions on cumulative stock return versus cumulative index return (excl. outliers)												
Window (days)	(1) Activist targets' cumulative returns vs index				(2) Mutual fund targets' cumulative returns vs index				(3) Pension fund targets' cumulative returns vs index			
	Coef.	St.Error	t	P-Value	Coef.	St.Error	t	P-Value	Coef.	St.Error	t	P-value
(t-1) to (t+1)												
Stock return dummy	0.0282**	0.0090	3.15	0.003	0.0038	0.0098	0.39	0.698	0.0067	0.0118	0.56	0.575
Intercept	0.0027	0.0063	0.43	0.669	-0.0054	0.0069	-0.78	0.436	0.0009	0.0083	0.11	0.914
Obs.				46				56				52
R ²				0.191				0.0219				0.0063
(t-5) to (t+5)												
Stock return dummy	0.0184	0.0205	0.9	0.375	0.0219	0.0203	1.08	0.285	0.0118	0.0210	1.06	0.293
Intercept	0.0086	0.0145	0.59	0.556	0.0004	0.0144	0.03	0.977	0.0027	0.0148	0.18	0.854
Obs.				46				56				52
R ²				0.0188				0.1543				0.23
(t-10) to (t+10)												
Stock return dummy	0.0144	0.0298	0.48	0.632	0.0085	0.0227	0.75	0.459	0.0172	0.0310	0.56	0.581
Intercept	0.0115	0.0211	0.55	0.589	0.0105	0.0162	0.65	0.52	-0.0218	0.0219	-0.99	0.325
Obs.				46				56				52
R ²				0.0056				0.0097				0.0064
(t) to (t+1)												
Stock return dummy	0.0117**	0.0071	2.46	0.018	-0.0015	0.0051	-0.27	0.791	0.0112	0.0087	1.29	0.204
Intercept	-0.0025	0.0050	-0.5	0.617	-0.0012	0.0035	-0.34	0.739	0.0011	0.0061	0.17	0.863
Obs.				46				56				52
R ²				0.1234				0.0013				0.0334
(t) to (t+10)												
Stock return dummy	0.0066	0.0141	1.05	0.297	-0.0040	0.0127	0.29	0.769	0.0191	0.0153	1.62	0.112
Intercept	0.0225**	0.0098	2.31	0.026	-0.0032	0.0088	-0.36	0.718	0.0089	0.0109	0.82	0.418
Obs.				46				56				52
R ²				0.0247				0.0016				0.0498

Table VIII

Simple regressions – CAR comparisons

For five different event windows, this table provides results of comparisons of CAR (cumulative abnormal returns) for activist targets compared with passive investors, mutual funds and pension funds, respectively. Panel A includes “outliers” (observations located further away as of the 5th and the 95th percentile, relative to the sample distributions’ medians). Panel B exclude outlier observations. The columns report results from the specification: $\overline{CAR} = \hat{\beta}_0 + \hat{\beta}_1 * X_1$ where the explanatory variable X_1 is a dummy variable that takes the value of 1 for activist flaggings and zero for passive investors flaggings. * and ** indicates statistical significance at the 10% and 5% levels.

Panel A: CAR - Simple regressions (incl. outliers)												
Window (days)	(1) Activist vs passive investors				(2) Activists vs mutual funds				(3) Activists vs pension funds			
	Coef.	St.Error	t	P-Value	Coef.	St.Error	t	P-Value	Coef.	St.Error	t	P-value
<u>(t-1) to (t+1)</u>												
Activist	0.0457**	0.0124	3.7	0	0.0440**	0.0156	2.82	0.007	0.0476**	0.0147	3.23	0.002
Intercept	0.0032	0.0067	0.47	0.641	0.0049	0.0104	0.47	0.641	0.0012	0.0101	0.12	0.904
Obs.				84				56				53
R ²				0.143				0.1284				0.1701
<u>(t-5) to (t+5)</u>												
Activist	0.0656**	0.0288	2.28	0.025	0.0637*	0.0355	1.8	0.078	0.0676*	0.0377	1.8	0.079
Intercept	0.0086	0.0157	0.55	0.585	0.0105	0.0237	0.44	0.66	0.0066	0.0259	0.25	0.801
Obs.				84				56				53
R ²				0.0594				0.0563				0.0594
<u>(t-10) to (t+10)</u>												
Activist	0.0672**	0.0321	2.1	0.039	0.0587	0.0393	1.49	0.141	0.0766*	0.0399	1.92	0.061
Intercept	0.0004	0.0175	0.02	0.984	0.0089	0.0262	0.34	0.737	-0.0091	0.0274	-0.33	0.743
Obs.				84				56				53
R ²				0.0508				0.0397				0.0674
<u>(t) to (t+1)</u>												
Activist	0.0239**	0.0086	2.79	0.007	0.0312**	0.0105	2.97	0.004	0.0159	0.0103	1.54	0.129
Intercept	0.0010	0.0047	0.22	0.826	-0.0062	0.0070	-0.89	0.379	0.0091	0.0071	1.28	0.205
Obs.				84				56				53
R ²				0.0866				0.1401				0.0446
<u>(t) to (t+10)</u>												
Activist	0.0405**	0.0197	2.06	0.043	0.0569**	0.0237	2.4	0.02	0.0224	0.0245	0.91	0.366
Intercept	-0.0019	0.0107	-0.18	0.861	-0.0183	0.0158	-1.16	0.253	0.0162	0.0169	0.96	0.34
Obs.				84				56				53
R ²				0.0491				0.0967				0.016
Panel B: CAR - Simple regressions (excl. outliers)												
Window (days)	(1) Activist vs passive investors				(2) Activists vs mutual funds				(3) Activists vs pension funds			
	Coef.	St.Error	t	P-Value	Coef.	St.Error	t	P-Value	Coef.	St.Error	t	P-value
<u>(t-1) to (t+1)</u>												
Activist	0.0230**	0.0087	2.65	0.01	0.0244**	0.0101	2.4	0.02	0.0216**	0.0094	2.3	0.026
Intercept	0.0052	0.0047	1.11	0.271	0.0038	0.0067	0.57	0.571	0.0067	0.0063	1.05	0.3
Obs.				76				50				48
R ²				0.0864				0.1074				0.103
<u>(t-5) to (t+5)</u>												
Activist	0.0012	0.0190	0.06	0.95	-0.0035	0.0221	-0.16	0.875	0.0066	0.0212	0.31	0.756
Intercept	0.0172*	0.0102	1.68	0.096	0.0219	0.0145	1.51	0.138	0.0118	0.0145	0.81	0.421
Obs.				76				51				47
R ²				0.0001				0.0005				0.0022
<u>(t-10) to (t+10)</u>												
Activist	0.0019	0.0229	0.08	0.934	0.0059	0.0269	0.22	0.826	-0.0028	0.0244	-0.11	0.909
Intercept	0.0125	0.0123	1.02	0.313	0.0085	0.0177	0.48	0.634	0.0172	0.0167	1.03	0.308
Obs.				76				51				47
R ²				0.0001				0.001				0.0003
<u>(t) to (t+1)</u>												
Activist	0.0074	0.0059	1.25	0.215	0.0132*	0.0068	1.94	0.058	0.0006	0.0057	0.1	0.923
Intercept	0.0044	0.0032	1.38	0.17	-0.0015	0.0045	-0.33	0.742	0.0112**	0.0039	2.87	0.006
Obs.				76				51				47
R ²				0.0001				0.0712				0.0002
<u>(t) to (t+10)</u>												
Activist	-0.0006	0.0129	-0.04	0.965	0.0106	0.0133	0.8	0.43	-0.0126	0.0151	-0.83	0.411
Intercept	0.0071	0.0070	1.03	0.307	-0.0040	0.0088	-0.45	0.652	0.0191*	0.0103	1.87	0.068
Obs.				76				50				48
R ²				0				0.013				0.0148

Table IX

Multiple regressions – CAR comparisons

For five different event windows, this table provides multiple regression results of comparisons of CAR (cumulative abnormal returns) for activist targets compared with passive investors, mutual funds and pension funds, respectively. Panel A includes “outliers” (observations located further away as of the 5th and the 95th percentile, relative to the sample distributions’ medians), while Panel B exclude outlier observations. The columns report results from the specification: $\overline{CAR} = \hat{\beta}_0 + \hat{\beta}_1 * X_1 + \hat{\beta}_2 * X_2$ where the explanatory variable X_1 is a dummy variable that takes the value of 1 for activist flaggings and zero for passive investors flaggings, and where X_2 is a size-variable. All regressions control for the size of the target firm. * and ** indicates statistical significance at the 10% and 5% levels.

Panel A: CAR - Regressions (incl. outliers)												
Window (days)	(1) Activist vs passive investors				(2) Activists vs mutual funds				(3) Activists vs pension funds			
	Coef.	St.Error	t	P-Value	Coef.	St.Error	t	P-Value	Coef.	St.Error	t	P-value
<u>(t-1) to (t+1)</u>												
Activist	0.0458**	0.0129	3.55	0.001	0.0440**	0.0163	2.71	0.009	0.0477**	0.0153	3.12	0.003
Size	0.0000	0.0000	-0.03	0.976	0.0000	0.0000	-0.02	0.987	0.0000	0.0000	-0.03	0.975
Intercept	0.0032	0.0068	0.47	0.643	0.0049	0.0105	0.47	0.644	0.0012	0.0102	0.12	0.904
Obs.				84				56				53
R ²				0.143				0.1284				0.1701
<u>(t-5) to (t+5)</u>												
Activist	0.0687**	0.0301	2.28	0.025	0.0671*	0.0370	1.82	0.075	0.0707*	0.0391	1.81	0.076
Size	0.0000	0.0000	-0.38	0.706	0.0000	0.0000	-0.36	0.717	0.0000	0.0000	-0.34	0.734
Intercept	0.0088	0.0158	0.56	0.58	0.0105	0.0239	0.44	0.661	0.0068	0.0261	0.26	0.794
Obs.				84				56				53
R ²				0.061				0.0587				0.0616
<u>(t-10) to (t+10)</u>												
Activist	0.0731**	0.0335	2.19	0.032	0.0651	0.0408	1.59	0.117	0.0823*	0.0413	1.99	0.052
Size	0.0000	0.0000	-0.65	0.519	0.0000	0.0000	-0.62	0.538	0.0000	0.0000	-0.6	0.553
Intercept	0.0007	0.0176	0.04	0.97	0.0090	0.0264	0.34	0.735	-0.0085	0.0276	-0.31	0.758
Obs.				84				56				53
R ²				0.0557				0.0467				0.074
<u>(t) to (t+1)</u>												
Activist	0.0248**	0.0090	2.77	0.007	0.0321**	0.0109	2.94	0.005	0.0168	0.0107	1.58	0.121
Size	0.0000	0.0000	-0.37	0.711	0.0000	0.0000	-0.35	0.726	0.0000	0.0000	-0.38	0.708
Intercept	0.0011	0.0047	0.23	0.819	-0.0062	0.0071	-0.88	0.384	0.0092	0.0071	1.28	0.205
Obs.				84				56				53
R ²				0.0881				0.1421				0.0473
<u>(t) to (t+10)</u>												
Activist	0.0427**	0.0206	2.07	0.041	0.0593**	0.0246	2.41	0.02	0.0246	0.0254	0.97	0.338
Size	0.0000	0.0000	-0.38	0.703	0.0000	0.0000	-0.4	0.693	0.0000	0.0000	-0.38	0.705
Intercept	-0.0018	0.0108	-0.16	0.869	-0.0182	0.0159	-1.14	0.258	0.0164	0.0170	0.97	0.338
Obs.				84				56				53
R ²				0.0508				0.0994				0.0189

Table IX (continued)

Panel B: CAR - Regressions (excl. outliers)												
Window (days)	(1) Activist vs passive investors				(2) Activists vs mutual funds				(3) Activists vs pension funds			
	Coef.	St.Error	t	P-Value	Coef.	St.Error	t	P-Value	Coef.	St.Error	t	P-value
<u>(t-1) to (t+1)</u>												
Activist	0.0205**	0.0091	2.25	0.027	0.0217**	0.0105	2.06	0.045	0.0191*	0.0097	1.98	0.054
Size	0.0000	0.0000	0.95	0.345	0.0000	0.0000	0.94	0.354	0.0000	0.0000	1	0.321
Intercept	0.0051	0.0047	1.08	0.282	0.0038	0.0067	0.56	0.575	0.0065	0.0064	1.02	0.315
Obs.				76				50				48
R ²				0.0976				0.1237				0.1226
<u>(t-5) to (t+5)</u>												
Activist	-0.0023	0.0200	-0.11	0.91	-0.0070	0.0231	-0.3	0.763	0.0034	0.0220	0.15	0.879
Size	0.0000	0.0000	0.6	0.554	0.0000	0.0000	0.56	0.576	0.0000	0.0000	0.6	0.55
Intercept	0.0171	0.0103	1.66	0.101	0.0219	0.0146	1.5	0.141	0.0115	0.0146	0.79	0.435
Obs.				76				51				47
R ²				0.0049				0.0071				0.0103
<u>(t-10) to (t+10)</u>												
Activist	0.0020	0.0241	0.08	0.933	0.0062	0.0282	0.22	0.827	-0.0026	0.0255	-0.1	0.921
Size	0.0000	0.0000	-0.02	0.985	0.0000	0.0000	-0.04	0.972	0.0000	0.0000	-0.04	0.969
Intercept	0.0125	0.0124	1.01	0.316	0.0085	0.0178	0.47	0.637	0.0172	0.0169	1.02	0.314
Obs.				76				51				47
R ²				0.0001				0.001				0.0003
<u>(t) to (t+1)</u>												
Activist	0.0068	0.0062	1.1	0.277	0.0126*	0.0072	1.77	0.084	0.0000	0.0059	0.01	0.995
Size	0.0000	0.0000	0.32	0.748	0.0000	0.0000	0.3	0.762	0.0000	0.0000	0.35	0.729
Intercept	0.0044	0.0032	1.37	0.175	-0.0015	0.0045	-0.33	0.743	0.0111	0.0039	2.83	0.007
Obs.				76				51				47
R ²				0.0021				0.0729				0.003
<u>(t) to (t+10)</u>												
Activist	-0.0021	0.0136	-0.15	0.88	0.0092	0.0139	0.66	0.511	-0.0138	0.0158	-0.88	0.385
Size	0.0000	0.0000	0.38	0.708	0.0000	0.0000	0.36	0.719	0.0000	0.0000	0.32	0.747
Intercept	0.0071	0.0070	1.01	0.315	-0.0040	0.0089	-0.45	0.654	0.0190*	0.0104	1.84	0.073
Obs.				76				50				48
R ²				0.002				0.0158				0.0171

Table X**Trading volume prior to activist intervention**

This table reports a relative comparison of daily average trading volume in a target firms' share during a twenty-day time window just before an announcement of activist intervention in the target firm, put in relation to the average daily trading volume of the year in which the activist intervention occurred. The No. of obs. column reports the number of activist targets in the sample. The Estimate column reports daily trading volumes in relative size compared to each other. Rank sums are reported as actual and expected in the two Rank sum columns. The test statistic is reported in the P-value column. * and ** indicates statistical significance at the 10% and 5% levels.

Non parametric volume significance test					
Window (days)	No. of obs.	Estimate	Ranksum		P-value
			Actual	Expected	
Relative comparison					
Indexed avg. annual volume	23	1.0000	460	540.5	
Avg. volume (t-20) to (t-1)	23	1.1231*	621	540.5	0.0587

Table XI

Descriptive statistics – Target firms' operational performance

For four different points in time; one year prior to when a firm is subject to activist intervention (t-1), the intervention year (t), one year after activist intervention (t+1) and two years after activist intervention (t+2), this table provides summary statistics for target companies operating performance in excess of the average operating performance of a group of matched industry peers°. For each point in time, and for each accounting ratio, this table reports the number of observations in each sample, their respective medians, means, minimum values, maximum values, their skewnesses, their kurtosis and their standard deviations in separate columns.

Descriptive statistics - Differences in operational performance								
Window (years)	(1) No. of obs.	(2) Median	(3) Mean	(4) Min	(5) Max	(6) Skewness	(7) Kurtosis	(8) St.Dev.
<u>(t-1)</u>								
EBITDA/Assets ¹	21	-0.0360	-0.0956	-0.6870	0.1629	-1.4468	5.3517	0.1917
EBITDA/Sales	21	-0.0402	-0.0841	-0.5037	0.1973	-0.8812	3.6605	0.1678
Net asset turnover rate	21	-0.2318	-7.0406	-103.2200	1.1300	-3.9617	17.4074	22.5425
<u>(t)</u>								
EBITDA/Assets ¹	21	-0.0598	-0.0694	-0.4416	0.4674	0.6694	4.3778	0.1917
EBITDA/Sales	21	-0.0501	-0.0318	-0.3376	0.6142	1.6624	7.9652	0.1889
Net asset turnover rate	21	-0.0200	-8.7605	-104.5900	1.1900	-3.1126	11.6638	25.1514
<u>(t+1)</u>								
EBITDA/Assets ¹	21	-0.0992	-0.1095	-0.4725	0.1110	-0.6673	2.6039	0.1686
EBITDA/Sales	21	-0.0440	-0.0316	-0.6599	0.6861	0.3788	6.9671	0.2393
Net asset turnover rate	21	-0.0400	-9.8775	-167.1000	1.6800	-4.1280	18.3746	36.3521
<u>(t+2)</u>								
EBITDA/Assets ¹	19	-0.0639	-0.0754	-0.4163	0.1520	-0.6889	2.4166	0.1741
EBITDA/Sales	19	-0.0398	-0.0637	-1.1591	0.1791	-3.4866	14.6234	0.2760
Net asset turnover rate	19	-0.2000	-4.0690	-35.9800	3.2175	-2.4264	8.1378	9.4417

¹ Assets defined as "lagged assets", meaning the firm's book value of total assets per Dec 31 the previous year.

° Industry peers are for each year defined as a group of companies that is matched with each target firm's industry and size dimensions. Companies in the same industry as the target firm are included in the peer group if their ratios are in the interval of +-15% regarding their firm size.

Table XII

Operational performance before and after activist intervention

This table reports the results of non-parametric comparisons of differences in activists' operational performances before and after activist intervention. Target firms' key operational accounting ratios (EBITDA/Assets, EBITDA/Sales and Net asset turnover rate) are compared to the average performance of a group of matched industry peers[°]. Medians and test statistics are reported in two different time windows, (t+1)-(t-1) and (t+2)-(t-1), around the announcement of activist intervention. The P-Value columns report the Mann-Whitney test statistics. * and ** indicates statistical significance at the 10% and 5% levels.

Non parametric comparison of activist targets' key accounting ratios versus their industry peers								
Window (years)	(1) EBITDA/Assets ¹		Window (years)	(2) EBITDA/Sales		Window (years)	(3) Net asset turnover rate	
	Median	P-Value		Median	P-Value		Median	P-value
<u>(t+1) - (t-1)</u>			<u>(t+1) - (t-1)</u>			<u>(t+1) - (t-1)</u>		
Activist targets	0.0877		Activist targets	0.0878		Activist targets	-0.0752	
Industry peers	0.1633		Industry peers	0.0762		Industry peers	-0.0848	
Diff.	-0.0755	0.3059	Diff.	0.0115	0.9139	Diff.	0.0095	0.4968
<u>(t+2) - (t-1)</u>			<u>(t+2) - (t-1)</u>			<u>(t+2) - (t-1)</u>		
Activist targets	0.1109		Activist targets	0.1026		Activist targets	-0.0784	
Industry peers	0.1261		Industry peers	0.0967		Industry peers	-0.2035	
Diff.	-0.0152	0.7701	Diff.	0.0059	1.0000	Diff.	0.1252	0.284

¹ Assets defined as "lagged assets", meaning the firm's bookvalue of total assets per Dec 31 the previous year.

[°] Industry peers are for each year defined as a group of companies that is matched with each target firm's industry and size dimensions. Companies in the same industry as the target firm are included in the peer group if their ratios are in the interval of +-15% regarding their firm size.

Table XIII

Operational performance before and after activist intervention (II)

This table reports simple regression results of differences in activists' operational performances before and after activist intervention. Target firms' key operational accounting ratios (EBITDA/Assets, EBITDA/Sales and Net asset turnover rate) are compared to the average operational performance of a group of matched industry peers[°]. Medians and test statistics are reported in three different time windows, (t+1)-(t-1) and (t+2)-(t-1) and (avg t+2 & t+1)-(avg t & t-1), around the announcement of activist intervention. * and ** indicates statistical significance at the 10% and 5% levels.

Panel A: Operational Performance (incl. outliers)												
Window (years)	(1) Diff. in EBITDA/Assets ¹ vs peers				(2) Diff. in EBITDA/Sales vs peers				(3) Diff. in Net asset turnover rate vs peers			
	Coef.	St.Error	t	P-Value	Coef.	St.Error	t	P-Value	Coef.	St.Error	t	P-value
<u>(t+1) - (t-1)</u>												
Post Activism	-0.0139	0.0557	-0.25	0.805	0.0525	0.0638	0.82	0.415	-2.8369	9.3341	-0.3	0.763
Intercept	-0.0956**	0.0394	-2.43	0.02	-0.0841*	0.0451	-1.86	0.07	-7.0406	6.6002	-1.07	0.292
Obs.				42				42				42
R ²				0.0015				0.0167				0.0023
<u>(t+2) - (t-1)</u>												
Post Activism	0.0202	0.0581	0.35	0.729	0.0204	0.0714	0.29	0.776	2.9716	5.5719	0.53	0.597
Intercept	-0.0956**	0.0401	-2.39	0.022	-0.0841*	0.0492	-1.71	0.096	-7.0406*	3.8401	-1.83	0.075
Obs.				40				40				40
R ²				0.0032				0.0022				0.0074
<u>(avg t+2 & t+1) - (avg t & t-1)</u>												
Post Activism	-0.0122	0.0874	-0.14	0.889	0.0272	0.1154	0.24	0.815	2.2474	13.9735	0.16	0.873
Intercept	-0.1655	0.0618	-2.68	0.011	-0.1164	0.0816	-1.43	0.161	-15.8063	9.8808	-1.6	0.118
Obs.				42				42				42
R ²				0.0005				0.0014				0.0006
Panel B: Operational Performance (excl. outliers)												
Window (years)	(1) Diff. in EBITDA/Assets ¹ vs peers				(2) Diff. in EBITDA/Sales vs peers				(3) Diff. in Net asset turnover rate vs peers			
	Coef.	St.Error	t	P-Value	Coef.	St.Error	t	P-Value	Coef.	St.Error	t	P-value
<u>(t+1) - (t-1)</u>												
Post Activism									-0.1665	1.6232	-0.1	0.919
Intercept		No outliers				No outliers			-2.2316*	1.1171	-2	0.053
Obs.												38
R ²												0.0003
<u>(t+2) - (t-1)</u>												
Post Activism									-0.3889	1.7167	-0.23	0.822
Intercept		No outliers				No outliers			-2.2316*	1.1636	-1.92	0.063
Obs.												37
R ²												0.0015
<u>(avg t+2 & t+1) - (avg t & t-1)</u>												
Post Activism									2.1267	3.9861	0.53	0.597
Intercept		No outliers				No outliers			-6.6549**	2.8186	-2.36	0.024
Obs.												38
R ²												0.0078

¹ Assets defined as "lagged assets", meaning the firm's book value of total assets per Dec 31 the previous year.

[°] Industry peers are for each year defined as a group of companies that is matched with each target firm's industry and size dimensions. Companies in the same industry as the target firm are included in the peer group if their ratios are in the interval of +/-15% regarding their firm size.

Table XIV

Activists', mutual funds' and pension funds' flaggings

This table shows the different cumulative abnormal returns for our activists', mutual funds' and pension funds' respective target firms.

Panel A: Activists' flaggings						
Target	Acquirer	CAR (+-1)	CAR (+-5)	CAR (+-10)	CAR (t0) to (t1)	CAR (t0) to (t10)
Note	Öresund	0.1355	0.0645	-0.0043	0.0096	-0.0381
Fabege	Öresund	0.0379	-0.1230	-0.1749	0.0305	-0.0627
Haldex	Öresund	0.0155	0.0839	0.0870	0.0157	-0.0605
Proact	Öresund	0.0793	0.1353	0.1126	0.0742	0.0880
Cision	Öresund	-0.0024	-0.0032	-0.0121	0.0065	-0.0095
Transcom	Öresund	0.0737	0.1844	0.1345	0.0508	0.0669
Munters	Industrivärden	-0.0239	-0.0523	0.0515	-0.0076	0.0546
Tandberg	Industrivärden	0.0130	-0.0200	-0.0029	0.0280	0.0398
Hemtex	Industrivärden	-0.0023	0.0619	0.2163	-0.0111	0.1138
Ossur	Industrivärden	0.0176	-0.0743	-0.0605	0.0033	-0.0285
Demag Cranes	Cevian Capital	0.0195	-0.0222	-0.0501	0.0260	-0.0081
Danske Bank	Cevian Capital	0.0583	0.0294	0.0189	0.0193	0.0008
Bilfinger	Cevian Capital	0.0803	0.0499	0.0582	0.0318	0.0411
Wolsely	Cevian Capital	-0.0063	-0.0971	-0.1319	-0.0066	-0.0517
Tieto	Cevian Capital	0.0558	0.0247	0.0295	0.0326	-0.0090
Daimler	Cevian Capital	0.0429	0.1048	-0.0078	0.0231	0.0558
Panalphina	Cevian Capital	-0.0227	0.0095	-0.0637	-0.0076	-0.0059
Volvo	Cevian Capital	0.0032	-0.0129	-0.0206	0.0037	0.0009
Swedbank	Cevian Capital	0.0327	0.0407	0.0249	0.0046	0.0256
Lindex	Amaranth Capital	0.0235	0.3959	0.2320	-0.0183	0.2739
Intrum Justitia	Amaranth Capital	0.0376	0.0827	0.0388	0.0125	-0.0051
Biovitrum	Investor	0.0757	-0.0467	0.0459	0.0343	0.0403
ABB	Investor	0.2008	0.5288	0.5312	0.2093	0.4332
Seamless	Kinnevik	0.2647	0.5250	0.6093	0.0820	0.0694
Husqvarna	Investor	0.0117	-0.0145	0.0277	-0.0231	-0.0595

Panel B: Mutul funds' flaggings						
Target	Acquirer	CAR (+-1)	CAR (+-5)	CAR (+-10)	CAR (t0) to (t1)	CAR (t0) to (t10)
Haldex	Handelsbanken Fonder AB	0.0123	-0.0638	-0.0571	-0.0072	0.0073
Tradedouble AB	Handelsbanken Fonder AB	0.0508	-0.0040	0.0064	0.0583	0.0072
Biotage	Länsförsäkringar Fonder AB	0.1001	0.0084	-0.0711	0.0383	-0.0036
Concentric AB	Handelsbanken Fonder AB	0.0076	-0.0601	-0.1815	0.0079	-0.0554
PA Resources	Länsförsäkringar Fonder AB	-0.0087	-0.0682	0.0071	-0.0096	0.0396
BE GROUP	Handelsbanken Fonder AB	0.0056	-0.0400	-0.0324	0.0110	-0.0812
Haldex	Handelsbanken Fonder AB	-0.0447	-0.0224	-0.0155	-0.0285	-0.0199
Doro	Nordea Fondbolag Finland AB	-0.0285	0.0069	-0.0064	-0.0443	-0.0334
Lagercrantz	Nordea Fondbolag Finland AB	-0.0101	-0.0201	-0.0483	-0.0056	0.0312
Eniro	Länsförsäkringar fondförvaltning AB	-0.0615	-0.1293	-0.1718	-0.0429	-0.2539
Medivir	Länsförsäkringar fondförvaltning AB	-0.0031	0.0298	-0.1028	-0.0041	-0.0493
Cybercom	Handelsbanken Fonder AB	-0.0485	-0.0971	-0.2212	-0.0209	-0.0818
Medivir Aktiebolag	Länsförsäkringar fondförvaltning AB	-0.0478	0.1022	0.1325	0.0034	0.0560
Proact IT Group AB	Didner & Gerge Fonder AB	0.0313	0.0393	-0.0045	0.0031	-0.0236
Fastighets AB Balder	Länsförsäkringar fondförvaltning AB	0.0024	0.0968	0.0750	-0.0165	-0.0332
Kappahl	Nordea Fondbolag Finland AB	-0.0043	0.0168	-0.0327	0.0013	0.0043
Eniro AB	Nordea Fondbolag Finland AB	0.0453	0.0886	0.0602	0.0165	0.0628
Connecta AB	Nordea Fondbolag Finland AB	0.0228	0.0213	0.1401	-0.0249	-0.0325
Intrum Justitia	Länsförsäkringar fondförvaltning AB	0.0260	-0.0633	-0.0091	0.0164	0.0370
Medivir	Länsförsäkringar fondförvaltning AB	0.0218	0.2011	0.0327	0.0587	0.0591
Eniro AB	Handelsbanken Fonder AB	0.1653	0.1925	0.0449	-0.0895	-0.0943
Vitrolife AB	SEB Investment Management AB	-0.0421	0.0009	-0.0768	-0.0430	-0.0692
Hexpol AB	Didner & Gerge Fonder AB	0.0065	0.0111	0.2173	-0.0184	-0.0035
Note	Swedbank Robur AB	-0.0283	-0.0391	-0.1521	0.0081	-0.1061
Björn Borg	SEB Asset Management AB	-0.0012	-0.1811	0.1695	-0.0603	-0.0558
Duni	Lannebo Fonder AB	-0.0595	-0.0825	-0.0393	-0.0088	0.0021
Lundin Petroleum	Swedbank Robur AB	-0.0246	0.1730	0.1472	-0.0222	0.0201
Lindab International	Swedbank Robur AB	-0.0041	0.0690	0.1103	-0.0060	0.0307
Duni	SEB Investment Management AB	-0.0005	-0.0024	-0.0266	0.0115	0.0020
Semcon	Swedbank Robur AB	-0.0301	0.0271	0.1303	-0.0207	-0.0393
Kappahl	Nordea Fonder AB	0.1015	0.1135	0.2508	0.0459	0.1103

Table XIV (continued)

Panel C: Pension funds' flaggings						
Target	Acquirer	CAR (+-1)	CAR (+-5)	CAR (+-10)	CAR (t0) to (t1)	CAR (t0) to (t10)
Vostok Nafta	Fjärde AP Fonden	-0.0312	0.0711	0.0787	0.0495	0.1059
Cellavision	Tredje AP Fonden	0.0151	0.0006	-0.0724	0.0627	-0.0021
Skanska AB	Alecta Pensionsförsäkring	-0.0067	-0.0022	-0.0051	-0.0061	-0.0182
Autoliv	AMF Pension	0.0144	0.0854	0.0251	0.0132	0.0229
Electrolux	Alecta Pensionsförsäkring	0.0059	-0.0266	-0.0004	-0.0120	0.0545
Net insight	Alecta Pensionsförsäkring	-0.0156	-0.0416	0.0627	0.0051	0.0401
Autoliv	Alecta Pensionsförsäkring	-0.0033	-0.0369	-0.0387	-0.0087	-0.0181
Hexagon Aktiebolag	AMF Pension	-0.0237	-0.0729	-0.0301	0.0168	0.0147
Net insight	AMF Pension	0.0184	-0.0481	-0.0033	0.0028	-0.0119
Orexo	Tredje AP Fonden	0.0526	0.0145	0.1205	0.0278	0.1158
Castellum	AMF Pension	-0.0246	-0.0160	0.0041	0.0014	-0.0499
Vostok Nafta Investment	Alecta Pensionsförsäkring	0.0060	-0.0505	-0.1991	0.0159	-0.0678
Skanska AB	Alecta Pensionsförsäkring	0.0270	0.0000	0.0143	0.0147	0.0444
Investment AB Öresund	AMF Pension	0.0309	0.0065	-0.2453	0.0345	-0.0827
Skanska AB	AMF Pension	0.0002	0.1961	0.2168	0.0131	0.0775
SSAB AB	AMF Pension	-0.0410	-0.0247	-0.0262	0.0161	0.0153
Alfa Laval	Alecta Pensionsförsäkring	0.0098	0.2577	0.0690	-0.0466	0.0522
5560896572 Proffice Aktiebolag	Fjärde AP Fonden	-0.0092	-0.2078	-0.2395	0.0022	-0.1586
Alfa Laval	AMF Pension	0.0879	-0.0043	-0.1169	0.0716	-0.0624
Skandinaviska Enskilda Banken AB	Alecta Pensionsförsäkring	-0.0337	0.0063	0.0672	-0.0162	0.0676
Tradedoubler	Första AP Fonden	-0.0204	0.2019	0.0919	0.0109	0.1038
Vostok Nafta Investment AB	Fjärde AP Fonden	-0.0881	-0.0501	-0.0966	-0.0094	0.0958
PartnerTech	Försäkringsbolaget Avanza Pension	-0.0357	-0.0276	0.1061	-0.0256	0.0615
Björn Borg	Fjärde AP Fonden	0.0535	-0.0432	-0.0605	0.0181	-0.0630
Castellum	Stichting Pensioenfonds ABP	0.0328	0.0575	0.0332	0.0172	-0.0119
ASSA ABLOY AB	Alecta Pensionsförsäkring	0.0030	0.0374	0.0744	0.0156	0.0369
TradeDoubler Aktiebolag	Fjärde AP Fonden	0.0604	0.0621	0.0658	0.0198	0.1052
Alfa Laval AB	AMF Pension	-0.0504	-0.1607	-0.1493	-0.0505	-0.0125

10.2 Understanding the institutional activists

10.2.1 Cevian Capital

Cevian Capital was founded in 2002 by Christer Gardell and Lars Förberg as they launched their first fund Cevian I. Four years later, they raised their second fund; Cevian II. Today, they have more than 4.5 billion dollar assets under management and they are the only activist hedge fund in Sweden. Their first fund, Cevian I was a huge success. During its first five years, it featured an average annual return of 8.6% a year compared to their hedge fund benchmark which earned 3.4% whilst MSCI Europe stock index was down 2.7%³⁵. Cevian II (Europe's largest activist fund) had for instance a return of 35.7% in 2009 and over 34% in 2010³⁶. They have consequently topped the ranking tables for hedge funds. This explains why their flaggings are given so much attention to in media. Moreover, they have an average holding period of at least three years, which puts them in the 95th percentile when comparing to the holding periods of other activist funds³⁷.

"We are uninterested in where the share prices of our companies are in six months. We are working on what the real value of the company can be in three or four years' time".

– Lars Förberg, CO-founder Cevian Capital³⁸

Their long holding periods resemble that of private equity investors, but unlike private equity investors, they take minority positions in listed companies only. About 14% of the activist hedge funds attempt to earn a position in the target firm's board without engaging in a proxy contest and Cevian Capital is one of them. They tend to have around 8-12 stocks in their portfolio, but five of these typically make up for over 80 percent of their portfolio³⁹. This enables them to focus on their target firms to a broader extent than both mutual funds and pension funds that are required to hold a much more diversified portfolio due to regulation.

³⁵ <http://www.investorchronicle.co.uk/2012/04/05/comment/no-free-lunch/who-is-cevian-4LA77D7zEtfA6ypcc1gy9L/article.html>

³⁶ <http://simonkerrrhfblog.blogspot.se/2011/01/cevian-capital-ii-ranks-high-on-2010.html>

³⁷ <http://www.thehedgefundjournal.com/magazine/200712/profiles/operational-activists-cevian-are-catalysts-for-corporate-change.php>

³⁸ Ibid.

³⁹ Ibid.

"We are not looking for bad companies. We are looking for neglected companies or misunderstood companies in out-of-favour industries, So, many of the companies we invest in have an excellent market position and the starting platform is relatively good"

– Lars Förberg, CO-founder Cevian Capital⁴⁰

Until 2008, they had only one loser out of 18 positions taken in Custos and Cevian I. Their aim is for the value of their holding to be able to double over three years. They try to identify firms that are undervalued and simultaneously offer an opportunity for Cevian Capital to enhance value through operational activism. Before they invest in a company, they need to have a value enhancement plan that includes the four areas shown in the table below⁴¹. Long lock-ups are considered to be important as it allows them to spend more time on target firms and strategic improvements.

Moreover, they have also recruited former British financial services minister Paul Myners who is the chairman for their UK operations. He is known for having criticized investor short termism in several reports and has highlighted issues such as short termism, and overly diversified portfolios that give rise to ownerless corporations⁴².

Figure 1 – The four ways in which Cevian Capital tries to create shareholder value

Corporate Governance Improvements	<ul style="list-style-type: none"> • Strengthen management • Clarify roles and responsibilities • Implement appropriate management incentives plans
Operational Improvements	<ul style="list-style-type: none"> • Improve operating performance • Enhance revenues (pricing, new markets & products)
Financial Restructuring	<ul style="list-style-type: none"> • Redemptions • Share buyback programs • Dividends • Debt restructuring
Corporate Restructurings	<ul style="list-style-type: none"> • Identify and pursue acquisitions • Re-orient strategic priorities • Evaluate and restructure Cap.Ex programs

⁴⁰ Ibid, 52.

⁴¹ Ibid, 52.

⁴² <http://www.fundweb.co.uk/myners-to-be-chairman-at-activist-investor/1031846.article>

10.2.2 Investor

Investor aims to add long term shareholder value through active board participation which they hope to achieve with significant ownership stakes. Their intention is to generate a total return to shareholders that exceeds the market cost of capital. Unlike Cevian Capital, they invest in both listed and unlisted companies, although listed companies make up for the larger part of their investments.

They work actively with remuneration to align the interests of senior executives and the board. They try to do this by tying the compensation of executives to value creation. Like Cevian Capital, Investor uses value creation plans with the intention to identify measures that can be taken to add fundamental value. These value creation plans are developed for all of their holdings by their business teams, consisting of analysts and board representatives for each holding. Furthermore, they continuously monitor their companies and use these value creation plans to benchmark their performance⁴³.

10.2.3 Industrivärden

Industrivärden is an investment company with over 60 years of experience in corporate governance and active ownership. They invest mainly in mid and large cap companies that are located in the Nordics. They seek companies with leading positions globally, a good ability to generate growth in cash flow and high potential for value enhancement through activism. Their goal is like Investor to generate a total shareholder return which over the long run is higher than the average return of Stockholm Stock exchange.

Their strategy to achieve this is also through active board work, which is based on Industrivärden's model for value creation. In order to be able to focus as much as possible on their holdings, they aim to have a limited number of companies in their portfolio. Industrivärden participates actively in the nomination work of portfolio companies' board directors. They try to add fundamental value through strategic improvements by interacting with other major owners. At least one board member of their portfolio companies typically participate in the board of Industrivärden as well⁴⁴.

⁴³ <http://www.investorab.com/en/default.htm>

⁴⁴ <http://www.industrivarden.se/en/>

10.2.4 Investment AB Kinnevik

Kinnevik was founded in 1936. Their main goal is to increase shareholder value through Net asset value growth. Their primary focus is high growth companies. They play an active role in the boards of their portfolio companies. Kinnevik has for the past 30 years generated an average yield of 20% through increases in dividends and higher share prices. Unlike other investment companies, they invest in companies all around the world. More than half of their assets are in fact in emerging markets⁴⁵.

10.2.5 Investment AB Öresund

Öresund's main goal is to generate a high return for their shareholders in the long run. They try to achieve this by investing mainly in Swedish stocks, low management costs, and a flexible liquidity policy. Their investments can be broken down into three parts: portfolio companies where they are active owners, financial investments and investments in unlisted companies. Their main focus is the first one, that is, investments where they participate actively within the boards of their portfolio companies. Fabege, Bilia and Skistar are the three companies that they are actively working with today⁴⁶.

⁴⁵ <http://www.kinnevik.se/en/>

⁴⁶ <http://www.oresund.se/english.html>