

Market Reactions to Early Called Elections

A Study Investigating the Announcement Impact of Snap Elections on the European Equity Index Market in 2014

Evangelos Makris¹ Lisa Tilly²

Abstract

In this thesis, sector reactions to early called elections on the European equity index market in 2014 are examined using the event study methodology. Realized and expected index returns from 15 European countries within Industrials, Consumer Staples, Financials, Information Technology and Telecommunication Services are compared around the snap election announcements in Sweden on December 3 and in Greece on December 9. The short-term impact is investigated by grouping the countries based on geography, financial and risk parameters, as well as Euro-dependency. Results demonstrate abnormal returns surrounding both announcements with interconnectedness and currency being of major importance. Across sectors and groups, the Swedish signal is weaker than the Greek signal. PIIGS³ shows a high sensitivity to both announcements and the Nordics⁴ is less sensitive to the Swedish announcement than expected. Eurozone countries are found to react more strongly than Non-Eurozone countries, however, the effect is more spread across sectors in the Swedish announcement. The Financials sector is less affected than anticipated and based on ranking, the least sensitive sectors are found to be Industrials and Consumer Staples.

Keywords: Snap Election, Early Election, Event Study, Sector Effects, Index Returns

Supervisor: Roméo Tédongap

¹40519@student.hhs.se

²21968@student.hhs.se

³Portugal, Italy, Ireland, Greece and Spain

⁴Norway, Finland, Sweden and Denmark

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1 Introduction

Political uncertainty surrounding elections has broad implications for financial markets and is hence important and interesting to study. In this thesis, it is in our interest to investigate the connection between political uncertainty, investor behavior and stock market performance. Here, political uncertainty consists of the announcements of snap elections in Sweden and Greece during December 2014. These two events are unique for multiple reasons. In Sweden, this was the first call for a snap election since 1958 and it quickly became worldwide news. It is particularly interesting as it lets us examine how the European markets reacted in a country whose political uncertainty has not been an issue before. As far as Greece's snap election call, it is interesting for various reasons. *Will political uncertainty in Greece again come to affect European financial stability? Is systemic risk still high or has Europe undertaken the necessary steps to withstand a disappointing outcome? How do different groups within different sectors react to political uncertainty?* These are some questions that we intend to answer.

The aim of the study is to conduct cross-country analysis and provide evidence of how political uncertainty surrounding early called elections impacts investor beliefs and stock returns in the short run. To do this an event study is performed around each announcement to investigate stock market effects and to compare and contrast the two announcements. Realized and expected index returns from 15 European countries on country-level and within five sectors are investigated using the Market model, proposed by MacKinlay (1997). By this procedure one can conclude whether abnormal effects are more severe in a particular announcement, group or sector. The countries included in the study sample consist of Sweden, Greece, Italy, Spain, Portugal, Germany, France, Switzerland, Norway, Finland, the Netherlands, Belgium, Denmark, Ireland and the United Kingdom. The sectors of interest comprise Industrials, Consumer Staples, Financials, Information Technology and Telecommunication Services, as classified by the Global Industry Classification Standard (GICS). The countries are divided into groups of PIIGS (including and excluding Greece), Other Europe, the Nordics, as well as two currency groups, one using Euro (including and excluding Greece) and the other one not using Euro. (See *Table 1* and *2* in Section *Sample Selection* in the Appendix).

The event date for the Swedish snap election announcement is December 3, and the Greek election was called early on December 9. The study uses an estimation window of 120 days to calculate expected returns and additional windows of 80 and 160 days are used in the

Country-level analysis for robustness checks. Our main event window consists of three days (-1,1) and additional event windows of five days (-1,3) and three days (0,2) are used for the purpose of robustness. The event windows are including days before the event day to capture leakage of information prior to the event and days after the event day to account for lagging stock market effects. When investigating returns, we find support for a normal distribution, but perform both parametric and non-parametric tests of significance for the purpose of robustness. When results from the Country-level indices are found to be significant in the parametric t-tests in the main event window (-1,1), non-parametric Wilcoxon sign rank tests are run to validate the results.

The null hypotheses (H_0) are stating that the announcement of a snap election has no impact on equity index returns and is neither dependent on the country announcing the election, nor the investigated group. The hypotheses are tested on the grouped country indices across sectors. The contrasting hypotheses (H_1) are supporting that the effects are different from zero. Interconnected, closely-related countries both geographically, financially and from a risk perspective are expected to be more affected. Eurozone countries are anticipated to be more exposed than Non-Eurozone countries in both events as Eurozone countries carry higher Greek debt levels and taking Swedish trade patterns into account implies sensitivity toward Eurozone countries. The Greek announcement is expected to have a larger impact than the Swedish announcement, due to Greece's higher systemic risk and the uncertainty in the Swedish signal. In addition, sectors with larger cyclicity and political dependency are expected to be more affected. Dependent sectors are defined as Financials, Information Technology and Telecommunication Services and non-dependent, non-cyclical sectors, less likely to suffer the effects of poor economic conditions, as Consumer Staples and Industrials, according to Berk and DeMarzo (2011).

There are a lot of previous studies on political uncertainty and investor behavior, including empirical research focusing on stock market effects upon announcements of election outcomes, as well as voter reactions to early election announcements. Regarding the release of information on election outcomes, the Uncertain Information Hypothesis is stating that prices increase as information resolution is worked out and as the outcome becomes more probable. This is in accordance with Brown, Harlow and Tinic (1988), Harrington (1993) and Furió and Pardo (2012). In the literature on early election announcements, problems of asymmetric information are widely discussed. Election timing, i.e. when a snap election is announced is found to be key as it might signal that future performance and support for the incumbent party is expected to decrease, in line with Smith (2003) and Pantzalis, Stangeland

and Turtle (2000). Still, there is currently a lack of empirical studies investigating how financial markets react upon a snap election announcement, why this study can add value to the research field and provide implications and suggestions on future reactions to snap election announcements. Our study does not only provide cross-country analysis, but also increases understanding on how different sectors react upon announcements, which according to our knowledge is not covered by previous research. This motivates the topic choice and in addition, the issue is up to date and highly relevant to study. In terms of implications, the results found in this study let authorities, policy makers and politicians assess short-term economic impact of changes in the political arena.

According to the event study results, in general, the null hypotheses that average cumulative abnormal returns upon the announcements are zero can be rejected. An overall small impact close to zero on the equity index market across sectors is found. In the day-to-day analysis, on the event date of the Greek announcement we do not find strong evidence that the abnormal returns among the groups are different from zero. However, we find that the Eurozone group (Greece excluded) presents a significant positive reaction in the Financials sector. We also find evidence of negative abnormal returns during the Greek announcement on the event day when studying the Country-level indices, especially for Other Europe and the Eurozone group (Greece excluded). Upon the Swedish announcement date, on the other hand, we find stronger evidence of significant abnormal returns. In particular, Other Europe presents negative abnormal returns in the sectors of Financials, Consumer Staples and Industrials. The Eurozone group (Greece excluded) also presents significant negative abnormal returns in the Financials and Industrials sectors.

From statistical comparisons of groups, in the Greek event, larger significant effects for PIIGS rather than the Nordics in the Telecommunication Services sector are found. PIIGS is significantly larger affected than Other Europe in Telecommunication Services, Financials and Information Technology. The Nordics show larger effects than Other Europe in the Financials and Consumer Staples sector. In the Swedish event, the PIIGS group is significantly larger affected than the Nordics on Country-level, in Industrials and Telecommunication Services. In Industrials, PIIGS is also significantly larger affected than Other Europe. Thus, in both events, PIIGS shows a high sensitivity to the announcements and the Nordic sample is less sensitive than expected, believed to be due to differences in financial stability and historical political risk.

When comparing currency-sorted groups in each event, starting with Greece, the Eurozone group is significantly greater affected than the Non-Eurozone sample in the

Telecommunication Services sector. In the Swedish event, significantly higher effects for Eurozone countries are found on Country-level and in all sectors but Consumer Staples and Information Technology. Hence, here support is found for the hypothesis that the effects on Eurozone countries are higher than for Non-Eurozone countries. For the Non-Eurozone sample, the effect in the Industrials sector is significantly larger in the Greek event compared to the Swedish announcement.

In the comparison of events across country-sorted groups, the Greek announcement is found to affect PIIGS and Other Europe significantly more in the Financials sector, compared to the Swedish announcement. The Nordics are significantly more affected by the Greek announcement than the Swedish announcement in Consumer Staples and Industrials. The hypothesis that the Swedish signal would be less severe in absolute terms compared to the Greek signal, is accepted for these groups and sectors, possibly due to the uncertainty surrounding the announcement of the Swedish snap election, as it had to be confirmed on December 29. The Financials sector is less affected than anticipated, potentially due to that the Greek debt is held by governments and not banks, according to Braihi (2015). Another reason could be that the two events took place two months after the EU-wide stress tests on 123 banking groups across the EU. According to a ranking process of abnormal returns across groups, in both events, the least sensitive sectors are Industrials and Consumer Staples.

The remainder of the paper is structured as follows. It continues with Section 2 Background, giving a comprehensive understanding of the events of interest, followed by Section 3 Literature, providing previous empirical research. Section 4 Data describes the empirics, followed by Section 5 Expected Findings, discussing the various hypotheses and expected outcomes. In Section 6 Methodology, the event study framework and statistical tests are described in more depth. Section 7 Results presents the main findings in the study, with Section 8 Discussion providing further remarks and an evaluation of the credibility of the results. Section 9 Conclusion offers concluding remarks, followed by Section 10 References, providing sources. The study closes with an Appendix.

2 Background

Political elections are very important to financial markets, primary as they are widely followed by market participants. A public election provides voters, or investors, with the opportunity to influence the political landscape and affect what economic policies should be undertaken in the medium to long-term future. Elections are also attracting substantial media attention. Various analysts are continuously filtering information from politicians to media, spreading information to financial markets. As this information is widespread, an election outcome becomes more probable, giving investors the chance to change probability distributions on the election outcome and likely policy implementations, which in turn has economic effects, in accordance with Pantzalis, Stangeland and Turtle (2000).

There are several types of elections that can be announced within a parliamentary system, among those, a general election or a national referendum. The focus in this study is on early elections, or snap elections, that are called earlier than expected. These elections usually take place when not required in order for the incumbent party to seize an electoral opportunity or to decide a pressing issue. It is the Prime Minister of the incumbent party who has the power to call a snap election, but the decision has to be confirmed by the Head of State. A snap election is most often called at an advantageous time for the incumbent party, for example when the support for the opposition is weak and when it is likely that the trust in the incumbent party will decrease in the future. In general, minority governments are found to have greater incentives and are more likely to call early elections. Historically seen, the result of an early called election has often been an increased majority for the incumbent party, but there have also been cases of backfiring, when the opposition party has gained power or eventually won the election, according to Smith (2003).

The particular events of interest in this thesis consist of two snap elections announced in December 2014 in Greece and Sweden, respectively. In Greece, the political climate has lately been shaky due to its financial difficulties associated with the Euro and sovereign debt crisis. A snap presidential election was announced on December 9 by Prime Minister Antonis Samaras, nominating Stavros Dimas, a former EU Commissioner for presidency. Thereby, the upcoming election was forwarded to December 17, on which a supermajority would be needed. If the country would fail to elect a president it would lead to a national general election. The snap election was called due to political opposition in the parliament, which threatened the recent Greek recovery. These political events were characterized by a very large electoral uncertainty. Following the announcement, stocks in Athens were down 13%,

the worst fall since 1987, according to Smith and Fletcher (2014). In Greece the snap election outcome came to change the political sentiment dramatically, as the first left-wing government was appointed in the January elections that followed. Extant evidence from parties' ideal policies suggests firms to perform better under right- than left-leaning governments. According to Füss and Bechtel (2006), if investors anticipate these effects of different parties holding office, changes in expected government partisanship should produce distinct patterns of stock market performance, with prices reflecting the electoral prospects of the competing parties in the pre-election time.

In the case of Sweden, there was a parliamentary political shift in the general election held on September 14, 2014. As a result, the Alliance lost power and a minority government was set up represented by the Social Democrats and the Greens. However, the minority government lost the parliamentary budget vote and decided to call early polls by announcing a snap election on December 3 that would be held on March 22, 2015, according to Milne (2014). The information was spread to the public through a press release by Prime Minister Stefan Löfven. To call early elections in Sweden is very unusual, as the country had its last snap election in 1958. According to Swedish law, *Svensk författningssamling* (1974:152), the decision to call a snap election can be taken a minimum of three months after the first meeting of the newly elected parliament. Hence, the first day to call a snap election would be December 29, 2014. However, the announced snap election was cancelled on December 27, 2014, as the December agreement was worked out by the governing and opposition parties in collaboration, which made it possible for a minority government to get their budget approved from Spring 2015, according to Milne (2014).

3 Literature

The financial literature investigating political risk and its consequences in emerging and developed markets is broad. Several empirical studies have been conducted to map out the effects of politically related events on elections, as well as to see whether stocks are politically sensitive. The empirical literature studying the relationship between the performance of the stock market and election outcomes dates back to Niederhofer, Gibbs and Bullock (1970), in which presidential elections and the corresponding market impact in the U.S. are in focus. Even though there are substantial studies performed on politics and stock markets, the empirical research within the field of early announced elections and stock market performance is limited, in particular studies investigating the market impact caused by the announcements. Still, there are several studies investigating political changes and equity effects using the event study methodology, which can be applied to our study.

3.1 Theories

Brown, Harlow and Tinic (1988) study stock price effects around the announcements of 9000 market wide and firm-specific events and find that bad, or unfavorable, events have larger effects than good, favorable, events and that prices rise as uncertainty is resolved due to market efficiency. In turn, this can be applied to the release of information regarding election outcomes. Uncertainty about a final election outcome might be resolved prior to an election and hence prices are expected to increase as uncertainty resolution is worked out, in line with the Uncertain Information Hypothesis (UIH).

Furió and Pardo (2012) check if announcements of election outcomes have effect on the Spanish stock market. They discuss two theories, the Opportunistic and the Partisan Political Business Cycle (PBC). The Opportunistic PBC is stating that the incumbent government is implementing short-term policies to increase stock prices and thereby win votes. Hence, there is a short-term incentive for incumbents to maximize economic benefits as the country's economic situation is taken into account on voting day. The Partisan theory claims that ideology matters, which in turn is affecting policies. The authors find support for the Partisan Political Business Cycle and find abnormal returns for general Spanish elections, but find no significant effects when considering other political events such as regional elections, general referendums or European elections. The authors are also interested in election-induced volatility and the uncertainty about policies that will be carried out with the expectation that prices should be able to adjust. They find that volatility increases on election

day and decreases when election results are out, as uncertainty is reduced, upon which prices rise, in line with the Uncertain Information Hypothesis and Brown, Harlow and Tinic (1988).

3.2 Announcement Effects of Election Outcomes

Lehander and Lönnqvist (2011) study signaling effects of electoral outcomes on the stock market by conducting an event study on parliamentary elections in Europe during 1999-2011. They investigate if country index abnormal returns are dependent on whether the winner of the elections belongs to the centre, left or right wing, if the firm investigated lies within the small, medium or large cap segment and is dependent on the outcome in terms of a minority or majority government. The authors find a significant negative impact on small cap indices, due to an increased political uncertainty and hence an increased market uncertainty. This is found to be true when a centre government is the outcome, but no significant reactions are found when the election outcome is left or right wing. With a majority government outcome the authors do not find significant abnormal returns for small cap indices, but with a minority outcome these are found to be significant. This can be explained by the confusion of what a new government will have on their political agenda, which leads to market uncertainty, higher risk aversion and lower returns when a non-majority government wins the election.

3.3 Early Called Elections

Pantzalis, Stangeland and Turtle (2000) study stock returns two weeks prior to elections during 1974-1995 in 33 countries and find positive abnormal returns before the election week. This is found to be a function of a country's degree of political, economic and press freedom, election timing and success of the incumbent party to be re-elected. The authors find high abnormal returns prior to elections in less free countries where the incumbents lost and in early called elections won by the opposition. Furthermore, the authors differ between favorable and unfavorable political events. They characterize an unfavorable event as the case when the incumbent party with previous poor economic performance wins an election. When an incumbent party loses after a poor past economic performance it is seen as a favorable event. The stated hypothesis (H_1) that is also proven is that cumulative abnormal returns surrounding an unfavorable event are larger than around a favorable event, which is in line with Brown, Harlow and Tinic (1988). The authors prove that higher uncertainty events are associated with a higher resolution of uncertainty, hence cumulative abnormal returns are larger than for low-uncertainty events. When considering early election outcomes they find

significantly greater cumulative abnormal returns than in on-time elections. The results found agree with Harrington (1993) and Brown, Harlow and Tinic (1988). According to the Uncertain Information Hypothesis there are significant cumulative abnormal returns when an election carries large asymmetric information and when the incumbent party can manipulate the election outcome, such as in early called elections. The reasoning behind this is that the rescheduling of the election gives the market less time to analyze new information, hence market participants' expectations need to be revised in a shorter period of time. Pantzalis, Stangeland and Turtle (2000) also discuss the important role of opposition parties and media. These players can create distrust in an incumbent government and possess the ability to influence whether a newly announced snap election will be seen as a favorable or unfavorable event for voters and investors.

Smith (2003) examines British parliaments and public reactions when announcing elections after 1945. The author uses timing, electoral and performance data and concludes that voters use the election timing signal to update their assessment of the government. When elections are widely expected, the signal is weak and the government can easier maintain their support compared to when an election is unexpectedly announced, which is rather a strong signal of a decline in performance and hence, governmental popularity becomes weaker. Decisions taken by leaders to call an early election signal information about the leader's expectations about future performance, hence, there is a signaling mechanism and a clear relationship between the election date, electoral outcome and the future performance. When dealing with elections and political uncertainty, one needs to take information asymmetry into account. If the leader is less confident in ruling well in the future, there will be a higher incentive for a snap election when having high support and being more confident to be able to "surf" on past performance. According to Smith (2003) it is incompetent and not competent leaders who call early elections. When leaders call early elections their support tend to decline, as was the case for Harold Wilson in 1970's Great Britain and Jacques Chirac in 1997's France. An early election signals that times will not be as good as in the past, hence an anticipated decline in performance makes the electorate re-evaluate the votes. In systems with fixed electoral terms, one cannot choose to hold an early election when the future does not look as rosy, instead, in these systems, it is believed that leaders manipulate economic performance through policy instruments so that their performance looks good upon election, even if manipulation leads to worse performance in the long run.

Accordingly, Balke (1990) expects snap election announcements to be made when the government's popularity is high, hence when the party is expecting to win and the popularity

is anticipated to decline in the future. The author is claiming that there is a tradeoff between the chances of winning a current and future election. There is indeed an arising utility from being in power, but also opportunity costs of losing an election. On the other hand, Downs (1957) is proposing that voters might not invest time and effort in speculating about why a Prime Minister calls an early election, hence, snap elections might not affect voting behavior. The signal effect does not have to contain information about a politician's competence and therefore voters might not react negatively.

Bélanger (2009) is describing and analyzing the 2007 Canadian snap election, in which the Quebec Premier Jean Charest, in power of a minority government, announced a snap election when the opposition was weak and financial crisis was approaching. The incumbent party won and got a majority in the re-election, but with a low turnout. Reasons for the snap election announcements are stated to be that the political context seemed favorable as surveys showed support for the current government.

Blais et al. (2004) examine voters' reactions to early election calls and in particular they investigate the case in which the Canadian Prime Minister in November 2000 called an early election. The study is done by conducting a survey asking about potential anger toward the Prime Minister for calling a snap election, to see whether the reactions provided support for incumbents. Results show that the earlier called election affected a small group of voters, however for the big mass, the action taken was not very decisive for the final election outcome.

4 Data

In order to investigate if index returns are sensitive to early election announcements, daily index returns from five sectors in 15 European countries have been used in this study. The sectors of interest consist of Industrials, Consumer Staples, Financials, Information Technology and Telecommunication Services, as classified by the Global Industry Classification Standard (GICS). The countries included in the study are Sweden, Greece, Italy, Spain, Portugal, Germany, France, Switzerland, Norway, Finland, the Netherlands, Belgium, Denmark, Ireland and the United Kingdom. In order to calculate index returns, we use logarithmic returns, as shown in the formula below where P_{it} is the closing price of index i on day τ .

$$R_{i\tau} = \ln \left[\frac{P_{i\tau}}{P_{i,\tau-1}} \right] \quad (1)$$

When performing the analysis, the countries are divided into different groups in order to remove noise and account for similarities. The aggregation of countries is based both on geographical and financial reasons. Firstly, three different groups are formed that allow us to draw more concrete conclusions about the two events investigated, as can be seen in *Table 1* in the Appendix. The PIIGS⁵ country sample consists of five Eurozone nations considered to be economically weaker after the last financial crisis. As these countries have the Euro as currency they cannot devalue their currencies, which makes the way out of a recession harder, according to The Economist (2010). When investigating the daily abnormal returns for each country, it is important to note that the Greek Index is experiencing a large volatility and high absolute effects. This is mostly evident in the event days of the Greek announcement, but in order to be consistent it is also taken into account in the second event. In that sense, when aggregating into the PIIGS, Greece is overstating the effect on that group making it harder to draw conclusions. Thus, one more group is investigated in our analysis, PIIGS excluding Greece. This group, when compared to the original one, will shed more light on our results, making it easier to distinguish which sectors might be more affected during the events.

Moreover, grouping Nordic countries⁶ can result in identifying the effects of the second event analyzed, the Swedish snap election announcement on Northern Europe, taking

⁵Portugal, Italy, Ireland, Greece and Spain. (The term was popularized during the European sovereign debt crisis of the late 2000s and expanded in use during this period).

⁶Norway, Finland, Sweden and Denmark

the interconnectedness in this specific region into account. Finally, the rest of the countries⁷ form the Other Europe group and constitute the most developed countries in Europe, but also possess significant exposure to the Greek debt. At the same time these countries have wide trade relations with Sweden. According to Kottasova (2015), the majority of the Greek debt is held by Eurozone countries. The largest part of the Greek debt outstanding is held by Germany, France, Italy, the European Central Bank (ECB), the International Monetary Fund (IMF) and Spain. Hence, two different groups are formed according to currency. We identify ten Eurozone countries and five Non-Eurozone countries as shown in *Table 2* in the Appendix. To be consistent, we also investigate the effects on the Eurozone group excluding Greece to account for Greece's big drop upon the Greek announcement, which might overstate our results.

The data source of the sector-specific indices is Thomson Reuters Datastream and to avoid a negative impact from using different currencies during the estimation and event window, all collected data is Euro-denominated. In order to conduct an event study using the Market model, as proposed by MacKinlay (1997), the World Index for each specific sector is used as a proxy for normal returns on sector level. These returns are also retrieved from Thomson Reuters Datastream. The World Index is used to control for global macroeconomic effects and increase the probability that the abnormal effects are caused by the announcement of snap elections and nothing else. The European countries included in the sample comprise a large part of the European Index and thus have a high covariance with the European Index, i.e. the European Industry Index is more correlated across sectors than the World Index, why it is better to use the World Index.

In addition, country-specific stock market indices are collected in order to capture the effects of snap election announcements on the overall stock market performance i.e. in the whole economy. For this data, the provider of equity indices used is Morgan Stanley Capital International (MSCI). The MSCI Country Indices are designed to measure the performance of the large and mid-cap segments of the country market. Each index covers about 85% of the equity universe in the respective country. For the country-specific regressions, the MSCI World Index is used as a proxy for normal returns, as the data on Country-level indices is also from the MSCI database. Finally, the data analysis software Stata is used to conduct the event study and perform statistical tests.

⁷Germany, France, Switzerland, the Netherlands, Belgium and United Kingdom

4.1 Critical Discussion

Regarding a critical discussion of our data sources, Thomson Reuters Datastream and MSCI can be seen as reliable sources, which add to the accuracy of our study. By using indices and not stock prices, one can reduce firm-specific noise, enabling cross-country analysis on a large sector sample. In addition, logarithmic returns are used throughout this study. This is done in accordance with a large proportion of event studies in the literature that use continuously compounded returns. Although daily returns would not be significantly different if calculated simply compounded, this method improves the overall normality of our return distribution. There might also be sample size issues, i.e. a limited number of event observations is used in the study, which is affecting the robustness of our obtained results. The explanatory power would naturally improve by adding a larger number of events, countries and indices in the study.

5 Expected Findings

5.1 Hypotheses

In this study, three different hypotheses are tested to cover expectations on both the events and the groups investigated. The sections below provide a deeper description of the null hypotheses as well as what is expected to be found. All hypotheses are tested in different event windows, consisting of three and five days.

5.1.1 Separate Effects

The null hypotheses focusing on separate effects consist of different versions of H_{01} , from H_{01a} to H_{01j} , overall stating that the announcement of a snap election has no impact on the equity index returns and is neither dependent on the country announcing the election, nor the country group being investigated. The null hypotheses, explained below, are tested on the grouped country- and currency-sorted indices across sectors.

Greek snap election announcement:

$$H_{01a} : \overline{CAR}_{Nordics} = 0$$

$$H_{01b} : \overline{CAR}_{PIIGS} = 0$$

$$H_{01c} : \overline{CAR}_{Other\ Europe} = 0$$

$$H_{01d} : \overline{CAR}_{Eurozone} = 0$$

$$H_{01e} : \overline{CAR}_{Non-Eurozone} = 0$$

Swedish snap election announcement:

$$H_{01f} : \overline{CAR}_{Nordics} = 0$$

$$H_{01g} : \overline{CAR}_{PIIGS} = 0$$

$$H_{01h} : \overline{CAR}_{Other\ Europe} = 0$$

$$H_{01i} : \overline{CAR}_{Eurozone} = 0$$

$$H_{01j} : \overline{CAR}_{Non-Eurozone} = 0$$

Groups of PIIGS (Greece excluded) and Eurozone (Greece excluded) are also tested in order to obtain a clearer image of the effect in these groups, as the Greek Index shows a high volatility. Correspondingly, there are contrasting hypotheses consisting of H_1 , rejecting the above null hypotheses and supporting that the effects are indeed different from 0. For the Greek announcement, we expect to find negative abnormal returns for the PIIGS, Other Europe and the Eurozone groups, with the rest of the groups being less affected. During the Swedish announcement, we expect to see negative abnormal returns for the Nordics, Other Europe and the Eurozone groups, with the rest being less affected.

5.1.2 Comparing Groups

Moreover, the aim of this study is also to test how the various groups react during the two announcements to see whether the absolute impact on equity index returns across sectors is larger for one group. The null hypothesis, H_{02} , consists of different versions from H_{02a} to H_{02h} , explained below, in order to account for all the combinations of groups in both events.

Greek snap election announcement:

$$H_{02a} : \overline{CAR}_{PIIGS} - \overline{CAR}_{Other\ Europe} = 0$$

$$H_{02b} : \overline{CAR}_{PIIGS} - \overline{CAR}_{Nordics} = 0$$

$$H_{02c} : \overline{CAR}_{Other\ Europe} - \overline{CAR}_{Nordics} = 0$$

$$H_{02d} : \overline{CAR}_{Eurozone} - \overline{CAR}_{Non-Eurozone} = 0$$

Swedish snap election announcement:

$$H_{02e} : \overline{CAR}_{PIIGS} - \overline{CAR}_{Other\ Europe} = 0$$

$$H_{02f} : \overline{CAR}_{PIIGS} - \overline{CAR}_{Nordics} = 0$$

$$H_{02g} : \overline{CAR}_{Other\ Europe} - \overline{CAR}_{Nordics} = 0$$

$$H_{02h} : \overline{CAR}_{Eurozone} - \overline{CAR}_{Non-Eurozone} = 0$$

The signal effect is anticipated to be dependent on the country being investigated with a higher expected impact for interconnected, closely-related countries both geographically, financially and from a risk perspective. Thus, we expect to see that the PIIGS group will be the group most affected in absolute terms by the Greek event, followed by the Other Europe group and the Nordic sample. In the same sense, we expect the Nordic group to be the group most affected by the Swedish event in absolute terms, followed by the Other Europe group and the PIIGS sample. These expected findings are summarized in the below relations:

Greek snap election announcement:

$$H_{12a} : \overline{CAR}_{PIIGS} > \overline{CAR}_{Other\ Europe} > \overline{CAR}_{Nordics}$$

Swedish snap election announcement:

$$H_{12b} : \overline{CAR}_{Nordics} > \overline{CAR}_{Other\ Europe} > \overline{CAR}_{PIIGS}$$

Furthermore, Eurozone countries are anticipated to be more affected than Non-Eurozone countries during both events. In the Greek case, this is due to the fact that Eurozone countries have higher Greek debt levels, according to Kottasova (2015). Taking Sweden's trade patterns into account implies that Swedish trade, exports in particular, with other Non-Euro countries is small, according to Flam and Nordstrom (2006) and higher for Eurozone countries, according to SCB (2014). Thus, Eurozone countries are anticipated to be more affected than Non-Eurozone countries, as summarized in the subsequent relations.

Greek snap election announcement:

$$H_{12c} : \overline{CAR}_{Eurozone} > \overline{CAR}_{Non-Eurozone}$$

Swedish snap election announcement:

$$H_{12d} : \overline{CAR}_{Eurozone} > \overline{CAR}_{Non-Eurozone}$$

5.1.3 Comparing Events

Furthermore, we are also interested in investigating how the different groups react upon the two events to see whether the absolute impact on equity index returns across sectors is larger for one particular event. The null hypothesis, H_{03} , is explained below and is tested on both country- and currency-sorted groups.

$$H_{03} : \overline{CAR}_{Group, Greek\ announcement} - \overline{CAR}_{Group, Swedish\ announcement} = 0$$

Correspondingly, there is a contrasting hypothesis H_1 rejecting the above null hypothesis, supporting that the difference is indeed different from zero. As can be seen in the below relation, the Greek snap election announcement is expected to have higher absolute impact on equity index returns across sectors than the Swedish announcement. This is believed to be due to a higher degree of uncertainty in the Swedish signal as the snap election had to be announced again on December 29, 2014, to actually take place, according to Swedish law. In addition, Greece is believed to have higher systemic impact on European countries, why this signal effect is expected to be larger than the Swedish one. As absolute average cumulative abnormal returns are taken into consideration, a positive difference means that the Greek announcement has a higher absolute impact for the group tested.

$$H_{13} : \overline{CAR}_{Group, Greek\ announcement} > \overline{CAR}_{Group, Swedish\ announcement}$$

5.2 Expected Sector Findings

Lastly, the below relation is stating that a snap election announcement has higher absolute impact on equity index returns in sectors with larger cyclicity and political dependency. In cyclical industries, prices tend to rise and fall depending on economic conditions. On the other hand, non-cyclical or defensive industries are less likely to suffer the effects of poor economic conditions. In this study, dependent sectors are defined as Financials, Information Technology and Telecommunication Services and non-dependent sectors as Consumer Staples and Industrials, in line with Berk and DeMarzo (2011). Hence, the politically dependent and cyclical sectors are expected to be more affected by both announcements than less dependent ones.

$$\overline{CAR}_{Country\ group, dependent\ sectors} > \overline{CAR}_{Country\ group, non-dependent\ sectors}$$

6 Methodology

6.1 Event Study

In general, event studies are most widely conducted on common equity, but can also be used to study the effects on debt securities. The purpose of an event study is to analyze signaling effects as prices are responding to the release of new information. By using the proposed event study methodology by MacKinlay (1997) one can compare realized and expected, normal returns and map out abnormal effects on securities after the occurrence of a particular event or release of information. An event study relies on several assumptions. The event, or in this case the announcement of information, needs to consist of new, not yet anticipated information to the market immediately incorporated into stock prices. Hence, information efficiency is assumed as the market is expected to capture news and political trends when anticipating election results. Further presumed is that market participants correctly can judge and interpret what the new information implies. As a final assumption, other factors influencing firms are expected to remain constant and only the specific event is taking place.

Our two event definitions consist of the announcements of snap elections in Sweden and Greece during late 2014. The announcement date, day 0, for the Greek event is December 9, when the Greek government announced a snap presidential vote to elect a new President of Democracy by nominating Stavros Dimas, which would require 60% of the votes in the Greek Parliament in the pre-scheduled election on December 17. Failure to gather these votes would automatically trigger a general snap election. Our second event investigated consists of the Swedish snap election that would be held on March 22 and was announced on December 3 by Prime Minister Stefan Löfven, due to the failure of getting the proposed budget approved.

After MacKinlay's suggestion, an estimation window of 120 trading days prior to the event window has been used to calculate expected, normal returns. A rather long estimation window makes the results more reliable by reducing noise. For the purpose of robustness, two additional estimation windows of 80 and 160 days are used when investigating Country-level indices in the event window of three days $(-1,1)$. The estimation window ends 10 days prior to the event window, according to common practice, aiming to minimize the probability of including leakage of information. The event study analysis is also performed using event windows of different lengths. A main window stretches over a total of three trading days $(-1,1)$ including one day before and one day after the announcement day. To perform robustness checks, additional event windows are used with a second and third event window stretching over five $(-1,3)$ three trading days $(0,2)$. The days before and after the event day

($0 < \tau < 0$) will capture short-term effects besides the immediate effect on the day of announcement. Thereby, one can measure the price effects of the release of information occurring after the stock market closes on announcement day and capture potential leakage of information prior to the event day, according to McWilliams, Siegel and Teoh (1999). Since it is key to check what is happening on a daily basis, abnormal and cumulative abnormal returns on each day during the event window are also investigated.

In addition, it is important to control for confounding events, i.e. other firm-specific events that impact stock prices and occur within the same event window. The longer the event window, the more difficult it becomes to control for confounding effects. Hence, when using a longer event window it becomes more likely to induce an abnormal return, in accordance with McWilliams and Siegel (1997). Robustness checks using event windows are as previously stated made by considering different lengths. Short event windows minimize the risk that other confounding events are affecting the result. Still, we want to use event windows longer than the one day to capture leakage of information as well as lagging reactions. Furthermore, to control for inferences with clustering there should be no overlapping in event windows, according to Henderson (1989). To make the probability of overlapping low we need to make sure that the announcements did not take place at the same event dates or share event windows. This is not the case for our two events, however they occurred rather close to each other, which constitutes an important thing to keep in mind when interpreting results.

According to Khotari and Warner (2006), an event study seeks to establish whether the cross-sectional distribution of returns at the time of an event is abnormal, i.e. systematically different from predicted. Such an exercise can be conducted in different ways and one could for example examine the entire distribution of abnormal returns. This is equivalent to comparing the distributions of actual returns with the distribution of predicted returns and asking whether the distributions are the same. If the snap election announcements contain information, the actual returns will turn out to be higher than the expected returns and hence be value increasing. Simultaneously, when the actual returns are lower than expected returns, value is decreasing. Two approaches to map out abnormal returns are presented by MacKinlay (1997), the Constant mean return model and the one-factor Market model. The Market model is assuming that there is a stable linear relationship between the market return and the security return. The Market model has the advantage over the Constant mean return model of reducing parts of the return associated with variation in the market's return and is thereby able to reduce the variance of abnormal returns. This can lead to an increased ability to identify event effects. The advantage of using the Market model depends on the R^2 in the

Market model regression, which will shortly be derived. A high R^2 implies a larger reduction in the abnormal returns and therefore a larger gain. Due to its advantages over the Constant mean return model, the Market model is used as the normal performance return model when comparing actual and expected returns in this study. The Market model is also the most commonly used prediction model, according to Ahern (2009). Using the event study methodology, abnormal returns are calculated according to the following formula:

$$AR_{i\tau} = R_{i\tau} - E(R_{i\tau} | x_t) \quad (2)$$

$AR_{i\tau}$ is the abnormal return for the index i at time τ , which is the realized return $R_{i\tau}$ less the expected, normal return $E(R_{i\tau})$, given exogenous factors determining returns, x_t . The cumulative abnormal return $CAR_i(\tau_1, \tau_2)$ is the sum of the abnormal returns, $\sum AR_{i\tau}$, during the event window, which is defined by τ_1 and τ_2 and calculated as:

$$CAR_i(\tau_1, \tau_2) = \sum_{\tau=\tau_1}^{\tau_2} AR_{i\tau} \quad (3)$$

The realized return can be described by the subsequent equation:

$$R_{i\tau} = \alpha_i + \beta_i R_{m\tau} + \varepsilon_{i\tau} \quad (4)$$

To obtain abnormal returns, one compares the realized returns in the event window with the returns one would expect, absent the event, which are part of the estimation window. As a first step, an ordinary least squares (OLS) regression is performed with the daily realized index returns of the sector equity indices, run on the sector-specific World Index returns, as a proxy for the market portfolio and its return. (See Section *OLS Regression* in the Appendix). From the regression one obtains estimates of an intercept and a coefficient, which are used to predict expected, normal returns given the market return through the following formula:

$$E(R_{i\tau} | R_{m\tau}) = \hat{\alpha}_i + \hat{\beta}_i R_{m\tau} \quad (5)$$

Lastly, the abnormal returns are calculated by subtracting the predicted normal returns from the realized returns:

$$AR_{i\tau} = R_{i\tau} - \hat{\alpha}_i - \hat{\beta}_i R_{m\tau} \quad (6)$$

The focus in this study is on the aggregation of cumulative abnormal returns (CARs) across country categories and sectors. Abnormal returns for each country are aggregated and then averaged across the specific group, giving us average cumulative abnormal returns (ACARs). In addition, average abnormal returns (AARs) are calculated for each group by summing up abnormal returns for each country included in the specific group, providing a daily abnormal effect on each day of the event window spanning from day -1 to day 3.

$$AAR_{\tau} = \frac{\sum_{i\tau} AR_{i\tau}}{N} \quad (7)$$

When comparing sector effects, average abnormal returns are summed up to CAARs, which are aggregated across groups using absolute numbers. These are then ranked from 1-5, where 1 is the sector with the highest absolute effect, hence with the highest political dependency and sensitivity toward the snap election announcement.

6.2 Significance Testing

Tests of significance are performed to make statistical inferences of abnormal and cumulative abnormal returns among events, country groups and sectors. According to MacKinlay (1997) it is common practice to use parametric as well as non-parametric tests when checking significance using the event study methodology. Berry, Gallinger and Henderson (1990) recommend to use parametric t-tests when working with daily data, which in their study are found to work well, whereas non-parametric tests do not. The recommended choice is a simple t-test, in which p-values are investigated. Campbell and Wasley (1993) investigate daily returns of NASDAQ stocks and find that non-parametric tests, including the rank test, work better and are more reliable than parametric tests. In parametric tests one needs to make assumptions about distributions, commonly a normal distribution. When excluding the outlier Greece, the data in this study supports a normal distribution, as can be seen in Section *Normality Check* in the Appendix. When checking for normality, normal quantile plots, normal probability plots as well as box plots are used to visualize abnormal returns. In this study, parametric tests are performed initially and results are then validated by non-parametric tests when significance is found for the purpose of robustness using our main event window (-1,1). Hence, initially, calculations of separate effects and comparisons between groups and

events are made using t-tests to see whether the null hypotheses can be rejected or not. When performing the parametric t-test the p-value is the probability, when assuming H_0 , of getting a result equal to or more extreme than observed. The smaller the p-value, the larger the significance, claiming that H_0 does not have large support in the data. H_0 is rejected if the p-value probabilities are less than the fixed, pre-defined threshold value, i.e. the level of significance. In this study we check significance on the 10%, 5% and 1% level. If results are not found to be statistically significant, one cannot reject the null hypothesis that average cumulative abnormal returns are equal to zero, in favor of the contrasting hypotheses, H_1 . When we cannot reject the null hypothesis, due to failure to find data inconsistent with the null, it does not mean that it is true. Based on the data we are just not able to reject it and hence accepting the null hypothesis after failing to reject it is not correct.

Pantzalis, Stangeland and Turtle (2000) as well as MacKinlay (1997) recommend the sign test and the rank test as non-parametric tests when performing event studies. In non-parametric tests, fewer assumptions are needed. One approach that is used in this study is the Wilcoxon sign rank test, in which there is no need to assume a normal distribution, only a fulfilling of a symmetric distribution is required, according to Newbold (2009). The test provides z statistics and measures significance of different signs of the abnormal returns. (See Section *Wilcoxon Sign Rank Test* in the Appendix).

6.3 Critical Discussion

One problem that the study might have regarding the event study methodology and its assumptions is that regulatory, or in this case political changes, are often debated in the political arena before a decisive announcement, which might lead to wealth effects being gradually incorporated into value, tracking the probability for the change to be adopted, according to Campbell et al. (1997). Besides the issue of non-normality in the data, another challenge in utilizing OLS regressions for daily stock data is that there is an underlying assumption that the data are cross-sectionally independent. According to Prabhala (1997), cross-sectional dependence is particularly likely when at least some of the returns used in an event study are correlated due to common macroeconomic or industry-specific activity or due to a single or clustered event date. As such, the challenge of cross-sectional dependence is exacerbated when a common event is tested in a single industry, in line with Strong (1992).

7 Results

7.1 Country Level Analysis

Table 1. Summary of Country-Level Findings

Group	Event	Event Window	Average CAR	T-Statistic	Event Window	Average CAR	T-Statistic	Event Window	Average CAR	T-Statistic
PIIGS	Greek Event	5 days, (-1,3)	-0.0237291	-0.7045	3 days, (-1,1)	-0.0143153	-0.6357	3 days (0,2)	-0.0455501	-1.0252
PIIGS (ex Greece)		5 days, (-1,3)	0.0097775	2.1935	3 days, (-1,1)	0.0080154	2.1286	3 days (0,2)	-0.001301	-0.2504
Nordics		5 days, (-1,3)	0.000165	0.0194	3 days, (-1,1)	0.0108793**	3.2201	3 days (0,2)	0.0017707	0.4038
Other Europe		5 days, (-1,3)	0.0007761	0.175	3 days, (-1,1)	0.0058017*	2.2564	3 days (0,2)	0.0032262	1.0263
PIIGS	Swedish Event	5 days, (-1,3)	0.0272156	1.9521	3 days, (-1,1)	0.0066441	0.7105	3 days (0,2)	0.016929 *	2.5908
PIIGS (ex Greece)		5 days, (-1,3)	0.0147145	1.8468	3 days, (-1,1)	0.001106	0.1137	3 days (0,2)	0.0113952*	2.5402
Nordics		5 days, (-1,3)	-0.0087557	-1.0285	3 days, (-1,1)	-0.007615*	-2.7825	3 days (0,2)	-0.0047613	-0.5826
Other Europe		5 days, (-1,3)	-0.0026365	-1.7251	3 days, (-1,1)	-0.01007**	-3.7436	3 days (0,2)	0.0030841	1.8191
Eurozone	Greek Event	5 days, (-1,3)	-0.009212	-0.5533	3 days, (-1,1)	-0.0023338	-0.2053	3 days (0,2)	-0.0202158	-0.8937
Eurozone (ex Greece)		5 days, (-1,3)	0.0072928**	2.9904	3 days, (-1,1)	0.0089222***	5.0016	3 days (0,2)	0.0022654	0.8107
Non-Eurozone		5 days, (-1,3)	-0.0042418	-0.5754	3 days, (-1,1)	0.0060177	1.5255	3 days (0,2)	0.0001694	0.0421
Eurozone	Swedish Event	5 days, (-1,3)	0.0122091	1.4725	3 days, (-1,1)	-0.003145	-0.5675	3 days (0,2)	0.0103297 **	2.6791
Eurozone (ex Greece)		5 days, (-1,3)	0.0049857	1.0956	3 days, (-1,1)	-0.0066941	-1.4067	3 days (0,2)	0.0071369**	2.9532
Non-Eurozone		5 days, (-1,3)	-0.007371	-1.0812	3 days, (-1,1)	-0.0052418*	-2.1712	3 days (0,2)	-0.0038384	-0.591

Table 1 shows average cumulative abnormal returns (CARs) in event windows (-1,3), (-1,1) and (0,2) for the country- and currency-sorted groups during the Greek and Swedish announcement. Here, Country-level indices are used and the asterisks denote significance levels of 10% (*), 5% (**) and 1% (***).

7.1.1 Greek Event

When studying the Country-level indices above we find that the large event window (-1,3) has no significant returns for either country group. The PIIGS group (Greece excluded) presents positive average cumulative abnormal returns of 0.0098. Moreover, excluding Greece from the Eurozone group leads to a positive average CAR of 0.0073, significant on the 5% level. As we narrow the event window to (-1,1) we find significant positive average cumulative abnormal returns for the Nordics and Other Europe groups of 0.0109 and 0.0058, on the 5% and 10% level, respectively. The effect is now stronger for the Eurozone group (Greece excluded) with positive average CAR of 0.0089, significant on the 1% level. The (0,2) event window does not present any significant results.

As can be seen in *Table 5* and *Graphs 5-6* in the Appendix, on the event date (0), we find negative average abnormal returns for all three country groups, with the PIIGS displaying the largest but insignificant value of -0.0308, due to Greece's big drop (See 7.2.6 *Effect of Greek Indices*). Excluding Greece from the calculation leads to a less extreme effect of -0.0059, but still insignificant. Other Europe presents an average abnormal return of -0.0077, significant on the 1% level. However, on the following day all groups recover significantly. We find significant positive abnormal returns of 0.0084, 0.0115 and 0.0125 for the PIIGS, Nordics and Other Europe on the 5%, 1% and 1% level, respectively. On the event date we find negative average abnormal returns of -0.0191 and -0.0029 for the Eurozone and Non-Eurozone countries, respectively, however not significant. Excluding Greece gives an average AR of -0.0068 for the Eurozone group, significant on the 1% level. On day 1 we find positive average ARs of 0.0117 and 0.0093 for the Eurozone and Non-Eurozone countries, respectively, both significant on the 1% level.

7.1.2 Swedish Event

According to *Table 1* above, the large event window (-1,3) shows no significant average CARs for neither country- nor currency-sorted groups. The average CAR for the Nordics is -0.0088 and the Other Europe group is also negatively affected by 0.0026. During the shorter window (-1,1) we find average CARs of -0.0076 and -0.0101 for the Nordics and Other Europe, significant on the 10% and 5% level, respectively. This event window seems to be the most important for the Swedish event also for Non-Eurozone countries, which present a -0.0052 average CAR, significant on the 10% level. When looking at the (0,2) event window we find no significant average CARs for the Nordics or Other Europe. However, we find

significant positive average CARs on the 10% level of 0.0169 (0.0114) when we include (exclude) Greece in the PIIGS group and 0.0103, significant on the 5% level, for the Eurozone countries. In accordance with *Table 5* and *Graphs 7-8* in the Appendix, on the event date, there is an average abnormal return of -0.0028, but insignificant, for the Nordics group. The effect is larger for the Other Europe group, displaying an AAR of -0.0053, significant on the 1% level. On the same day, Eurozone countries (Greece excluded) are more affected than Non-Eurozone countries (-0.0049 vs -0.0006), with the Eurozone sample being significant on the 1% level. One day prior to the announcement we find AARs of -0.0048 and -0.0068 (significant on the 10% level) for the Nordics and the Other Europe group, respectively. The effect on currency-sorted countries is about the same, -0.0032 and insignificant.

7.1.3 Comparison of Groups and Events

As can be seen in *Table 2* below, when comparing the Country-level reactions upon the Greek announcement using a t-test, no significant differences among the groups are present. Upon the Swedish announcement, in the (-1,1) event window, we find a positive absolute difference of 0.0101 between PIIGS and Nordics, significant on the 10% level. The null hypothesis H_{02f} stating that there is no significant absolute difference between the PIIGS and Nordics upon the Swedish announcement can hence be rejected. However, the result is in contrast with our initial expectations. In the same event window we also find that Eurozone countries have a greater absolute effect than Non-Eurozone countries of 0.0099, significant on the 5% level.

Table 2. Comparison of Groups on Country-Level

<i>Greek Event</i>				
	<i>PIIGS-Nordics</i>	<i>PIIGS-Other Europe</i>	<i>Nordics-Other Europe</i>	<i>Eurozone-Non-Eurozone</i>
<i>(-1,3)</i>	insignificant	insignificant	insignificant	insignificant
<i>(-1,1)</i>	insignificant	insignificant	insignificant	insignificant
<i>(0,2)</i>	insignificant	insignificant	insignificant	insignificant
<i>Swedish Event</i>				
	<i>PIIGS-Nordics</i>	<i>PIIGS-Other Europe</i>	<i>Nordics-Other Europe</i>	<i>Eurozone-Non-Eurozone</i>
<i>(-1,3)</i>	insignificant	insignificant	insignificant	insignificant
<i>(-1,1)</i>	0.0100528 (2.0141)*	insignificant	insignificant	0.0098544 (3.0534)**
<i>(0,2)</i>	insignificant	insignificant	insignificant	insignificant

Table 2 displays the significance of the difference in absolute average cumulative abnormal returns (ACARs) between the groups for each event. The numbers are showing the difference, t-stat in parenthesis and the asterisks denote significance levels of 10% (), 5% (**) and 1% (**).*

A t-test is also performed between the two events for each group in order to see if the difference in the average CAR is equal to zero (H_0), or if the hypothesis should be rejected. According to *Table 3* below, we find no significant results in the Country-level indices in either event window.

Table 3. Comparison of Events on Country-Level

	<i>PIIGS</i>	<i>Nordics</i>	<i>Other Europe</i>	<i>Eurozone</i>	<i>Non-Eurozone</i>
<i>(-1,3)</i>	insignificant	insignificant	insignificant	insignificant	insignificant
<i>(-1,1)</i>	insignificant	insignificant	insignificant	insignificant	insignificant
<i>(0,2)</i>	insignificant	insignificant	insignificant	insignificant	insignificant

Table 3 displays whether average CAR_{group} in the Greek announcement = average CAR_{group} in the Swedish announcement on Country-level. The numbers are showing the difference, t-stat in parenthesis and the asterisks denote significance levels of 10% (), 5% (**) and 1% (***).*

7.1.4 Summary Country Level Analysis

To summarize the effects around the Greek Event, stronger effects for Eurozone countries compared to Non-Eurozone countries are found, but with weak significance. According to *Table 5* in the Appendix, negative returns on event day are displayed by all country groups. PIIGS shows the largest value (-0.0308, but insignificant), followed by Other Europe (-0.0077, significant on the 1% level). Other Europe is more affected than PIIGS (Greece excluded), showing -0.0059, stressing the importance of political instability in Greece to economically stronger countries. On the day after the announcement, returns are recovering, giving overall significant positive CARs for all groups in most of the event windows. In the Swedish event window (-1,1) we find average CARs of -0.0076 and -0.0101 for the Nordics and Other Europe, significant on the 10% and 5% level, respectively. In the (0,2) event window, we also find a significant positive average CAR on the 10% level of 0.0169 (0.0114) when we include (exclude) Greece in the PIIGS group. The Greek announcement provides no significant differences between the groups, however in the Swedish event, we find significant results of around 1% in the (-1,1) event window when testing the differences in absolute average CARs between the PIIGS and the Nordics as well as between the Eurozone and Non-Eurozone countries, on the 10% and 5% level, respectively. Finally, we do not find any significant results when testing the difference in absolute average CARs for each group between the two events. When using our main event window (-1,1), results are validated by non-parametric tests and when using estimation windows of 80 and 160 days, the results found do not change significantly. Hence, the results can be said to be robust (See Sections *Wilcoxon Sign Rank Test* and *Robustness Check* in the Appendix).

7.2 Sector Level Analysis

7.2.1 Industrials

Table 4. Summary of Industrials Findings

Group	Event	Event Window	Average CAR	T-Statistic	Event Window	Average CAR	T-Statistic	Event Window	Average CAR	T-Statistic
PIIGS	Greek Event	5 days, (-1,3)	-0.0054982	-0.2147	3 days (-1,1)	-0.0000894	-0.0053	3 days (0,2)	-0.0223286	-0.6855
PIIGS (ex Greece)		5 days, (-1,3)	0.0198411**	4.1303	3 days (-1,1)	0.0164301**	3.8606	3 days (0,2)	0.0101851**	4.0028
Nordics		5 days, (-1,3)	0.0128797	1.8317	3 days (-1,1)	0.0174527***	6.8905	3 days (0,2)	0.0014571	0.1892
Other Europe		5 days, (-1,3)	0.0090791	1.793	3 days (-1,1)	0.0103746*	2.3976	3 days (0,2)	0.0090261	1.9792
PIIGS	Swedish Event	5 days, (-1,3)	0.0209065	0.7689	3 days (-1,1)	-0.0020912	-0.104	3 days (0,2)	0.0235831	1.3749
PIIGS (ex Greece)		5 days, (-1,3)	-0.0017767	-0.0918	3 days (-1,1)	-0.015764	-0.8288	3 days (0,2)	0.0108884	0.7311
Nordics		5 days, (-1,3)	-0.003311	-0.565	3 days (-1,1)	-0.0075461*	-2.3816	3 days (0,2)	-0.0027245	-0.4066
Other Europe		5 days, (-1,3)	-0.0024836	-0.4821	3 days (-1,1)	-0.0074167*	-2.209	3 days (0,2)	0.0014535	0.5941
Eurozone	Greek Event	5 days, (-1,3)	0.0036409	0.2866	3 days (-1,1)	0.006627	0.791	3 days (0,2)	-0.0052185	-0.3153
Eurozone (ex Greece)		5 days, (-1,3)	0.0159183***	4.3618	3 days (-1,1)	0.0147153***	6.0304	3 days (0,2)	0.0111332***	3.8972
Non-Eurozone		5 days, (-1,3)	0.0084186	1.3495	3 days (-1,1)	0.0130683*	2.4511	3 days (0,2)	0.0001054	0.0189
Eurozone	Swedish Event	5 days, (-1,3)	0.0088357	0.6514	3 days (-1,1)	-0.0058727	-0.6093	3 days (0,2)	0.0119692	1.325
Eurozone (ex Greece)		5 days, (-1,3)	-0.0025869	-0.3163	3 days (-1,1)	-0.0123696	-1.5539	3 days (0,2)	0.0050367	0.7778
Non-Eurozone		5 days, (-1,3)	-0.0023941	-0.3583	3 days (-1,1)	-0.0052828	-1.4306	3 days (0,2)	-0.0007906	-0.1391

Table 4 shows average cumulative abnormal returns (CARs) in event windows (-1,3), (-1,1) and (0,2) for the country- and currency-sorted groups during the Greek and Swedish announcement. Here, the Industrials indices are used and the asterisks denote significance levels of 10% (*), 5% (**) and 1% (***).

7.2.1.1 Greek Event

According to *Table 4*, the PIIGS group (Greece excluded) has positive average CARs in all event windows (-1,3), (-1,1) and (0,2) of 0.0198, 0.0164 and 0.0102, respectively, significant on the 5% level. However, when Greece is included, negative and insignificant average CARs are found. During the (-1,1) event window we find significant average CARs of 0.0175 and 0.0104 for the Nordics and Other Europe on the 1% and 10% level, respectively. Eurozone countries (Greece excluded) show significance on the 1% level in all event windows with average CARs of 0.0159, 0.0147 and 0.0111, respectively. In the (-1,1) window the Non-Eurozone group has an average CAR of 0.0131, significant on the 10% level. As can be seen in *Table 6* and *Graphs 9-10* in the Appendix, on event day, there are negative average ARs for PIIGS and Other Europe of -0.0214 and -0.0032, respectively, but both insignificant. The Nordics, however, present an AAR of 0.0026, significant on the 1% level. One day after the announcement positive AARs of 0.0136, 0.0095 and 0.0118 are found for PIIGS, the Nordics and Other Europe, respectively, significant on the 5% level. On that day we also find significance on the 1% level for both Eurozone (Greece excluded) and Non-Eurozone groups, with AARs of 0.0138 and 0.0112, respectively.

7.2.1.2 Swedish Event

When investigating the largest event window (-1,3) no significant average CAR across any country- or currency-sorted group is found. Taking our main, shorter event window into account, (-1,1), we find average CARs of -0.0075 for the Nordics and -0.0074 for Other Europe, significant on the 10% level. Eurozone (Greece excluded) and Non-Eurozone groups present average CARs of -0.0124 and -0.0053 respectively, but both insignificant. As can be seen in *Table 6* and *Graphs 11-12* in the Appendix, on the event date, we find AARs of -0.0039, -0.0046 and -0.0053 for PIIGS, Nordics and Other Europe, respectively, with the first two being insignificant and the last one significant on the 5% level. However, one day prior to the announcement we find AARs of -0.0060 and -0.0059 for the Nordics and Other Europe, significant on the 10% and 5% level, respectively. Both Eurozone countries (Greece excluded) and Non-Eurozone countries show negative average ARs on days -1 and 0, with Eurozone countries being affected to a larger extent. The Eurozone countries display average ARs of -0.0110 and -0.0082, significant on the 10% and 5% level, respectively. During the same days, Non-Eurozone countries show -0.0050 and -0.0031, but both insignificant.

7.2.1.3 Comparison of Groups and Events

As can be seen in *Table 5*, no significant differences among any groups in the Industrials sector are found during the Greek event. On the other hand, upon the Swedish announcement, we find positive absolute differences in CARs of 0.0273 and 0.0251, significant on the 10% level between PIIGS and Nordics as well as PIIGS and Other Europe in the (-1,1) event window. We also find a positive absolute difference between Eurozone and Non-Eurozone countries of 0.0142, significant on the 10% level. Thus, we can reject the null hypotheses that there are no significant differences between these currency- and country-sorted groups. However, we expected to see that the Nordics group would be the one most affected.

Table 5. Comparison of Groups in the Industrials Sector

<i>Greek Event</i>				
	<i>PIIGS-Nordics</i>	<i>PIIGS-Other Europe</i>	<i>Nordics-Other Europe</i>	<i>Eurozone-Non-Eurozone</i>
<i>(-1,3)</i>	insignificant	insignificant	insignificant	insignificant
<i>(-1,1)</i>	insignificant	insignificant	insignificant	insignificant
<i>(0,2)</i>	insignificant	insignificant	insignificant	insignificant
<i>Swedish Event</i>				
	<i>PIIGS-Nordics</i>	<i>PIIGS-Other Europe</i>	<i>Nordics-Other Europe</i>	<i>Eurozone-Non-Eurozone</i>
<i>(-1,3)</i>	insignificant	insignificant	insignificant	insignificant
<i>(-1,1)</i>	0.0272931 (2.5825)*	0.0250947 (2.4498)*	insignificant	0.0141705 (2.0882)*
<i>(0,2)</i>	insignificant	insignificant	insignificant	insignificant

Table 5 displays the significance of the difference in absolute average cumulative abnormal returns (ACARs) between the groups for each event. The numbers are showing the difference, t-stat in parenthesis and the asterisks denote significance levels of 10% (), 5% (**) and 1% (***).*

We also perform a t-test to check the absolute difference for each group between the two events (See *Table 6*). We find insignificant results for the PIIGS, Other Europe and the Eurozone group in all event windows. However, we find that the Nordic group has a greater effect during the Greek event around 1%, rather than the Swedish event, significant on the 10% level. The Non-Eurozone group is around 1% less affected by the Swedish event than the Greek event, on the 10% level of significance.

Table 6. Comparison of Events in the Industrials Sector

	<i>PIIGS</i>	<i>Nordics</i>	<i>Other Europe</i>	<i>Eurozone</i>	<i>Non-Eurozone</i>
<i>(-1,3)</i>	insignificant	insignificant	insignificant	insignificant	insignificant
<i>(-1,1)</i>	insignificant	0.0099066 (2.4422)*	insignificant	insignificant	0.0078097 (2.2233)*
<i>(0,2)</i>	insignificant	insignificant	insignificant	insignificant	insignificant

Table 6 displays whether average CAR_{group} in the Greek announcement = average CAR_{group} in the Swedish announcement for the Industrials sector. The numbers are showing the difference, t-stat in parenthesis and the asterisks denote significance levels of 10% (), 5% (**) and 1% (***).*

7.2.1.4 Summary Industrials

In the Greek event, the PIIGS sample (Greece excluded) is found to be more affected in the event windows (-1,3) and (0,2), compared to other country-sorted groups, but only PIIGS is significant. When all country-sorted groups are significant on the 1-10%, in the (-1,1) event window, the Nordic sample is somewhat more affected (0.0175), followed by PIIGS (Greece excluded) (0.0164) and Other Europe (0.0104). Larger effects for Eurozone countries compared to Non-Eurozone countries are present in both events, however only significant results are found during the Greek event.

In the Swedish event, the Nordics are more affected than the Other Europe group, however not when only considering the event day. When testing the absolute difference in CARs between the groups, no significant results are found in the Greek event, but in the Swedish event PIIGS presents larger effects than the Nordics and Other Europe, significant on the 10% level, in contrast with initial expectations. The t-test comparing groups between events shows significant and positive results on the 10% level for the Nordics and Non-Eurozone groups, meaning that the Greek impact is larger than that of the Swedish announcement. For the Nordic group, this is in contrast with initial hypotheses.

Based on statistical findings we can conclude that as expected, Industrials is not very affected by the political uncertainty caused by the snap election announcements, as abnormal returns around zero are found across groups and events, as well as small differences between the events. According to *Table 3* in the Appendix, the Industrials sector comprises Capital Goods, Commercial and Professional Services as well as Transportation, which are industries that are not very affected by economic changes in the market place, and thus, are also less sensitive to changes in the political arena. As the results from the Country-level analysis contain the whole market, and not just non-cyclical sectors, the Country-level is believed to be more affected than the Industrials sector.

7.2.2 Consumer Staples

Table 7. Summary of Consumer Staples Findings

Group	Event	Event Window	Average CAR	T-Statistic	Event Window	Average CAR	T-Statistic	Event Window	Average CAR	T-Statistic
PIIGS	Greek Event	5 days, (-1,3)	-0.010617	-0.4356	3 days (-1,1)	-0.0007496	-0.0457	3 days (0,2)	-0.0197763	-0.6572
PIIGS (ex Greece)		5 days, (-1,3)	0.0125218	1.2678	3 days (-1,1)	0.0140772	1.562	3 days (0,2)	0.009005	0.7938
Nordics		5 days, (-1,3)	-0.0002604	-0.0298	3 days (-1,1)	0.0045618	0.6053	3 days (0,2)	-0.0031171	-0.4311
Other Europe		5 days, (-1,3)	0.0023146	0.4276	3 days (-1,1)	0.006396**	2.828	3 days (0,2)	0.0076593*	2.1068
PIIGS	Swedish Event	5 days, (-1,3)	0.0140208	1.2691	3 days (-1,1)	0.0175402	0.9495	3 days (0,2)	0.0198995	1.2181
PIIGS (ex Greece)		5 days, (-1,3)	0.0088945	0.704	3 days (-1,1)	0.0170619	0.7156	3 days (0,2)	0.0188372	0.8951
Nordics		5 days, (-1,3)	-0.0120668	-1.9646	3 days (-1,1)	-0.0069253**	-3.3214	3 days (0,2)	-0.0067052	-1.0084
Other Europe		5 days, (-1,3)	-0.004841	-1.6633	3 days (-1,1)	-0.0078041**	-2.6725	3 days (0,2)	0.0020602	0.7718
Eurozone	Greek Event	5 days, (-1,3)	-0.0042211	-0.3499	3 days (-1,1)	0.0011963	0.146	3 days (0,2)	-0.0080656	-0.5328
Eurozone (ex Greece)		5 days, (-1,3)	0.0067734	1.2203	3 days (-1,1)	0.0080021	1.5693	3 days (0,2)	0.0060272	0.9746
Non-Eurozone		5 days, (-1,3)	0.0003945	0.056	3 days (-1,1)	0.0081825**	3.0081	3 days (0,2)	0.0030524	1.0914
Eurozone	Swedish Event	5 days, (-1,3)	0.0054151	0.8795	3 days (-1,1)	0.0052412	0.5354	3 days (0,2)	0.0118022	1.4286
Eurozone (ex Greece)		5 days, (-1,3)	0.0021805	0.3723	3 days (-1,1)	0.0036621	0.339	3 days (0,2)	0.0104303	1.1451
Non-Eurozone		5 days, (-1,3)	-0.0122721 *	-2.7594	3 days (-1,1)	-0.0078474***	-7.7298	3 days (0,2)	-0.0065968	-1.3015

Table 7 shows average cumulative abnormal returns (CARs) in event windows (-1,3), (-1,1) and (0,2) for the country- and currency-sorted groups during the Greek and Swedish announcement. Here, the Consumer Staples indices are used and the asterisks denote significance levels of 10% (*), 5% (**) and 1% (***).

7.2.2.1 Greek Event

According to *Table 7* above, in the event window (-1,3) average CARs are close to zero and insignificant for all groups investigated. In the three-day event window (-1,1) Other Europe displays an average CAR of 0.0064, significant on the 5% level. The Non-Eurozone sample exhibits an average CAR of 0.0082, significant on the 5% level, whereas the Eurozone sample (Greece excluded) shows 0.0080, but insignificant. In the event window (0,2) the Other Europe group has an average CAR of 0.0077, significant on the 10% level. When instead looking at the abnormal returns day-by-day during the event window as seen in *Table 7* and *Graphs 13-14* in the Appendix, on the event date we do not find any significant results. Other Europe shows an average AR of 0.0104, significant on the 1% level on day 1. On the same day, the average AR for the Non-Eurozone sample is 0.0115, significant on the 1% level, compared to the Eurozone sample (Greece excluded) showing an insignificant value of 0.0027.

7.2.2.2 Swedish Event

In the Swedish event, the average CARs are found to be around zero, with no significance among the country-sorted groups in the event window (-1,3). However, the Non-Eurozone group shows an average CAR of -0.0122, significant on the 10% level. Eurozone countries (Greece excluded) are exhibiting an average CAR of 0.0022, but insignificant. In event window (-1,1), the Nordics display an average CAR of -0.0069 and Other Europe shows -0.0078, both significant on the 5% level. The Non-Eurozone sample shows an average CAR of -0.0078, significant on the 1% level, compared to Eurozone countries (Greece excluded) showing 0.0037, but insignificant.

When instead analyzing daily average abnormal returns in *Table 7* and *Graphs 15-16* in the Appendix, neither the PIIGS (including or excluding Greece) nor the Nordics show significant AARs, however Other Europe displays returns of -0.0062 on day -1, significant on the 5% level as well as -0.0057 on the event date, significant on the 1% level. The Non-Eurozone sample displays -0.0050 on day -1 (insignificant) and the Eurozone (Greece excluded) -0.0041, significant on the 5% level. However, on announcement day, neither currency group is significant with the Non-Eurozone group displaying -0.0061 and Eurozone (Greece excluded) showing 0.0066.

7.2.2.3 Comparison of Groups and Events

As can be seen in *Table 8* below, in the Greek event, we only find significance between the Nordics and the Other Europe group, with a difference of 0.0069 on the 10% level. In the Swedish event, no significant results are found.

Table 8. Comparison of Groups in the Consumer Staples Sector
Greek Event

	<i>PIIGS-Nordics</i>	<i>PIIGS-Other Europe</i>	<i>Nordics-Other Europe</i>	<i>Eurozone-Non-Eurozone</i>
<i>(-1,3)</i>	insignificant	insignificant	insignificant	insignificant
<i>(-1,1)</i>	insignificant	insignificant	0.0068805 (2.1656)*	insignificant
<i>(0,2)</i>	insignificant	insignificant	insignificant	insignificant

Swedish Event

	<i>PIIGS-Nordics</i>	<i>PIIGS-Other Europe</i>	<i>Nordics-Other Europe</i>	<i>Eurozone-Non-Eurozone</i>
<i>(-1,3)</i>	insignificant	insignificant	insignificant	insignificant
<i>(-1,1)</i>	insignificant	insignificant	insignificant	insignificant
<i>(0,2)</i>	insignificant	insignificant	insignificant	insignificant

Table 8 displays the significance of the difference in absolute average cumulative abnormal returns (ACARs) between the groups for each event. The numbers are showing the difference, t-stat in parenthesis and the asterisks denote significance levels of 10% (), 5% (**) and 1% (***).*

A t-test is also performed between events for each group to see if the difference in the absolute average CARs is equal to zero. As can be seen in *Table 9* below, we find a difference for the Nordic group of 0.0064, significant on the 10% level, which means that for the Nordics, the Greek event has a larger impact on Consumer Staples than the Swedish event.

Table 9. Comparison of Events in the Consumer Staples Sector

	<i>PIIGS</i>	<i>Nordics</i>	<i>Other Europe</i>	<i>Eurozone</i>	<i>Non-Eurozone</i>
<i>(-1,3)</i>	insignificant	insignificant	insignificant	insignificant	insignificant
<i>(-1,1)</i>	insignificant	0.0063512 (2.0796)*	insignificant	insignificant	insignificant
<i>(0,2)</i>	insignificant	insignificant	insignificant	insignificant	insignificant

Table 9 displays whether average CAR_{group} in the Greek announcement = average CAR_{group} in the Swedish announcement for the Consumer Staples sector. The numbers are showing the difference, t-stat in parenthesis and the asterisks denote significance levels of 10% (), 5% (**) and 1% (***).*

7.2.2.4 Summary Consumer Staples

Regarding Consumer Staples, the PIIGS group (including or excluding Greece) shows the highest effects compared to any other country group in both events. Moreover, Other Europe is more affected than the Nordics, with average CARs of -0.0078 and -0.0069, respectively, significant on the 5% level in the (-1,1) event window. Eurozone-countries are more affected than Non-Eurozone countries in both events. According to *Table 8* above, in the Greek event, the Nordics are significantly greater affected than Other Europe at the 10% level in the event

window (-1,1), which is against our hypothesis that the Nordic group would be the least affected by the Greek announcement. Still, the difference is very small, less than 1%. In the Swedish event, no significant differences among groups are present. From *Table 9* we learn that the Greek event has a larger impact on the Nordics, significant on the 10% level, compared to the Swedish announcement.

According to the above statistical findings, Consumer Staples equity indices do not react very much during the two political events. Abnormal returns are close to zero for all groups, especially when taking into account the longer event window of five days. This sector is comprised by industries that people rely on in everyday use such as Food and Beverages, Tobacco and Personal Products, as seen in *Table 3* in the Appendix. In that sense, correlation with the market tends to be very low, making the sector insensitive to political factors. Low correlation with the market, in conjunction with its stability during economic turndown make Consumer Staples a sector to diversify with, potentially explaining our overall findings.

7.2.3 Financials

Table 10. Summary of Financials Findings

Group	Event	Event Window	Average CAR	T-Statistic	Event Window	Average CAR	T-Statistic	Event Window	Average CAR	T-Statistic
PIIGS	Greek Event	5 days, (-1,3)	0.0145492	0.3464	3 days (-1,1)	-0.0030189	-0.1084	3 days (0,2)	-0.0265835	-0.5451
PIIGS (ex Greece)		5 days, (-1,3)	0.0548236**	3.5654	3 days (-1,1)	0.0237314*	2.383	3 days (0,2)	0.0218319*	2.8852
Nordics		5 days, (-1,3)	0.0088118	0.5113	3 days (-1,1)	0.0119236	1.7673	3 days (0,2)	0.0183981*	2.7416
Other Europe		5 days, (-1,3)	0.0144591***	4.422	3 days (-1,1)	0.0056859***	6.1208	3 days (0,2)	0.0130562***	5.2415
PIIGS	Swedish Event	5 days, (-1,3)	0.0126555	0.9205	3 days (-1,1)	-0.0032549	-0.4161	3 days (0,2)	0.0062361	0.9903
PIIGS (ex Greece)		5 days, (-1,3)	-0.0001846	-0.0291	3 days (-1,1)	-0.0082014	-1.0484	3 days (0,2)	0.0008089	0.1962
Nordics		5 days, (-1,3)	-0.0230226*	-3.1535	3 days (-1,1)	-0.0088657**	-4.8285	3 days (0,2)	-0.0094442	-2.0361
Other Europe		5 days, (-1,3)	-0.0115994**	-3.5248	3 days (-1,1)	-0.0079453 *	-2.3463	3 days (0,2)	-0.0035585	-1.4045
Eurozone	Greek Event	5 days, (-1,3)	0.0159878	0.8064	3 days (-1,1)	0.0019433	0.1468	3 days (0,2)	-0.0055499	-0.2307
Eurozone (ex Greece)		5 days, (-1,3)	0.0340474***	3.7231	3 days (-1,1)	0.0143837**	2.8486	3 days (0,2)	0.0183051***	5.2865
Non-Eurozone		5 days, (-1,3)	0.0069739	0.519	3 days (-1,1)	0.0094564	1.6813	3 days (0,2)	0.0149023*	2.5054
Eurozone	Swedish Event	5 days, (-1,3)	-0.0019402	-0.2373	3 days (-1,1)	-0.0072624	-1.7546	3 days (0,2)	-0.0005543	-0.1378
Eurozone (ex Greece)		5 days, (-1,3)	-0.0092686*	-2.2852	3 days (-1,1)	-0.0099061**	-2.7821	3 days (0,2)	-0.0037209	-1.3416
Non-Eurozone		5 days, (-1,3)	-0.0158014	-2.0666	3 days (-1,1)	-0.005357	-2.0135	3 days (0,2)	-0.0044808	-1.1356

Table 10 displays average cumulative abnormal returns (CARs) in event windows (-1,3), (-1,1) and (0,2) for the country- and currency-sorted groups during the Greek and Swedish announcement. Here, the Financials indices are used and the asterisks denote significance levels of 10% (*), 5% (**) and 1% (***).

7.2.3.1 Greek Event

According to *Table 10* above, the event window $(-1,3)$ shows average CARs of 0.0145 for both PIIGS and Other Europe, the latter significant on the 1% level. Importantly, when excluding Greece from the PIIGS due to its high volatility, we find significance on the 5% level and an average CAR of 0.0548. Moreover, excluding Greece from the Eurozone group leads to significance on the 1% level and a positive average CAR of 0.0340. The same trend is shown in the shorter event windows. The $(-1,1)$ window shows a positive average CAR of 0.0057 for Other Europe, significant on the 1% level. PIIGS presents a negative CAR of -0.0030 (insignificant), but when excluding Greece we find significance on the 10% level and a positive average CAR of 0.0237. Eurozone countries (Greece excluded) also show a positive average CAR of 0.0144, significant on the 5% level. The $(0,2)$ event window shows large negative CAR for the PIIGS, -0.0266, which is insignificant mainly due to the Greek index impact. Again, when excluding Greece we find a positive average CAR for the PIIGS group of 0.0218, significant on the 10% level. Here, we also find significance for the Nordics on the 10% level with an average CAR of 0.0184 and for Other Europe on the 1% level with an average CAR of 0.0131. Eurozone countries (Greece excluded) show an average CAR of 0.0183, significant on the 1% level and Non-Eurozone countries 0.0149, significant on the 10% level.

Regarding the day-to-day analysis and *Table 8* and *Graphs 17-18* in the Appendix, the Nordics show positive average ARs of 0.0121 and 0.0058 on days 0 and 1, respectively, both significant on the 5% level. The Other Europe group shows significant results almost every day, except from the event day. One day -1 we find an average AR of -0.0031, significant on the 1% level. On days 1, 2 and 3 we find average ARs of 0.0070, 0.0043 and 0.0045 significant on the 1%, 10% and 5% level, respectively. The PIIGS group, including or excluding Greece, shows no significant results during the days $(-1,2)$, however it is important to note that excluding Greece leads to only positive average ARs during these days.

7.2.3.2 Swedish Event

The longer event window, $(-1,3)$, shows an average CAR of -0.0230, significant on the 10% level for the Nordics and an average CAR of -0.0116, significant on the 5% level for Other Europe. PIIGS shows an average insignificant CAR of 0.0127. We find negative average CARs of -0.0019 and -0.0158, when grouping into Eurozone and Non-Eurozone countries, respectively, but both insignificant. However, we find significance on the 10% level when

excluding Greece from the Eurozone sample, giving an average CAR of -0.0093. When investigating the (-1,1) event window, we find average CARs of -0.0089 and -0.0079 for the Nordics and Other Europe, significant on the 5% and 10% level, respectively. We also find significance on the 5% level for Eurozone countries (Greece excluded) with an average CAR of -0.0099. Hence, these returns are higher than for the Non-Eurozone sample, which is showing an average CAR of -0.0054, however insignificant.

On the day-to-day analysis displayed in *Table 8* and *Graphs 19-20* in the Appendix, one can see that there are negative average ARs each day for the Nordics. On the day prior to the announcement, we find significance on the 10% level and an average AR of -0.0077. On the same day, Other Europe shows an average AR of -0.0050, significant on the 5% level. On event day, we find average ARs of -0.0016, -0.0007 and -0.0055 for the PIIGS, Nordics and Other Europe, respectively, however only Other Europe is significant (on the 10% level). On the same day, the Eurozone group (Greece excluded) shows -0.0077, significant on the 1% level, whereas the Non-Eurozone sample is displaying the insignificant value of 0.0014.

7.2.3.3 Comparison of Groups and Events

According to the below *Table 11*, during the Greek announcement in the (-1,3) event window, we find significant differences in absolute CARs between PIIGS and Other Europe (almost 6%) as well as between Nordics and Other Europe (almost 2%). Both results are found to be significant on the 10% level. Upon the Swedish announcement, we find a difference of less than 1% between the Eurozone and Non-Eurozone groups, significant on the 5% level in the (-1,1) event window.

Table 11. Comparison of Groups in the Financials Sector

<i>Greek Event</i>				
	<i>PIIGS-Nordics</i>	<i>PIIGS-Other Europe</i>	<i>Nordics-Other Europe</i>	<i>Eurozone-Non-Eurozone</i>
<i>(-1,3)</i>	insignificant	0.0587095 (2.6547)*	0.0151775 (2.3765)*	insignificant
<i>(-1,1)</i>	insignificant	insignificant	insignificant	insignificant
<i>(0,2)</i>	insignificant	insignificant	insignificant	insignificant
<i>Swedish Event</i>				
	<i>PIIGS-Nordics</i>	<i>PIIGS-Other Europe</i>	<i>Nordics-Other Europe</i>	<i>Eurozone-Non-Eurozone</i>
<i>(-1,3)</i>	insignificant	insignificant	insignificant	insignificant
<i>(-1,1)</i>	insignificant	insignificant	insignificant	0.0073905 (2.3260)**
<i>(0,2)</i>	insignificant	insignificant	insignificant	insignificant

Table 11 displays the significance of the difference in absolute average cumulative abnormal returns (ACARs) between the groups for each event. The numbers are showing the difference, t-stat in parenthesis and the asterisks denote significance levels of 10% (), 5% (**) and 1% (***).*

From the t-test performed between events, with results shown in *Table 12* below, a positive and significant difference on the 10% level is found in the (-1,3) event window for PIIGS. Thus, for this group the Greek event affected the Financials sector 5% more than the Swedish event, which constitutes a large percentage. In addition, we find a positive difference, significant on the 5% level, in the (0,2) event window for the Other Europe group. Hence, the Financials sector is affected to a larger extent by the Greek event than the Swedish event for this group. However the difference is not very large, less than 1%.

Table 12. Comparison of Events in the Financials Sector

	<i>PIIGS</i>	<i>Nordics</i>	<i>Other Europe</i>	<i>Eurozone</i>	<i>Non-Eurozone</i>
<i>(-1,3)</i>	0.0520934 (2.1331)*	insignificant	insignificant	insignificant	insignificant
<i>(-1,1)</i>	insignificant	insignificant	insignificant	insignificant	insignificant
<i>(0,2)</i>	insignificant	insignificant	0.0086304 (2.5744)**	insignificant	insignificant

Table 12 displays whether absolute average CAR_{group} in the Greek announcement = CAR_{group} in the Swedish announcement for the Financials sector. The numbers are showing the difference, t-stat in parenthesis and the asterisks denote significance levels of 10% (), 5% (**) and 1% (**).*

7.2.3.4 Summary Financials

In the Greek (0,2) event window, PIIGS (Greece excluded) displays 0.0218, Nordics 0.0184 and Other Europe, 0.0131, significant on 10%, 10% and 1% level. Eurozone (Greece excluded) shows 0.0183 and Non-Eurozone 0.0149, significant on the 1% and 10% level respectively. Thus we can reject the null hypotheses of no abnormal returns for these groups. In the Swedish event windows (-1,3) and (-1,1), the Nordics display high significant abnormal results of -0.0230 and -0.0089. Eurozone countries (Greece excluded) display an average CAR of -0.0099 significant on the 5% level during event window (-1,1), which is higher than the effect on Non-Eurozone countries of -0.0054. Hence, we can reject the null hypotheses that the Nordics and Eurozone groups do not present significant abnormal returns upon the Swedish announcement.

However, when performing the t-test comparisons between groups and events, we find that PIIGS and Nordics have overall larger absolute effects during the Greek Event compared to Other Europe, significant on the 10% level. Upon the Swedish event, Eurozone countries are affected more in absolute terms, significant on the 5% level, compared to Non-Eurozone countries, which is in line with our initial hypothesis. Lastly, between events, we can confirm a significant positive difference for the PIIGS group of 0.0521 on the 10% level, meaning that this group is affected to a larger extent during the Greek Event than during the Swedish event, which makes a lot of sense when considering the interconnectedness between the countries

representing the group and Greece. In the window (0,2) we also find that Other Europe has a larger effect (0.0086) during the Greek event, significant on the 5% level.

Compared to the sectors of Industrials and Consumer Staples, the abnormal effects upon the announcements for the Financials sector are larger, giving evidence that a more cyclical and dependent sector is also more politically sensitive, most evident in the PIIGS reaction. The Financials sector contains Banks, Diversified Financials, Insurance and Real Estate, according to *Table 3* in the Appendix. On beforehand, the Financials sector was anticipated to be highly affected by the political uncertainty caused by the Greek announcement across groups. As the majority of the Greek debt is held by governments and not banks, according to Braihi (2015), the found effects are believed to be smaller. Another reason for the less than expected effect is that the two events took place two months after the EU-wide stress tests on 123 banking groups across the EU, which showed that banks are capable of sustaining political shock.

7.2.4 Information Technology

Table 13. Summary of Information Technology Findings

Group	Event	Event Window	Average CAR	T-Statistic	Event Window	Average CAR	T-Statistic	Event Window	Average CAR	T-Statistic
PIIGS	Greek Event	5 days, (-1,3)	-0.0182275	-2.0919	3 days (-1,1)	-0.0177985	-1.82	3 days (0,2)	-0.0180133	-1.8305
PIIGS (ex Greece)		5 days, (-1,3)	-0.0166949	-1.5076	3 days (-1,1)	-0.0123011	-1.1781	3 days (0,2)	-0.0113622	-1.2135
Nordics		5 days, (-1,3)	-0.0059002	-1.0208	3 days (-1,1)	0.0069421	1.2666	3 days (0,2)	-0.0175909*	-2.6765
Other Europe		5 days, (-1,3)	0.009379	1.6652	3 days (-1,1)	0.0067672 **	2.8093	3 days (0,2)	-0.0015371	-0.3065
PIIGS	Swedish Event	5 days, (-1,3)	0.0156156	1.242	3 days (-1,1)	0.008811	1.1256	3 days (0,2)	0.0147578	1.688
PIIGS (ex Greece)		5 days, (-1,3)	0.0210506	1.4382	3 days (-1,1)	0.0146458	2.174	3 days (0,2)	0.0225077**	4.3079
Nordics		5 days, (-1,3)	0.0195533	1.3358	3 days (-1,1)	-0.0053058	-0.5105	3 days (0,2)	0.0120886	0.8423
Other Europe		5 days, (-1,3)	0.0232412**	3.3049	3 days (-1,1)	0.0025561	0.5257	3 days (0,2)	0.0197853**	3.5373
Eurozone	Greek Event	5 days, (-1,3)	-0.0042969	-0.6184	3 days (-1,1)	-0.0058121	-0.944	3 days (0,2)	-0.0104759	-1.7226
Eurozone (ex Greece)		5 days, (-1,3)	-0.0020679	-0.281	3 days (-1,1)	-0.0020369	-0.3746	3 days (0,2)	-0.0066824	-1.2574
Non-Eurozone		5 days, (-1,3)	-0.0030991	-0.5559	3 days (-1,1)	0.0074999	1.5503	3 days (0,2)	-0.0129788	-2.0319
Eurozone	Swedish Event	5 days, (-1,3)	0.0154136**	2.4493	3 days (-1,1)	0.0005285	0.1025	3 days (0,2)	0.0119609**	2.5263
Eurozone (ex Greece)		5 days, (-1,3)	0.0178067**	2.7365	3 days (-1,1)	0.0022014	0.4039	3 days (0,2)	0.0150945***	3.8039
Non-Eurozone		5 days, (-1,3)	0.0283205*	2.2196	3 days (-1,1)	0.0065768	0.8632	3 days (0,2)	0.0242493*	2.138

Table 13 displays average cumulative abnormal returns (CARs) in event windows (-1,3), (-1,1) and (0,2) for the country- and currency-sorted groups during the Greek and Swedish announcement. Here, the Information Technology indices are used and the asterisks denote significance levels of 10% (*), 5% (**) and 1% (***).

7.2.4.1 Greek Event

According to *Table 13* above, in all event windows, PIIGS is displaying the highest average CARs, followed by the Nordics and Other Europe. In the (-1,1) event window average CARs for PIIGS is -0.0178 and for the Nordics 0.0069, however insignificant. Other Europe displays an average CAR of 0.0068, significant on the 5% level. In the (0,2) event window the Nordics are significant on the 10% level, with an average CAR of -0.0176, whereas PIIGS is showing -0.0180 and Other Europe -0.0015, however insignificant. The Eurozone group is more negatively affected compared to the Non-Eurozone sample, but no results are significant. As an example, in the event window (-1,3) the Eurozone countries show -0.0043 and the Non-Eurozone sample -0.0031.

Regarding the day-to-day analysis found in *Table 9* and *Graphs 21-22* in the Appendix, on the event day, the Nordic sample displays a negative average AR of -0.0226, significant on the 5% level. The Other Europe group shows an average AR of -0.0130, significant on the 1% level. Both these groups display positive average ARs on the day before the event with the Nordics exhibiting 0.0175 and Other Europe 0.0107, both significant on the 1% level. The Non-Eurozone group shows a negative average AR on the event day of -0.0190, significant on the 1% level and the Eurozone group -0.0097, however insignificant.

7.2.4.2 Swedish Event

In the event window (-1,3) the average CAR for Other Europe is 0.0232, significant on the 5% level. The Eurozone group displays 0.0154, significant on the 5 % level, while the Non-Eurozone sample shows 0.0283, significant on the 10% level. In the three-day event window (-1,1) none of the average CARs are significant. In the event window (0,2), PIIGS without Greece is significant on the 5% level, with an average CAR of 0.0225, whereas Other Europe displays 0.0198, significant on the 5% level. Positive significant results of 0.0120 and 0.0242 are found among the Eurozone and Non-Eurozone groups on the 1% and 10% level, respectively. According to the day-to-day analysis in *Table 9* and *Graphs 23-24* in the Appendix, neither country group is displaying significant returns on the event day. However, Other Europe shows significant (1-10% level) average ARs on all other event days, ranging between -0.0074 and 0.0108. The Non-Eurozone countries are displaying a positive AR of 0.0142 on event day, significant on the 5% level, compared to the Eurozone sample (Greece excluded) showing the insignificant value 0.0022.

7.2.4.3 Comparison of Groups and Events

According to *Table 14* below, the PIIGS group is affected to a larger extent than the Other Europe group during the Greek announcement in the (0,2) event window. We find a positive difference of 0.0148, significant on the 10% level. Upon the Swedish announcement we do not find any significant results for the Information Technology sector, hence we fail to reject the null hypotheses for all groups.

Table 14. Comparison of Groups in the Information Technology Sector
Greek Event

	<i>PIIGS-Nordics</i>	<i>PIIGS-Other Europe</i>	<i>Nordics-Other Europe</i>	<i>Eurozone-Non-Eurozone</i>
<i>(-1,3)</i>	insignificant	insignificant	insignificant	insignificant
<i>(-1,1)</i>	insignificant	insignificant	insignificant	insignificant
<i>(0,2)</i>	insignificant	0.014802 (2.2182)*	insignificant	insignificant

Swedish Event

	<i>PIIGS-Nordics</i>	<i>PIIGS-Other Europe</i>	<i>Nordics-Other Europe</i>	<i>Eurozone-Non-Eurozone</i>
<i>(-1,3)</i>	insignificant	insignificant	insignificant	insignificant
<i>(-1,1)</i>	insignificant	insignificant	insignificant	insignificant
<i>(0,2)</i>	insignificant	insignificant	insignificant	insignificant

Table 14 displays the significance of the difference in absolute average cumulative abnormal returns (ACARs) between the groups for each event. The numbers are showing the difference, t-stat in parenthesis and the asterisks denote significance levels of 10% (), 5% (**) and 1% (***).*

A t-test is also performed between events for each group, in order to see if the difference in the average CARs is equal to zero, or if the null hypothesis should be rejected. As can be seen in *Table 15* below, we do not find any significant differences, i.e. we fail to reject the null.

Table 15. Comparison of Events in the Information Technology Sector

	<i>PIIGS</i>	<i>Nordics</i>	<i>Other Europe</i>	<i>Eurozone</i>	<i>Non-Eurozone</i>
<i>(-1,3)</i>	insignificant	insignificant	insignificant	insignificant	insignificant
<i>(-1,1)</i>	insignificant	insignificant	insignificant	insignificant	insignificant
<i>(0,2)</i>	insignificant	insignificant	insignificant	insignificant	insignificant

Table 15 displays whether average CAR_{group} in the Greek announcement = average CAR_{group} in the Swedish announcement for the Information Technology sector. The numbers are showing the difference, t-stat in parenthesis and the asterisks denote significance levels of 10% (), 5% (**) and 1% (***).*

7.2.4.4 Summary Information Technology

In the Greek event, PIIGS (with or without Greece) shows the highest effects across event windows, compared to the Nordics and Other Europe. Due to overall insignificant results, we fail to reject the null hypotheses that these separate groups display no abnormal effects. Furthermore, we do not find any support to reject the null hypothesis that currency-sorted groups present no abnormal returns upon the Greek announcement either. In the Swedish

event window (0,2), PIIGS (Greece excluded) shows a larger effect (0.0225) than Other Europe (0.0198), both significant on the 5% level. The Nordics are least affected (0.0121), but not significant. In the Swedish event window (-1,3), Eurozone (Greece excluded) shows 0.0178 and Non-Eurozone 0.0283, significant on 5% and 10% level, respectively. Thus, for the Swedish event, we can reject the null hypotheses of no abnormal separate effects for all groups but PIIGS and the Nordics, for which we fail to reject the null. In the comparison of groups in the Information Technology sector we find that the PIIGS group is affected significantly more than the Other Europe group on the 10% level, during the Greek Event, which is in line with initial hypotheses. In the comparison of events, no significant results are found, hence we cannot reject the null hypothesis H_{03} . The IT sector, comprised by industries such as Technology Hardware and Equipment and Software and Services, is believed to be one of the most sensitive and affected sectors. Uncertainty in the market, caused by a political event, can cause big price moves, mostly down. This large sensitivity of the IT sector makes it difficult to isolate these particular events and this is mirrored in the difficulty of finding strong significance in our results. Other confounding factors might drive returns up or down.

7.2.5 Telecommunication Services

Table 16. Summary of Telecommunication Services Findings

Group	Event	Event Window	Average CAR	T-Statistic	Event Window	Average CAR	T-Statistic	Event Window	Average CAR	T-Statistic
PIIGS	Greek Event	5 days, (-1,3)	-0.0335378	-1.1828	3 days (-1,1)	-0.0203292	-1.0563	3 days (0,2)	0.0132859	0.2658
PIIGS (ex Greece)		5 days, (-1,3)	-0.0219533	-0.6571	3 days (-1,1)	-0.0108912	-0.503	3 days (0,2)	0.0522619	1.2935
Nordics		5 days, (-1,3)	-0.0062982	-0.5257	3 days (-1,1)	-0.0048447	-0.3636	3 days (0,2)	0.0066998	0.6303
Other Europe		5 days, (-1,3)	0.00372	0.4034	3 days (-1,1)	-0.0013586	-0.1814	3 days (0,2)	0.0048476	0.7947
PIIGS	Swedish Event	5 days, (-1,3)	-0.0223505	-0.4423	3 days (-1,1)	0.0208592	1.7232	3 days (0,2)	0.0316401**	3.2671
PIIGS (ex Greece)		5 days, (-1,3)	-0.0391463	-0.6362	3 days (-1,1)	0.0219124	1.4075	3 days (0,2)	0.027562*	2.4305
Nordics		5 days, (-1,3)	0.013118*	2.6696	3 days (-1,1)	0.022168	1.7248	3 days (0,2)	0.0228207**	4.5145
Other Europe		5 days, (-1,3)	0.0201942***	7.1859	3 days (-1,1)	0.0065307*	2.1996	3 days (0,2)	0.0149396**	3.7187
Eurozone	Greek Event	5 days, (-1,3)	-0.0137317	-0.8619	3 days (-1,1)	-0.0097702	-0.8991	3 days (0,2)	0.0106701	0.4438
Eurozone (ex Greece)		5 days, (-1,3)	-0.0063824	-0.4039	3 days (-1,1)	-0.0044023	-0.4167	3 days (0,2)	0.0277022	1.4603
Non-Eurozone		5 days, (-1,3)	-0.0066489	-0.8345	3 days (-1,1)	-0.0062949	-0.7011	3 days (0,2)	0.0031226	0.6648
Eurozone	Swedish Event	5 days, (-1,3)	0.0000608	0.0024	3 days (-1,1)	0.0161352**	2.6636	3 days (0,2)	0.0268485***	5.2218
Eurozone (ex Greece)		5 days, (-1,3)	-0.0049138	-0.1794	3 days (-1,1)	0.0160784**	2.3741	3 days (0,2)	0.0245036***	4.7897
Non-Eurozone		5 days, (-1,3)	0.0122553**	3.4289	3 days (-1,1)	0.0141601	1.2265	3 days (0,2)	0.0141272**	2.8008

Table 16 displays average cumulative abnormal returns (CARs) in event windows (-1,3), (-1,1) and (0,2) for the country- and currency-sorted groups during the Greek and Swedish announcement. Here, the Telecommunication Services indices are used and the asterisks denote significance levels of 10% (*), 5% (**) and 1% (***).

7.2.5.1 Greek Event

Looking at the three event windows in the above *Table 16*, we find no significant results for this sector. The (-1,3) event window shows a large, insignificant average CAR for the PIIGS of -0.0335 and -0.0062 for the Nordics. Other Europe presents a 0.0037 insignificant average CAR. Eurozone and Non-Eurozone groups also display negative, insignificant average CARs, with the Eurozone being most affected. In the (-1,1) window, large and insignificant negative average CARs for all groups are found, however in the (0,2) window the trend changes and the average CARs turn positive for all groups.

Performing a deeper day-to-day analysis, we still find little significance. On event day, according to *Table 10* and *Graphs 25-26* in the Appendix, we find insignificant average ARs of -0.0050, 0.0092, 0.0065 and -0.0024 for PIIGS, PIIGS (Greece excluded), the Nordics and Other Europe, respectively. On day -1 we find a large negative average AR of -0.0561 for PIIGS, mainly driven by the Irish equity index. The effect is smaller for the Nordics, -0.0068, and we find an average AR of 0.0035 for the Other Europe group, significant on the 10% level. On day 2 we find a large, insignificant negative average AR of -0.0224 for PIIGS, but when excluding Greece the effect is smaller (-0.0057). The Nordics display an average AR of 0.0048, but insignificant, whereas the Other Europe group shows an average AR of 0.0097, significant on the 5% level. The Eurozone group (with and without Greece) does not present any significance. The Non-Eurozone countries display an average AR of -0.0065 on day 3, significant on the 10% level.

7.2.5.2 Swedish Event

According to *Table 16* above, the (-1,3) event window displays average CARs of 0.0131, 0.0202 and 0.0123 for the Nordics, Other Europe and Non-Eurozone groups, significant on the 10%, 1% and 5% level, respectively. In the (-1,1) event window we still find a positive effect on Other Europe, but it is now limited to 0.0065, significant on the 10% level. In addition, we find significant results on the 5% level for the Eurozone group (with and without Greece) of 0.0161 in both cases, whereas the Non-Eurozone sample displays 0.0142, but insignificant. The (0,2) window is found to be statistically significant for all groups. In detail, we find positive average CARs of 0.0316, 0.0228 and 0.0149 for the PIIGS, Nordics and Other Europe, respectively, significant on the 5% level. When Greece is not included in the PIIGS sample we find an average CAR of 0.0275, significant on the 10% level. We find average CARs of 0.0268 and 0.0245 for Eurozone countries (with and without Greece),

respectively, significant on the 1% level and also an average CAR of 0.0141 for Non-Eurozone countries, significant on the 5% level.

According to *Table 10* and *Graphs 27-28* in the Appendix, on the event date we find average ARs of 0.0149 and 0.0237 for PIIGS and the Nordics, significant on the 5% and 10% level, respectively. Other Europe presents an average AR of -0.0016, but insignificant. The Eurozone group also exhibits a positive effect of 0.0081, significant on the 5% level. On day 2 we find an average AR of 0.0101 for the Other Europe group, significant on the 1% level. The Eurozone group also experiences a positive and significant effect of 0.0111 on the 5% level.

7.2.5.3 Comparison of Groups and Events

As can be seen in *Table 17* below, during the Greek event, the PIIGS group presents a larger absolute effect compared to the Nordics and Other Europe, with differences of 0.0400 and 0.0432, respectively, significant on the 5% level in the (-1,3) event window. The trend between PIIGS and Other Europe continues in the (-1,1) event window with a positive significant difference of 0.0253, on the 5% level. The Eurozone group displays larger absolute effects compared to the Non-Eurozone group in all event windows, with differences of 0.0263, 0.0187 and 0.0407, significant on the 5%, 10% and 10%, in the (-1,3), (-1,1) and (0,2) event windows, respectively. Upon the Swedish announcement we find significant positive differences between the PIIGS and the Nordic group of 0.0685 and between the Eurozone and Non-Eurozone groups of 0.0398, both significant on the 10% level in the (-1,3) event window.

Table 17. Comparison of Groups in the Telecommunication Services Sector

<i>Greek Event</i>				
	<i>PIIGS-Nordics</i>	<i>PIIGS-Other Europe</i>	<i>Nordics-Other Europe</i>	<i>Eurozone-Non-Eurozone</i>
<i>(-1,3)</i>	0.040028 (2.5580)**	0.0431975 (2.7487)**	insignificant	0.0262681 (2.3503)**
<i>(-1,1)</i>	insignificant	0.0252941 (2.5914)**	insignificant	0.0187668 (1.9571)*
<i>(0,2)</i>	insignificant	insignificant	insignificant	0.0407013 (2.2464)*
<i>Swedish Event</i>				
	<i>PIIGS-Nordics</i>	<i>PIIGS-Other Europe</i>	<i>Nordics-Other Europe</i>	<i>Eurozone-Non-Eurozone</i>
<i>(-1,3)</i>	0.0685092 (2.1272)*	insignificant	insignificant	0.0397945 (2.1691)*
<i>(-1,1)</i>	insignificant	insignificant	insignificant	insignificant
<i>(0,2)</i>	insignificant	insignificant	insignificant	insignificant

Table 17 displays the significance of the difference in absolute average cumulative abnormal returns (ACARs) between the groups for each event. The numbers are showing the difference, t-stat in parenthesis and the asterisks denote significance levels of 10% (), 5% (**) and 1% (***).*

A t-test is also performed between events for each group, to see if the difference in the average CARs is equal to zero (H_0) or if the null hypothesis should be rejected. For the Telecommunication Services sector, we fail to reject the null as we do not find any significant results, displayed in *Table 18* below.

Table 18. Comparison of Events in the Telecommunication Services Sector

	<i>PIIGS</i>	<i>Nordics</i>	<i>Other Europe</i>	<i>Eurozone</i>	<i>Non-Eurozone</i>
<i>(-1,3)</i>	insignificant	insignificant	insignificant	insignificant	insignificant
<i>(-1,1)</i>	insignificant	insignificant	insignificant	insignificant	insignificant
<i>(0,2)</i>	insignificant	insignificant	insignificant	insignificant	insignificant

Table 18 displays whether average CAR_{group} in the Greek announcement = average CAR_{group} in the Swedish announcement for the Telecommunication Services sector. The numbers are showing the difference, t-stat in parenthesis and the asterisks denote significance levels of 10% (), 5% (**) and 1% (***).*

7.2.5.4 Summary Telecommunication Services

In the Greek event, no effects are found to be significant and we fail to reject the null hypotheses that the separate groups present no abnormal returns upon the announcement. PIIGS displays the largest effect, followed by the Nordics and Other Europe. In the Swedish event window (0,2), on the other hand, Eurozone countries show significant and higher effects than Non-Eurozone countries, 0.0268, compared to 0.0141, significant on the 1% and 5% level, respectively. According to *Table 10* in the Appendix, the Nordics display the highest effects on event day (0.0237), followed by PIIGS (0.0149) and Other Europe (-0.0016), the first two being significant on the 5% and 10% level, respectively.

According to the comparison of groups in *Table 17* above, significant positive differences are present between PIIGS and the other two groups in the Greek Event, which is in line with the initial hypothesis that the PIIGS would be affected to a larger extent. The hypothesis that the Eurozone group is more affected than the Non-Eurozone group is also accepted in all event windows. During the Swedish event, PIIGS is more affected than the Nordics, which is in contrast with our initial hypothesis. On the other hand, Eurozone countries are more affected than the Non-Eurozone group, which validates our initial hypothesis. Regarding the comparison between events, as seen in *Table 18* above, no significant results are found, hence we fail to reject the null hypothesis. In line with the statistical findings above, the Telecommunication Services sector is more affected than the less cyclical sectors investigated. Again, this is believed to be due to the fact that Telecommunication Services is a very cyclical sector, highly affected by the ups and downs in the market, which has effects on its political sensitivity.

7.2.6 Effect of Greek Indices

In the Greek event, when investigating the PIIGS and Eurozone groups, the Greek sector indices are more volatile and responsible for most of the abnormality on event day, due to the large sudden drop in value. *Table 19* below shows abnormal returns for the Greek sector indices on event day.

Table 19. Abnormal Returns on Event Day

<i>Sector</i>	<i>AR</i>
<i>Financials</i>	-0.1334
<i>Industrials</i>	-0.0867
<i>Telecommunication Services</i>	-0.0619
<i>Consumer Staples</i>	-0.0541
<i>Information Technology</i>	-0.0254

Table 19 shows the sector abnormal returns for the Greek indices on the Greek event day (0).

A found effect of excluding Greece from calculations is an increase in significance. During our main event window (-1,1), PIIGS is found to be negatively affected (-0.0030) in the Financials Sector, whereas the Industrials Sector is found to be unaffected (-0.00009). However, when investigating the effect of excluding Greece, positive and significant results are found for both sectors, 0.0237 and 0.0164, respectively, on the 10% and 5% level of significance (See *Table 20* below).

Table 20. PIIGS vs PIIGS (ex Greece)

	<i>PIIGS</i>	<i>PIIGS (ex Greece)</i>
<i>Financials (-1,1)</i>	-0.0030189	0.0237314*
<i>Industrials (-1,1)</i>	-0.0000894	0.0164301**

Table 20 shows the effect of including the Greek index in the PIIGS group, leading to insignificant results in the Greek event.

According to *Table 21* below, the Eurozone group is slightly positively affected in the Financials and Industrials sectors, showing no significance, however. When Greece is excluded, we find larger positive results of 0.0144 and 0.0147 for these groups, significant on the 5% and 1% level, respectively. Moreover, on the Country-level, a positive average CAR of 0.0089 is found, significant on the 1% level when Greece is excluded, in comparison to the found effect of -0.0023 when Greece is included in the calculations.

Table 21. Eurozone vs Eurozone (ex Greece)

	<i>Eurozone</i>	<i>Eurozone (ex Greece)</i>
<i>Financials (-1,1)</i>	0.0019433	0.0143837**
<i>Industrials (-1,1)</i>	0.0066270	0.0147153***
<i>Country-level (-1,1)</i>	-0.0023338	0.0089222***

Table 21 shows the effect of including the Greek index in the Eurozone group, leading to insignificant results in the Greek event.

As can be seen in Table 22 below, the Eurozone group presents large negative average ARs on the event date of -0.0191 and -0.0089 on Country-level and in the Financials sector, respectively. On Country-level we find a less severe average AR of -0.0068, significant on the 1% level, when excluding Greece. In the Financials sector, the average AR changes sign, leading to a positive result of 0.0049, significant on the 10% level, i.e. the abnormal effect is closer to zero than when including Greece.

Table 22. Eurozone vs Eurozone (ex Greece) on Event Day

	<i>Eurozone</i>	<i>Eurozone (ex Greece)</i>
<i>Country-level</i>	-0.0191404	-0.0067889***
<i>Financials</i>	-0.0089490	0.0048734*

Table 22 shows the effect of including the Greek index in the Eurozone group on event day (0) leading to insignificant results in the Greek event.

When comparing different groups during the two announcements, we do not find any differences when including or excluding Greece from the calculations. However, comparing the two events presents one difference in the Eurozone sample. As can be seen in Table 23 below, Eurozone countries excluding Greece are affected significantly more in the Swedish event than in the Greek announcement in the (-1,1) event window on Country-level. However, the difference is very small, -0.0050.

Table 23. Effects of Excluding Greece on Country-Level

	<i>PIIGS ex Greece</i>	<i>Nordics</i>	<i>Other Europe</i>	<i>Eurozone ex Greece</i>	<i>Non-Eurozone</i>
<i>(-1,3)</i>	insignificant	insignificant	insignificant	insignificant	insignificant
<i>(-1,1)</i>	insignificant	insignificant	insignificant	-0.0049989 (-1.8624)*	insignificant
<i>(0,2)</i>	insignificant	insignificant	insignificant	insignificant	insignificant

Table 23 displays whether average CAR_{group} in the Greek announcement = average CAR_{group} in the Swedish announcement for the Country-level. The numbers are showing the difference, t-stat in parenthesis and the asterisks denote significance levels of 10% (*), 5% (**) and 1% (***).

In the Financials sector, as can be seen in *Table 24*, Eurozone countries excluding Greece are significantly more affected by the Greek announcement than the Swedish event, in the (-1,3) and (0,2) event windows. Euro-dependency of Greece, in conjunction with the political risk inherent to this announcement are interpreted as more important by the market, reacting significantly more (2.03%) in the Greek event than the Swedish. A possible Grexit⁸ in the following months or even a further bailout for Greece is believed to affect the Financials equity indices more compared to the Swedish announcement, but less than anticipated in general.

Table 24. Effects of Excluding Greece in the Financials Sector

	<i>PIIGS ex Greece</i>	<i>Nordics</i>	<i>Other Europe</i>	<i>Eurozone ex Greece</i>	<i>Non-Eurozone</i>
(-1,3)	0.0444835 (2.8650)*	insignificant	insignificant	0.0202652 (2.1717)*	insignificant
(-1,1)	insignificant	insignificant	insignificant	insignificant	insignificant
(0,2)	insignificant	insignificant	0.0086304 (2.5744)**	0.0115975 (2.9188)**	insignificant

Table 24 displays whether average CAR_{group} in the Greek announcement = average CAR_{group} in the Swedish announcement for the Financials sector. The numbers are showing the difference, t-stat in parenthesis and the asterisks denote significance levels of 10% (), 5% (**) and 1% (***).*

7.2.7 Sector-Level Ranking

According to *Table 11* and Graphs 29-31 in the Appendix, when aggregating the effects of each sector and group on each event day in the Greek event and ranking the result, the Telecommunication Services sector is found to be most affected, followed by Financials, Information Technology, Industrials and Consumer Staples, which is in line with expected results (See 5.2 *Expected Sector Findings*). For the Swedish event, according to *Table 12* and *Graphs 32-34* in the Appendix, the order looks as follows; Information Technology, Telecommunication Services, Financials, Consumer Staples and last Industrials. Hence, in both events cyclical sectors are more affected by the snap election announcements, compared to the less cyclical industries such as Consumer Staples and Industrials. The Financials sector was expected to be one of the highest affected sectors, especially in the Greek event. This is found to be somewhat true as it was ranked after Telecommunication Services. The reason that we do not find a stronger effect might be because most of the Greek debt is held by governments and not by banks as previously believed. In the Swedish event, Financials is even less affected (placed 3rd in the ranking).

⁸In May 2012, the financial crisis in Greece and the political instability following the elections created strong speculations that Greece would abandon the Eurozone. The phenomenon became known as “Grexit”.

8 Discussion

When comparing the findings in this study with initial hypotheses and theory, in general we can reject the null hypotheses across sectors that average cumulative abnormal returns upon the snap election announcements are zero. Impact on the equity index market is found, overall with small abnormal effects, often close to zero. In the comparison of different groups during the two events in absolute terms, in the Greek event, we learn that larger significant effects are present for the PIIGS group compared to the Nordic sample in the Telecommunication Services sector. Furthermore, PIIGS is significantly larger affected than Other Europe in the sectors of Telecommunication Services, Financials and Information Technology. The Nordic group shows significantly larger effects than Other Europe in the Financial and Consumer Staples sector. In the Swedish event, on the other hand, the PIIGS group is significantly larger affected than the Nordics on Country-level and in the sectors of Industrials and Telecommunication Services. In Industrials, PIIGS is also significantly larger affected than Other Europe. Hence, in both events, PIIGS shows a high sensitivity to the snap election announcements and the Nordic sample is not as sensitive to the announcements as previously expected when comparing the findings with initial Hypotheses H_{12a} and H_{12b} . The reason that the PIIGS countries are particularly affected is found to be their economic weakness and inability to devalue their currencies when crisis approaches as they are using the Euro, according to The Economist (2010). The PIIGS group is especially sensitive to shocks in the market, evident from the last financial crisis. Also in our study, currency is found to be of major importance for the sensitivity and market reaction upon the events. As Euro-dependency is of importance, this could be a reason that the Other Europe sample is not as affected, as it contains two non-Euro countries. The Nordics' insensitivity to the announcements is believed to be the result of their strong economies, financial and political stability and historical low political risk.

When investigating the difference in the Greek and Swedish announcement impact on the Eurozone sample, no significance is found. For the Non-Eurozone sample however, the effect in the Industrials sector is significantly larger in the Greek event compared to the Swedish announcement. When instead comparing currency-sorted groups in each separate event, starting with the Greek event, a significant difference is found in the Telecommunication Services sector, where the Eurozone group is significantly greater affected than the Non-Eurozone sample in all event windows. In the Swedish event, significantly higher effects for Eurozone countries are found on Country-level and in all

sectors but Consumer Staples and Information Technology. Hence, here evidence is found for Hypotheses H_{12c} and H_{12d} , predicting higher absolute effects for Eurozone countries compared to Non-Eurozone countries. However, support is not found for each and every sector and is not as clear in the Greek as in the Swedish event.

According to the t-test comparing the two events, the Greek announcement affects the groups of PIIGS and Other Europe significantly more in the Financials sector, compared to the Swedish announcement. The Nordic sample is significantly more affected by the Greek announcement, compared to the Swedish announcement in the sectors of Consumer Staples and Industrials. The hypothesis H_{13} , stating that the Swedish signal would be less severe in absolute terms compared to the Greek signal, is hence accepted for these particular groups and sectors. A reason for the Swedish signal to be rather weak is possibly due to higher Greek systemic impact and the uncertainty surrounding the Swedish announcement, as it was not ultimate, but rather had to be confirmed on December 29. In addition, Greece has higher systemic impact on European countries, why this signal effect is larger than the Swedish one, in line with initial hypotheses. On Country-level and for the remaining sectors of Telecommunication Services and Information Technology, no significant differences between the events are found.

In accordance with initial expectations and based on the ranking of absolute abnormal returns across groups, we find the least sensitive sectors to be Industrials and Consumer Staples. The Financials sector is not as affected as previously anticipated, which might be due to that the Greek debt is held by governments and not banks, according to Braihi (2015). Another reason explaining this smaller than anticipated effect, could be that the two events took place two months after the EU-wide stress test of 2014 on 123 banking groups across the EU. The objective of the test was to assess the resilience of banks to adverse economic development in an attempt to understand systemic risk in the EU, in line with European Banking Authority (EBA) (2014). 24 banks out of the 123 failed to pass one of the tests. Out of the 24 banks with a shortfall, nine banks (with an aggregate shortfall of EUR 9.4BN) were from Italy, three banks (with EUR 8.7BN of aggregate shortfall) from Greece and another three banks (with EUR 2.4BN of aggregate shortfall) from Cyprus. In that sense, we can claim that systemic risk in Europe and the Eurozone has been limited in the Financials sector, making events like the ones studied, less severe.

As the empirical research studying market effects of the announcements of early elections is narrow, our study can contribute to the research field and provide important implications and suggestions on future reactions to such announcements. Our study provides

cross-country analysis and increases understanding on how different sectors react, which to the best of our knowledge is not enclosed in previous research. As a comparison of our found results with the existing literature on market reactions and political elections, Furió and Pardo (2012) find abnormal returns for stocks upon general Spanish elections, but find no significant effects when considering other political events such as regional elections, general referendums or European elections. This is in contrast to our study as some country groups are significantly affected by the investigated political news consisting of snap election announcements in another country. The differences in abnormal returns found between groups and events in our study can be explained by the findings that higher uncertainty events are associated with a higher resolution of uncertainty, hence cumulative abnormal returns should be larger than for low-uncertainty events, in line with Brown, Harlow and Tinic (1988) as well as Pantzalis, Stangeland and Turtle (2000). Balke (1990) claims that elections are called earlier when the popularity of the incumbent government is high, hence when a victory is expected and the support is anticipated to decline in the future, which is found to be of importance for our two events. Still, there is not only an ascending value of increasing in power, but also opportunity costs of losing an election, most evident in the action of cancelling the Swedish snap election. The found effects in our study are believed to be highly affected by media and opposition parties, which can create disbelief in an incumbent government and hence affect whether an early called election is deemed as a positive or negative event for voters and investors. This, in accordance with Pantzalis, Stangeland and Turtle (2000).

Throughout the study, various robustness checks have been conducted to make the final results more reliable. Regarding a critical evaluation of results, the event study methodology is assuming that the information released consists of unexpected new information to the market, which might be questionable in our cases as political changes are often debated in the political arena before a decision is taken, which might lead to wealth effects being gradually incorporated into value, according to Campbell et al. (1997). There are also some problems with insignificance in the data. Finally, there is still an issue of a limited sample size. The explanatory power could certainly be improved by adding more events, countries and indices in the study.

9 Conclusion

To conclude, what is shown in this study is how different sectors and country groups on the European equity index market react to events carrying political uncertainty in terms of snap election announcements. The PIIGS sample is found to be particularly sensitive and also Eurozone countries are found to be significantly more affected than Non-Eurozone countries across sectors and events. Our study concludes that cyclical and politically dependent sectors react more strongly to snap election announcements, where Telecommunication Services, Financial Services and Information Technology can be seen as the most sensitive sectors and Industrials and Consumer Staples as the least affected ones, in both announcements. We find that political uncertainty in one country has effects on the European index market and that interconnectedness and risk parameters are of great importance, particularly evident in the PIIGS reaction and in the Eurozone effects.

European financial stability has been put under the microscope by recent regulations in Europe, with the increasing need to assess the speed of potential shocks in the market. A need to limit the systemic risk that was built during the last crisis is evident. When referring to systemic risk in Europe, it is thought as having two dimensions; a structural dimension across markets, meaning that there is a high interconnectedness between financial institutions and markets and a cyclical dimension across time, implicating that financial institutions are excess risk-appetite in booms and excel risk-averse in downturns. As far as financial stability and systemic risk are concerned, this thesis provides evidence that even though abnormal returns are found during the two announcements, these are not as high as one could expect. As an example, the Financials Sector is less affected than anticipated in the Greek event. Particularly, the Greek announcement imposes a high volatility on the Greek equity indices, but in general the European equity indices are less volatile and can quickly absorb any negative abnormality during the event period. Indeed, we even encounter significant positive results on the day after the event, implying that financial stability has been strengthened and systemic risk lowered, which can be concluded when investigating the effects of the PIIGS and Eurozone groups, excluding Greece (See 7.2.6 *Effect of Greek Indices*). Furthermore, the Swedish snap election shows that in a country with a strong economy, being part of the stable Nordics, the political climate can suddenly be upset and replaced with political uncertainty, in line with Milne (2014). Still, we can conclude in this study that the effects on the equity index markets are limited for the Nordic sample, but most evident in the Information Technology and Telecommunication Services sectors.

It is also in our interest to outline wider and practical implications for our found results. In large, how general and applicable these are to other situations depends on significance and robustness. The results found in this study gives authorities, policy makers and politicians a chance to assess the short-term economic impact of changes in the political arena. Still, political variation across countries makes it hard to draw conclusions on the impact a snap election announcement might have on stock markets in Europe in general. One could question our credibility as the number of events (two) included in the study is pretty limited. Therefore, it might be hard to transfer conclusions between countries, even if they have similar governmental and party structure as well as political composition, in line with Cahan et al. (2005).

Regarding unanswered questions and extensions toward future studies, it would be interesting to look at cancellation effects of snap elections, for example by studying how markets reacted in Sweden around December 27, 2014, as the snap election was cancelled. In Greece, three different failed votes were performed to elect the new President, which opens up for investigation of how markets reacted upon every voting, making an overall conclusion of the connection between politics and markets. This thesis only deals with short-term effects of early election announcements, why long-term effects would be interesting to analyze. Our thesis is limited to stock index reactions on the European market, why global market effects could be covered as well. It is also possible to extend the study by investigating the announcement impact on sovereign bonds. As an example, the Greek 10-year sovereign bond yield jumped from 7.25% to 8.18% between December 8 and 9, according to Bloomberg Business (2014). This would be interesting to examine, as the sovereign bond yield is an approximation for how expensive it is for the government to finance their debt. Thus, the research area of early called elections can certainly be explored in more depth in an attempt to understand the impact of political decisions on markets better in the future.

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Appendix

Sample Selection

Table 1. Country-Sorted Groups

	PIIGS	Nordics	Other Europe
1	Portugal	Sweden	Germany
2	Italy	Norway	France
3	Ireland	Denmark	The Netherlands
4	Greece	Finland	Belgium
5	Spain		Switzerland
6			The United Kingdom

Table 1 displays our sample selection, i.e. the 15 European countries grouped according to characteristics.

Table 2. Currency-Sorted Groups

	Eurozone	Non-Eurozone
1	Greece	Sweden
2	Germany	Norway
3	France	Switzerland
4	Finland	Denmark
5	Spain	The United Kingdom
6	Italy	
7	Portugal	
8	The Netherlands	
9	Belgium	
10	Ireland	

Table 2 displays our sample selection, i.e. the 15 European countries grouped according to Euro-dependency.

Table 3. Sector and Industry Group Classification (GICS)⁹

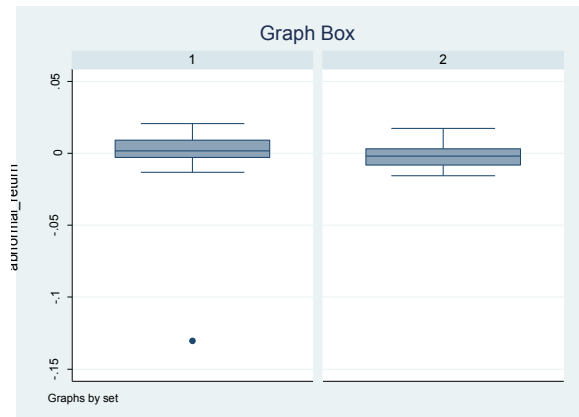
Code	Sector	Subcode	Industry Group
10	Energy	1010	Energy
15	Materials	1510	Materials
20	Industrials*	2010	Capital Goods
		2020	Commercial & Professional Services
		2030	Transportation
25	Consumer Discretionary	2510	Automobiles & Components
		2520	Consumer Durables & Apparel
		2530	Consumer Services
		2540	Media
		2550	Retailing
30	Consumer Staples*	3010	Food & Staples Retailing
		3020	Food, Beverage & Tobacco
		3030	Household & Personal Products
35	Health Care	3510	Health Care Equipment & Services
		3520	Pharmaceuticals, Biotechnology & Life Sciences
40	Financials*	4010	Banks
		4020	Diversified Financials
		4030	Insurance
		4040	Real Estate
45	Information Technology*	4510	Software & Services
		4520	Technology Hardware & Equipment
		4530	Semiconductors & Semiconductor Equipment
50	Telecommunication Services*	5010	Telecommunication Services
55	Utilities	5510	Utilities

Table 3 displays the selection of sectors used in this study, among those Industrials, Consumer Staples, Financials, Information Technology and Telecommunication Services, as classified by GICS (Global Industry Classification Standard) and denoted with an asterisk ().*

⁹MSCI (2014). GICS Structure. Accessed 2015-03-05.
www.msci.com/products/indexes/sector/gics/gics_structure.html

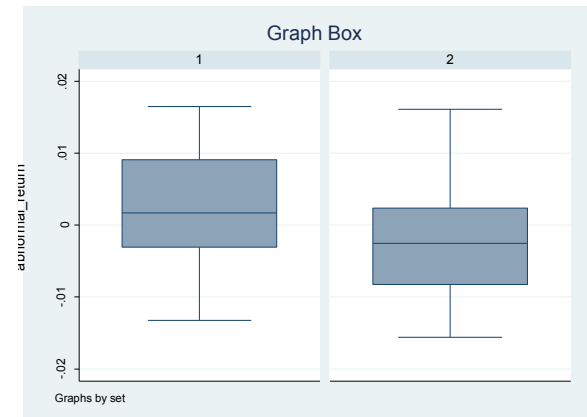
Normality Check

Figure 1. Box Plot of Abnormal Returns (Including Greece)



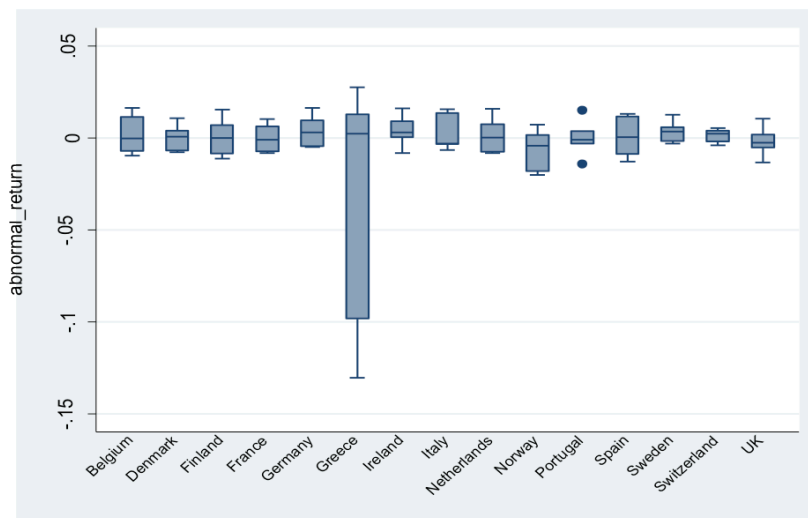
The box plots represent the 25th percentile, median, 75th percentile, min and max for the abnormal returns in event window $(-1,1)$ for each event. An outlier can be seen in plot 1 (Greek Event). Plot 2 (Swedish Event) has no outliers.

Figure 2. Box Plot of Abnormal Returns (Excluding Greece)



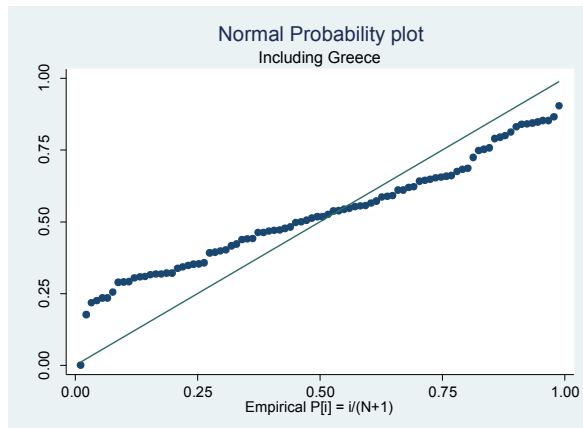
The box plots represent the 25th percentile, median, 75th percentile, min and max for the abnormal returns in event window $(-1,1)$ for each event. When excluding Greece, the abnormal returns are centered around 0 also in plot 1.

Figure 3. Box Plot of Abnormal Returns in Both Events



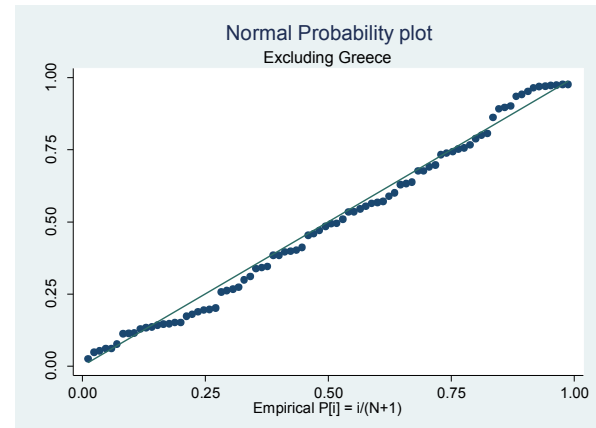
The box plot represents the 25th percentile, median, 75th percentile, min and max for the abnormal returns for each of the 15 countries. Here, it is more obvious why we chose to exclude Greece from some calculations.

**Graph 1. Normal Probability Plot
(Including Greece)**



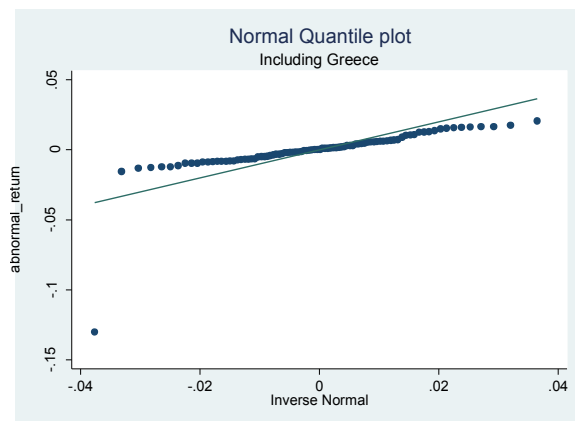
Graph 1 consists of a P-P plot, obtained from STATA, which has the cumulative distribution of an empirical variable on the x axis and the theoretical normal distribution on the y axis. Here, Greece is included in the plot.

**Graph 2. Normal Probability Plot
(Excluding Greece)**



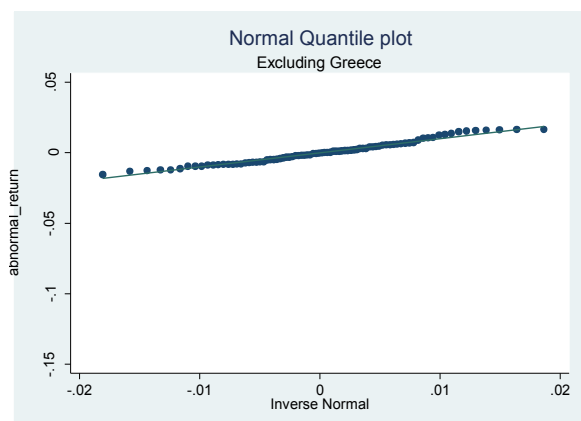
Graph 2 consists of a P-P plot, obtained from STATA, which has the cumulative distribution of an empirical variable on the x axis and the theoretical normal distribution on the y axis. Here, Greece is excluded from the plot.

**Graph 3. Normal Quantile Plot
(Including Greece)**



Graph 3 consists of a Q-Q plot, a plot of the quantiles of two distributions against each other, or a plot based on estimates of the quantiles. The pattern of points in the plot is used to compare the two distributions. Here, Greece is included in the plot.

**Graph 4. Normal Quantile Plot
(Excluding Greece)**



Graph 4 consists of a Q-Q plot, a plot of the quantiles of two distributions against each other, or a plot based on estimates of the quantiles. The pattern of points in the plot is used to compare the two distributions. Here, Greece is excluded from the plot.

OLS Regression

Table 4. OLS Regression Statistics

Country	Event	T-stat	R ²	Adjusted R ²
Greece	Greek Event	4.82	0.1648	0.1577
	Swedish Event	4.84	0.1654	0.1583
Sweden	Greek Event	12.04	0.5511	0.5473
	Swedish Event	11.37	0.5227	0.5187
Germany	Greek Event	12.09	0.5533	0.5495
	Swedish Event	11.76	0.5397	0.5358
France	Greek Event	14.79	0.6497	0.6468
	Swedish Event	14.52	0.6412	0.6381
Norway	Greek Event	8.03	0.3532	0.3477
	Swedish Event	7.91	0.3462	0.3407
Finland	Greek Event	10.74	0.4945	0.4902
	Swedish Event	10.38	0.4774	0.4729
Spain	Greek Event	12.71	0.5778	0.5743
	Swedish Event	12.69	0.5772	0.5736
Italy	Greek Event	13.07	0.5915	0.5881
	Swedish Event	12.65	0.5756	0.572
Portugal	Greek Event	8.49	0.3793	0.3741
	Swedish Event	8.39	0.3737	0.3684
Switzerland	Greek Event	11.34	0.5217	0.5176
	Swedish Event	11.15	0.5129	0.5088
Netherlands	Greek Event	14.25	0.6325	0.6294
	Swedish Event	14.41	0.6376	0.6345
Belgium	Greek Event	13.09	0.5921	0.5886
	Swedish Event	12.79	0.5808	0.5773
Denmark	Greek Event	7.57	0.3268	0.3211
	Swedish Event	7.55	0.3256	0.3199
Ireland	Greek Event	10.48	0.4821	0.4778
	Swedish Event	10.53	0.4842	0.4799
UK	Greek Event	14.64	0.6448	0.6418
	Swedish Event	14.17	0.6298	0.6266
<i>Average</i>		11.11	0.4968	0.4926
<i>Minimum</i>		4.82	0.1648	0.1577
<i>Maximum</i>		14.79	0.6497	0.6468

Table 4 gives an overview of the regressions of the Country-level index returns over the MSCI World Index Return during the estimation window of 120 days and event window (-1,3).

Event Study Results

i. Day-by-Day Effects

Country-Level

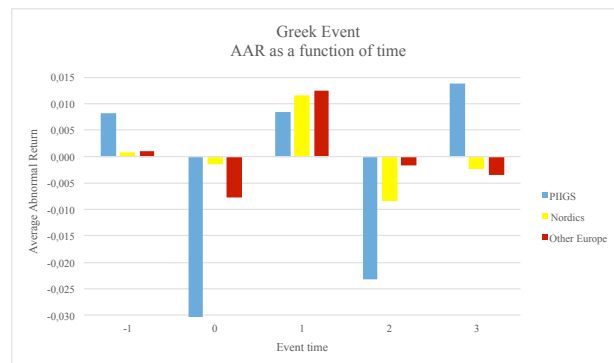
Table 5. Country-Level AAR (Average Abnormal Return)

<i>Greek Event</i>							
Event day	PIIGS	PIIGS (ex Greece)	Nordics	Other Europe	Eurozone	Eurozone (ex Greece)	Non-Eurozone
-1	0.00812053*	0.0050021 **	0.00081308	0.00097918	0.00514956**	0.0034335***	-0.00035311
0	-0.03083599	-0.0059691	-0.00144743	-0.00767909***	-0.01914038	-0.0067889***	-0.00292807
1	0.00840016**	0.0089823	0.01151366***	0.01250156***	0.01165703***	0.0122776***	0.0092989***
2	-0.02311431	-0.0043143	-0.00829551*	-0.00159629	-0.01273244	-0.0032233*	-0.00620139
3	0.01370047	0.0060764*	-0.00241884	-0.00342923*	0.00585421	0.0015939	-0.0040581

<i>Swedish Event</i>							
Event day	PIIGS	PIIGS (ex Greece)	Nordics	Other Europe	Eurozone	Eurozone (ex Greece)	Non-Eurozone
-1	0.00216472	-0.0016274	-0.0048186	-0.00675266*	-0.00328933	-0.0055807	-0.00321469
0	0.00158874	-0.001208	-0.00276367	-0.00525855***	-0.00314967	-0.0049191***	-0.0006331
1	0.00289067	0.0039414	-0.00003273	0.00194121	0.00329397	0.0038058	-0.00139401
2	0.01244963**	0.0086617**	-0.00196488	0.00640145**	0.01018539***	0.0082503***	-0.00181132
3	0.00812183*	0.0049468**	0.0008242	0.00103204	0.00516874**	0.0034295***	-0.00031785

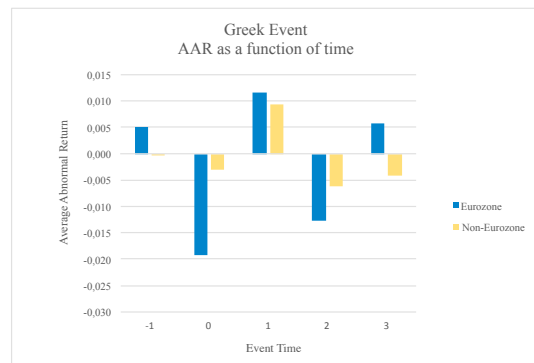
Table 5 displays the average abnormal return (AAR) on Country-level during the event days for the different groups of interest, including country- and currency-sorted samples.

Graph 5.



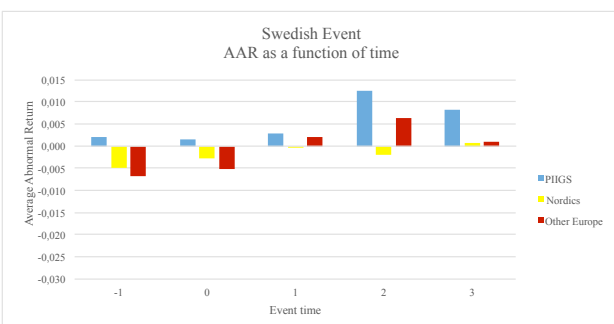
Graph 5 is displaying average abnormal returns on Country-level during the event days in the Greek event for the groups of PIIGS, Nordics and Other Europe.

Graph 6.



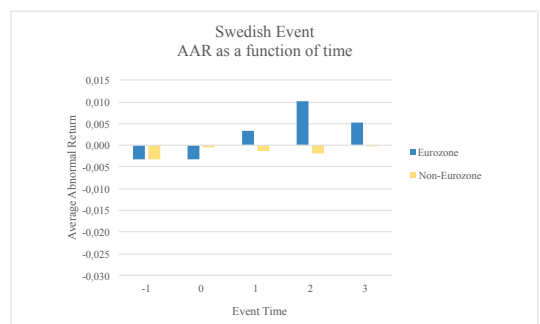
Graph 6 is displaying average abnormal returns on Country-level during the event days in the Greek event for the Eurozone and Non-Eurozone samples.

Graph 7.



Graph 7 is displaying average abnormal returns on Country-level during the event days in the Swedish event for the groups of PIIGS, Nordics and Other Europe.

Graph 8.



Graph 8 is displaying average abnormal returns on Country-level during the event days in the Swedish event for the Eurozone and Non-Eurozone sample.

Industrials

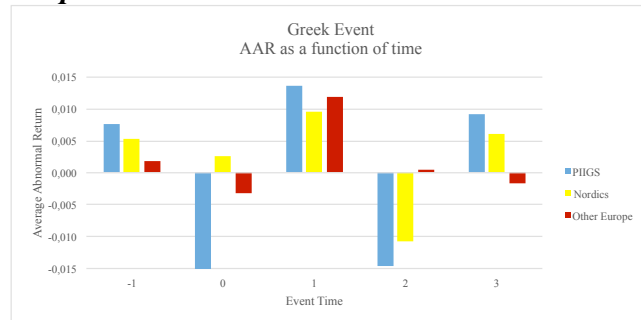
Table 6. Industrials AAR (Average Abnormal Return)

<i>Greek Event</i>							
Event day	PIIGS	PIIGS (ex Greece)	Nordics	Other Europe	Eurozone	Eurozone (ex Greece)	Non-Eurozone
-1	0.00767486	0.003605	0.00537246***	0.00177512	0.00538907*	0.0033263*	0.00332484
0	-0.02141267	-0.0050883	0.00262134***	-0.00322285	-0.01088136	-0.0024559	-0.00142029
1	0.01364841 **	0.0179134***	0.00945886**	0.01182237**	0.01211931***	0.0138449***	0.01116372***
2	-0.01456434	-0.00264	-0.01062312	0.00042654	-0.00645646	-0.0002559	-0.00963807
3	0.00915556	0.0060511	0.00605018	-0.00172209	0.00347037	0.0014589	0.00498846

<i>Swedish Event</i>							
Event day	PIIGS	PIIGS (ex Greece)	Nordics	Other Europe	Eurozone	Eurozone (ex Greece)	Non-Eurozone
-1	-0.0105969	-0.0163016	-0.00597946*	-0.00585965**	-0.0087152	-0.0110415*	-0.00498165
0	-0.00394483	-0.0098621	-0.00461545	-0.0052587**	-0.00543746	-0.0082332**	-0.0030727
1	0.0124505	0.0103997	0.00304882	0.0037016**	0.00827999*	0.0069051	0.00277151
2	0.01507746*	0.0103508*	-0.00115788	0.00301063*	0.00912668**	0.0063647**	-0.00048945
3	0.00792027	0.0036365	0.00539296***	0.00192252	0.00558172*	0.003418*	0.00337823

Table 6 displays the average abnormal return (AAR) for the Industrials sector during the event days for the different groups of interest, including country- and currency-sorted samples.

Graph 9.



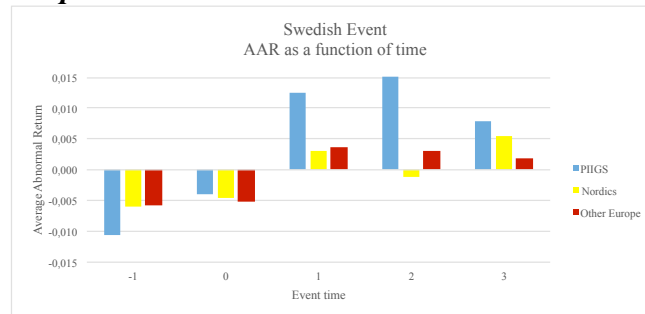
Graph 9 is displaying average abnormal returns for the Industrials sector during the event days in the Greek event for the groups of PIIGS, Nordics and Other Europe.

Graph 10.



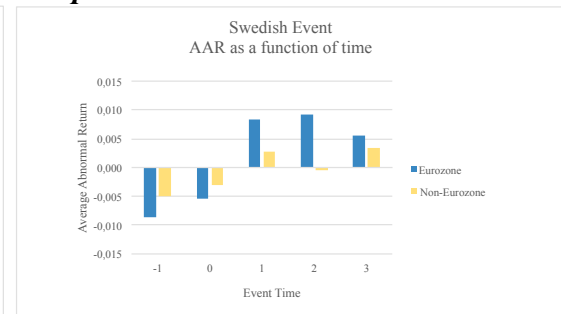
Graph 10 is displaying average abnormal returns for the Industrials sector during the event days in the Greek event for the Eurozone and Non-Eurozone sample.

Graph 11.



Graph 11 is displaying average abnormal returns for the Industrials sector during the event days in the Swedish event for the groups of PIIGS, Nordics and Other Europe.

Graph 12.



Graph 12 is displaying average abnormal returns for the Industrials sector during the event days in the Swedish event for the Eurozone and Non-Eurozone sample.

Consumer Staples

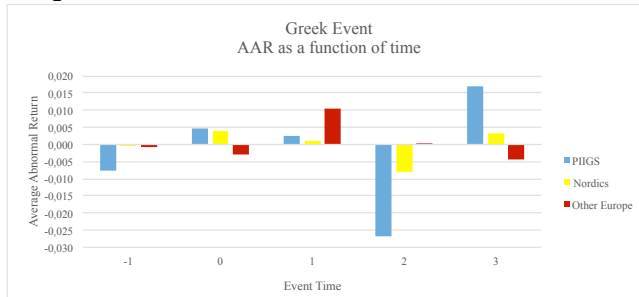
Table 7. Consumer Staples AAR (Average Abnormal Return)

<i>Greek Event</i>							
Event day	PIIGS	PIIGS (ex Greece)	Nordics	Other Europe	Eurozone	Eurozone (ex Greece)	Non-Eurozone
-1	-0.00769354	-0.0089565	-0.0002758	-0.00093153	-0.00414777	-0.0043151	-0.00073648
0	0.0045924	0.0192719	0.00376776	-0.00305255	0.00328465	0.0096636	-0.00262576
1	0.00235157	0.0037618**	0.00106982	0.01038004***	0.00205938	0.0026537	0.01154472***
2	-0.02672025	-0.0140288	-0.00795469	0.00033178	-0.01340967	-0.0062901	-0.00586654
3	0.01685287	0.0124734	0.00313254	-0.00441319**	0.00799228	0.0050613	-0.00192148

<i>Swedish Event</i>							
Event day	PIIGS	PIIGS (ex Greece)	Nordics	Other Europe	Eurozone	Eurozone (ex Greece)	Non-Eurozone
-1	0.00186076	-0.0010692	-0.00513671	-0.0061674**	-0.00230144	-0.0040661**	-0.00504661
0	0.01744872	0.0207879	-0.00501198	-0.00569376***	0.0063557	0.0066072	-0.00610478
1	-0.00176929	-0.0026568	0.00322336	0.00405707	0.00118693	0.0011209	0.00330402
2	0.00422008	0.0007061	-0.00491663	0.0036969	0.00425953*	0.0027021	-0.003796
3	-0.00773951	-0.0088735	-0.00022489	-0.00073385	-0.00408567	-0.0041837	-0.0006287

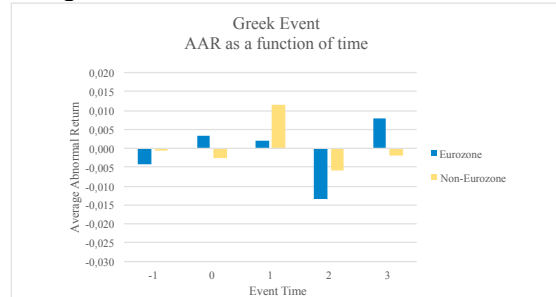
Table 7 displays the average abnormal return (AAR) for the Consumer Staples sector during the event days for the different groups of interest, including country- and currency-sorted samples.

Graph 13.



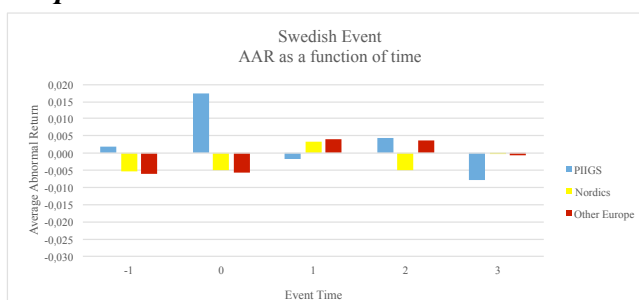
Graph 13 is displaying average abnormal returns for the Consumer Staples sector during the event days in the Greek event for the groups of PIIGS, Nordics and Other Europe.

Graph 14.



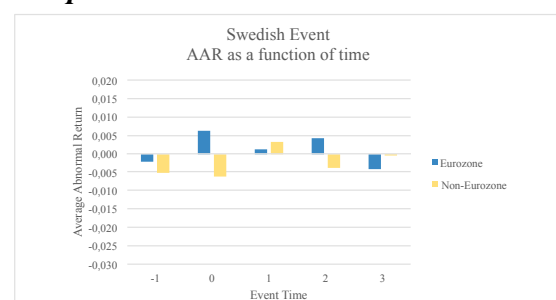
Graph 14 is displaying average abnormal returns for the Consumer Staples sector during the event days in the Greek event for the Eurozone and Non-Eurozone sample.

Graph 15.



Graph 15 is displaying average abnormal returns for the Consumer Staples sector during the event days in the Swedish event for the groups of PIIGS, Nordics and Other Europe.

Graph 16.



Graph 16 is displaying average abnormal returns for the Consumer Staples sector during the event days in the Swedish event for the Eurozone and Non-Eurozone sample.

Financials

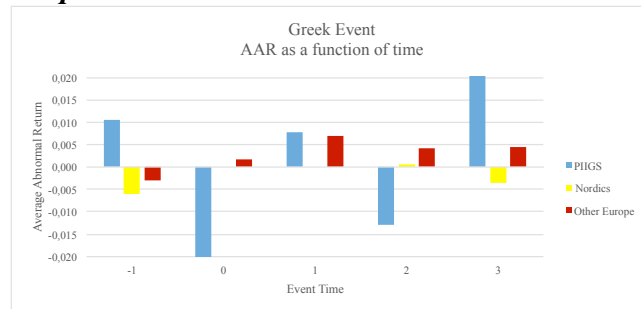
Table 8. Financials AAR (Average Abnormal Return)

<i>Greek Event</i>							
Event day	PIIGS	PIIGS (ex Greece)	Nordics	Other Europe	Eurozone	Eurozone (ex Greece)	Non-Eurozone
-1	0.01057415	0.0064517	-0.00593089	-0.00307187***	0.00379609	0.0012108	-0.00544899
0	-0.0213458	0.0066553	0.01209855**	0.00179198	-0.00894897	0.0048734*	0.00838136
1	0.00775278	0.0106244	0.0057559**	0.0069658***	0.00709621**	0.0082996***	0.00652403**
2	-0.01299048	0.0045522	0.00054366	0.00429844*	-0.00369719	0.0051321**	-0.00000346
3	0.03055852**	0.02654*	-0.00365542	0.00447475**	0.01774164**	0.0145316**	-0.00247941

<i>Swedish Event</i>							
Event day	PIIGS	PIIGS (ex Greece)	Nordics	Other Europe	Eurozone	Eurozone (ex Greece)	Non-Eurozone
-1	-0.0042009	-0.0074312	-0.00770153*	-0.00497322**	-0.0052069**	-0.0067543***	-0.00591622
0	-0.00155853	-0.0066567	-0.00073184	-0.00547452*	-0.00503891	-0.0076915***	0.0013644
1	0.00250454	0.0058865	-0.00043232	0.00250242**	0.0029834	0.0045397	-0.0008052
2	0.00529005	0.0015791	-0.00828003	-0.00058637	0.00150121	-0.0005691	-0.00504004
3	0.01062033	0.0064377	-0.0058769	-0.00306767***	0.003821	0.0012066	-0.00540438

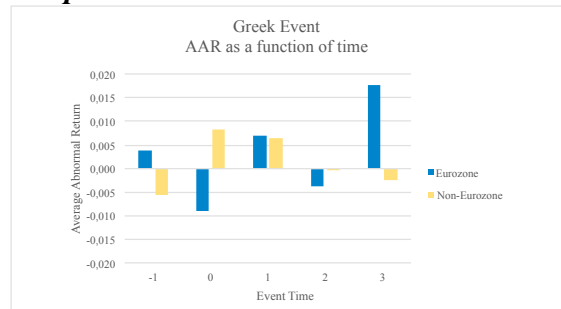
Table 8 displays the average abnormal return (AAR) for the Financials sector during the event days for the different groups of interest, including country- and currency-sorted samples.

Graph 17.



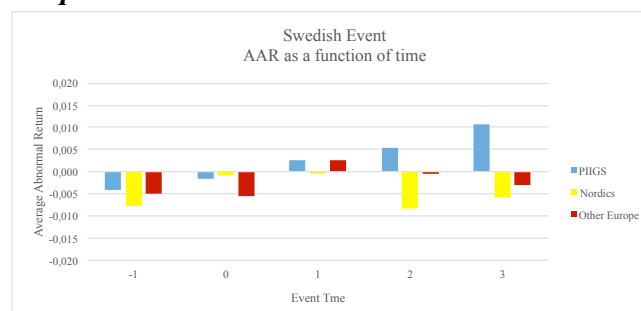
Graph 17 is displaying average abnormal returns for the Financials sector during the event days in the Greek event for the groups of PIIGS, Nordics and Other Europe.

Graph 18.



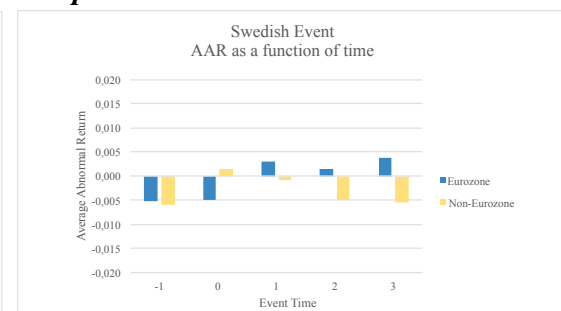
Graph 18 is displaying average abnormal returns for the Financials sector during the event days in the Greek event for the Eurozone and Non-Eurozone sample.

Graph 19.



Graph 19 is displaying average abnormal returns for the Financials sector during the event days in the Swedish event for the groups of PIIGS, Nordics and Other Europe.

Graph 20.



Graph 20 is displaying average abnormal returns for the Financials sector during the event days in the Swedish event for the Eurozone and Non-Eurozone sample.

Information Technology

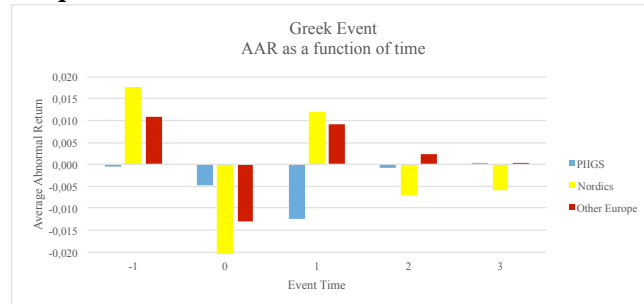
Table 9. Information Technology AAR (Average Abnormal Return)

<i>Greek Event</i>							
Event day	PIIGS	PIIGS (ex Greece)	Nordics	Other Europe	Eurozone	Eurozone (ex Greece)	Non-Eurozone
-1	-0.00050013	-0.0007739	0.01750875***	0.01073441***	0.00491263	0.0053924	0.01656291***
0	-0.00476538	0.0004001	-0.02262115**	-0.01302159***	-0.00971992	-0.0079747	-0.01904836***
1	-0.01253302	-0.0119273	0.01205449	0.00905434**	-0.00100476	0.0005454	0.0099853
2	-0.0007149	0.000165	-0.00702429**	0.00243016	0.00024879	0.0007469	-0.00391571
3	0.00028589	-0.0045588	-0.00581802*	0.00018169	0.00126637	-0.0007779	-0.00668324**

<i>Swedish Event</i>							
Event day	PIIGS	PIIGS (ex Greece)	Nordics	Other Europe	Eurozone	Eurozone (ex Greece)	Non-Eurozone
-1	0.00135179	-0.0006535	-0.00973738	-0.00737771*	-0.00145638	-0.0026597	-0.01237861**
0	0.00673844	0.01231	0.00593461	0.00296391	0.00041484	0.0021885	0.01421314**
1	0.00072076	0.0029893	-0.00150301	0.00696995***	0.00157	0.0026726	0.0047423
2	0.00729865**	0.0072084	0.007657	0.00985144***	0.00997603***	0.0102334***	0.00529391
3	-0.00049403	-0.0008036	0.01720203***	0.01083366***	0.00490912	0.0053719	0.01644974***

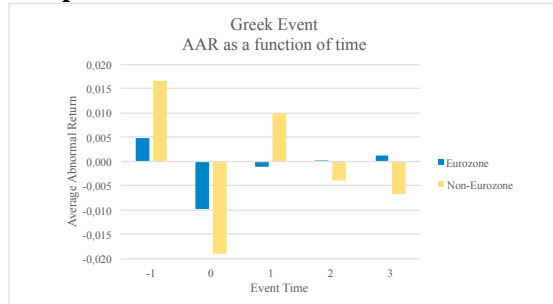
Table 9 displays the average abnormal return (AAR) for the Information Technology sector during the event days for the different groups of interest, including country- and currency-sorted samples.

Graph 21.



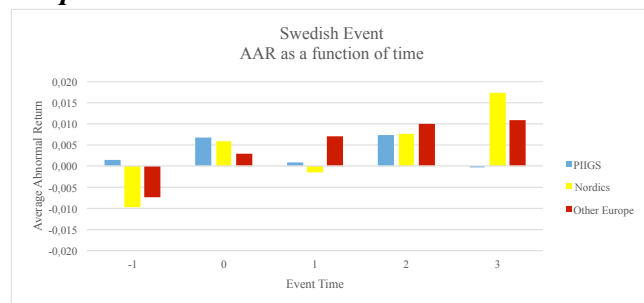
Graph 21 is displaying average abnormal returns for the Information Technology sector during the event days in the Greek event for the groups of PIIGS, Nordics and Other Europe.

Graph 22.



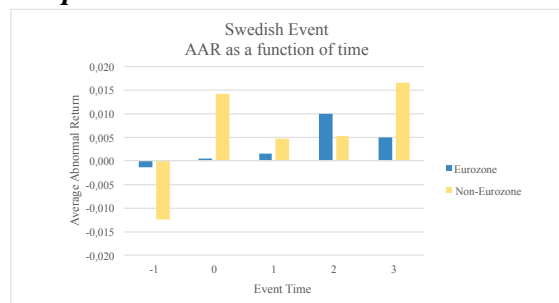
Graph 22 is displaying average abnormal returns for the Information Technology sector during the event days in the Greek event for the Eurozone and Non-Eurozone sample.

Graph 23.



Graph 23 is displaying average abnormal returns for the Information Technology sector during the event days in the Swedish event for the groups of PIIGS, Nordics and Other Europe.

Graph 24.



Graph 24 is displaying average abnormal returns for the Information Technology sector during the event days in the Swedish event for the Eurozone and Non-Eurozone sample.

Telecommunication Services

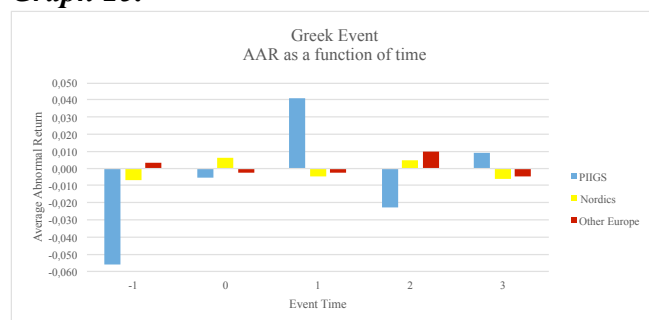
Table 10. Telecommunication Services AAR (Average Abnormal Return)

<i>Greek Event</i>							
Event day	PIIGS	PIIGS (ex Greece)	Nordics	Other Europe	Eurozone	Eurozone (ex Greece)	Non-Eurozone
-1	-0.05605808	-0.068857	-0.0067939	0.00348909*	-0.02706001	-0.0295264	-0.00318628
0	-0.00503164	0.0091743	0.00651149	-0.00236025	-0.00201597	0.0046329	0.00137718
1	0.04076052	0.0487914	-0.00456228	-0.00248748	0.01930575	0.0204912	-0.00448579
2	-0.02244302	-0.0057039	0.00475064	0.00969535**	-0.00661966	0.0025781	0.00623123
3	0.0092344	-0.0053583	-0.00620409***	-0.00461668	0.00265817	-0.0045581	-0.00658523*

<i>Swedish Event</i>							
Event day	PIIGS	PIIGS (ex Greece)	Nordics	Other Europe	Eurozone	Eurozone (ex Greece)	Non-Eurozone
-1	0.00235609	0.0024758	-0.00290585	0.00168689	0.0004069	0.0002435	0.00124188
0	0.01494665**	0.016513*	0.02374872*	-0.00164906	0.00806237**	0.0079936*	0.01584201
1	0.00355642	0.0029237	0.00132518	0.00649287	0.00766591*	0.0078413	-0.00292381
2	0.01313704	0.0081254	-0.00225324	0.01009581***	0.01112022**	0.0086687**	0.00120897
3	-0.0563467	-0.069184	-0.00679676	0.00356765*	-0.02719456	-0.0296609	-0.0031138

Table 10 displays the average abnormal return (AAR) for the Telecommunication Services sector during the event days for the different groups of interest, including country- and currency-sorted samples.

Graph 25.



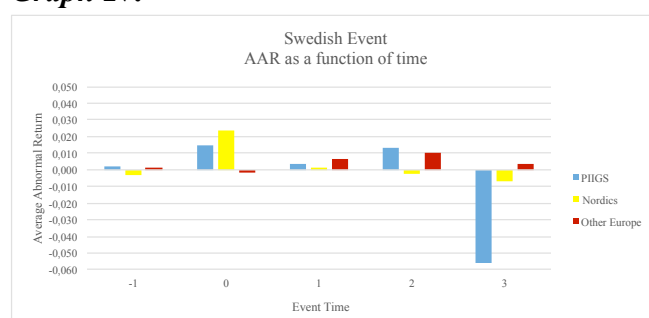
Graph 25 is displaying average abnormal returns for the Telecommunication Services sector during the event days in the Greek event for the groups of PIIGS, Nordics and Other Europe.

Graph 26.



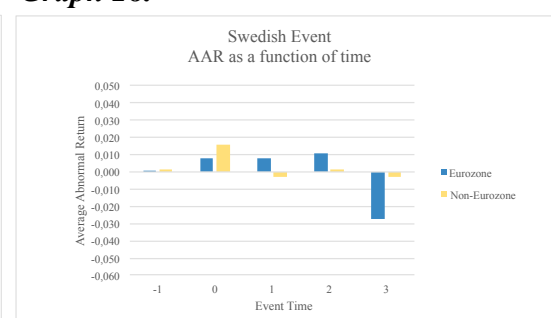
Graph 26 is displaying average abnormal returns for the Telecommunication Services sector during the event days in the Greek event for the Eurozone and Non-Eurozone sample.

Graph 27.



Graph 27 is displaying average abnormal returns for the Telecommunication Services sector during the event days in the Swedish event for the groups of PIIGS, Nordics and Other Europe.

Graph 28.



Graph 28 is displaying average abnormal returns for the Telecommunication Services sector during the event days in the Swedish event for the Eurozone and Non-Eurozone sample.

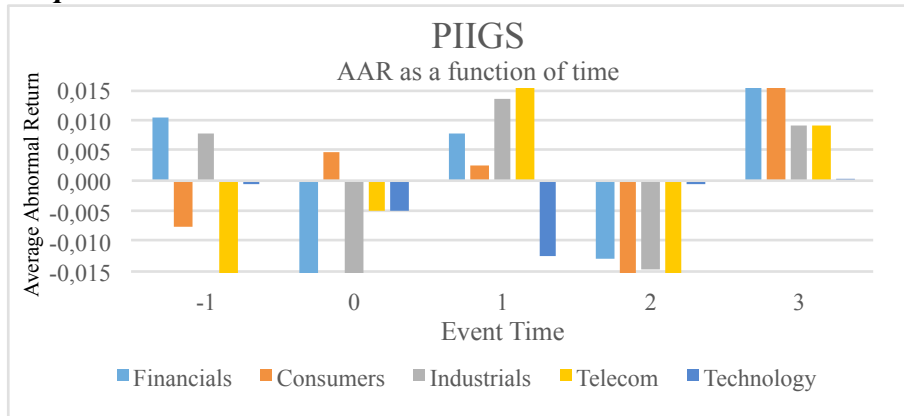
ii. Sector Ranking

Table 11. Average Abnormal Returns and Ranking in the Greek Event

<i>PIIGS</i>					
	Financials	Consumers	Industrials	Telecom	Technology
-1	0.01057415	-0.00769354	0.00767486	-0.05605808	-0.00050013
0	-0.02134580	0.00459240	-0.02141267	-0.00503164	-0.00476538
1	0.00775278	0.00235157	0.01364841	0.04076052	-0.01253302
2	-0.01299048	-0.02672025	-0.01456434	-0.02244302	-0.00071490
3	0.03055852	0.01685287	0.00915556	0.00923440	0.00028589
CAAR	0.01454917	-0.01061695	-0.00549818	-0.03353782	-0.01822754
<i>Nordics</i>					
	Financials	Consumers	Industrials	Telecom	Technology
-1	-0.00593089	-0.00027580	0.00537246	-0.00679390	0.01750875
0	0.01209855	0.00376776	0.00262134	0.00651149	-0.02262115
1	0.00575590	0.00106982	0.00945886	-0.00456228	0.01205449
2	0.00054366	-0.00795469	-0.01062312	0.00475064	-0.00702429
3	-0.00365542	0.00313254	0.00605018	-0.00620409	-0.00581802
CAAR	0.00881180	-0.00026037	0.01287972	-0.00629814	-0.00590022
<i>Other Europe</i>					
	Financials	Consumers	Industrials	Telecom	Technology
-1	-0.00307187	-0.00093153	0.00177512	0.00348909	0.01073441
0	0.00179198	-0.00305255	-0.00322285	-0.00236025	-0.01302159
1	0.00696580	0.01038004	0.01182237	-0.00248748	0.00905434
2	0.00429844	0.00033178	0.00042654	0.00969535	0.00243016
3	0.00447475	-0.00441319	-0.00172209	-0.00461668	0.00018169
CAAR	0.01445910	0.00231455	0.00907909	0.00372003	0.00937901
Aggregated					
CAARs	0.037820070	-0.01319187	-0.02745699	-0.04355599	-0.03350677
Ranking	2	5	4	1	3

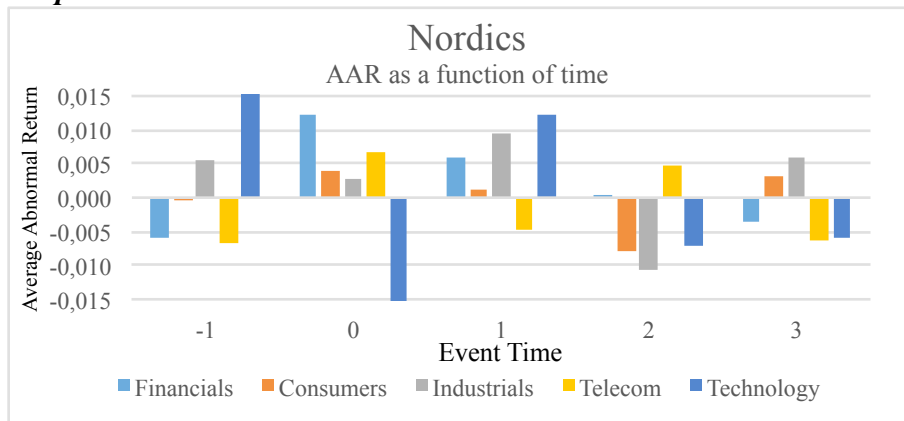
In Table 11, average abnormal returns are summed up to CAARs, which are aggregated across groups using absolute numbers. These are then ranked from 1-5, where 1 is the sector with the highest absolute effect, hence with the highest sensitivity, political dependency and cyclicalitv toward the snap election announcement.

Graph 29.



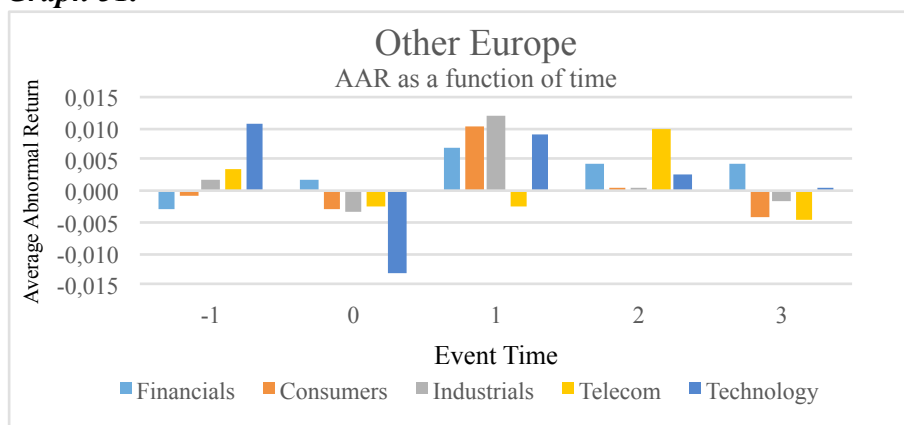
Graph 29 displays average abnormal returns in the Greek event for the PIIGS group within all sectors on each day of the event window.

Graph 30.



Graph 30 displays average abnormal returns in the Greek event for the Nordic group within all sectors on each day of the event window.

Graph 31.



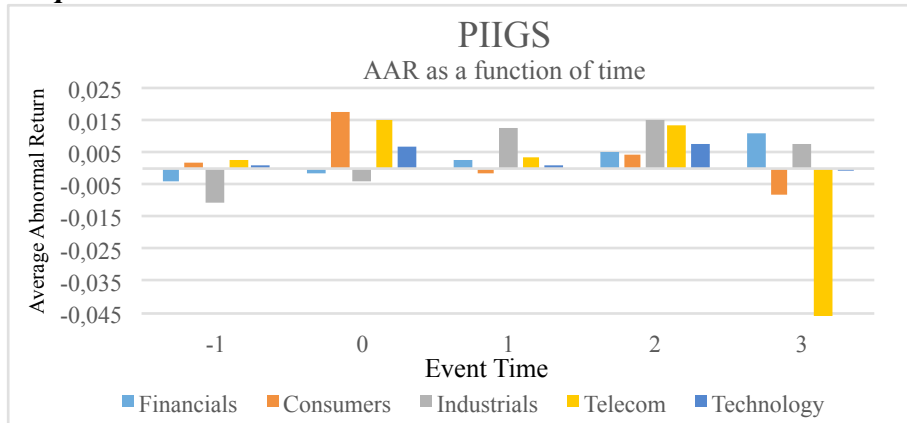
Graph 31 displays average abnormal returns in the Greek event for the Other Europe group within all sectors on each day of the event window.

Table 12. Average Abnormal Returns and Ranking in the Swedish Event

<i>PIIGS</i>					
	Financials	Consumers	Industrials	Telecom	Technology
-1	-0.00420090	0.00186076	-0.0105969	0.00235609	0.00135179
0	-0.00155853	0.01744872	-0.00394483	0.01494665	0.00673844
1	0.00250454	-0.00176929	0.0124505	0.00355642	0.00072076
2	0.00529005	0.00422008	0.01507746	0.01313704	0.00729865
3	0.01062033	-0.00773951	0.00792027	-0.05634670	-0.00049403
CAAR	0.01265549	0.01402076	0.0209065	-0.02235050	0.01561561
<i>Nordics</i>					
	Financials	Consumers	Industrials	Telecom	Technology
-1	-0.00770153	-0.00513671	-0.00597946	-0.00290585	-0.00973738
0	-0.00073184	-0.00501198	-0.00461545	0.02374872	0.00593461
1	-0.00043232	0.00322336	0.00304882	0.00132518	-0.00150301
2	-0.00828003	-0.00491663	-0.00115788	-0.00225324	0.00765700
3	-0.00587609	-0.00022489	0.00539296	-0.00679676	0.01720203
CAAR	-0.02302262	-0.01206685	-0.00331101	0.01311805	0.01955325
<i>Other Europe</i>					
	Financials	Consumers	Industrials	Telecom	Technology
-1	-0.00497322	-0.00616740	-0.00585965	0.00168689	-0.00737771
0	-0.00547452	-0.00569376	-0.00525870	-0.00164906	0.00296391
1	0.00250242	0.00405707	0.00370160	0.00649287	0.00696995
2	-0.00058637	0.00369690	0.00301063	0.01009581	0.00985144
3	-0.00306767	-0.00073385	0.00192252	0.00356765	0.01083366
CAAR	-0.01159936	-0.00484104	-0.00248360	0.02019416	0.02324125
Aggregated					
CAARs	-0.04727747	-0.03092865	-0.02670111	-0.05566271	0.05841011
Ranking	3	4	5	2	1
Both Events					
Aggregated					
CAARs	-0.08509754	-0.04412052	-0.0541581	-0.0992187	-0.09191688
Total Ranking	3	5	4	1	2

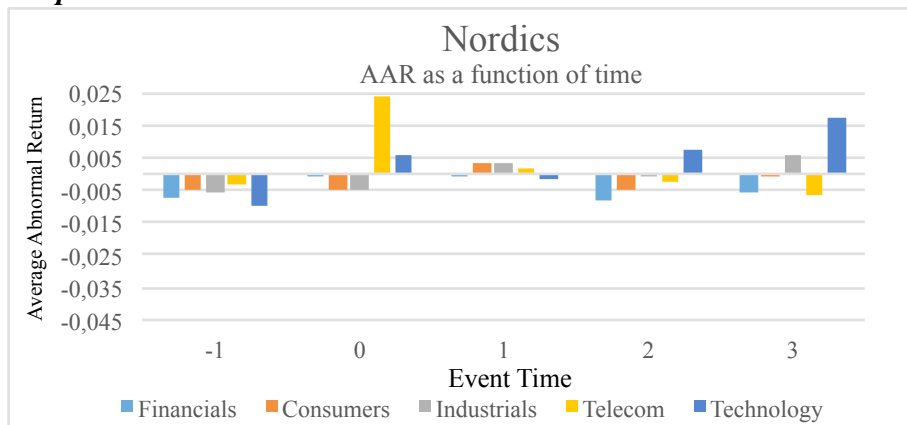
In Table 12, average abnormal returns are summed up to CAARs, which are aggregated across groups using absolute numbers. These are then ranked from 1-5, where 1 is the sector with the highest absolute effect, hence with the highest sensitivity, political dependency and cyclicalit toward the snap election announcement.

Graph 32.



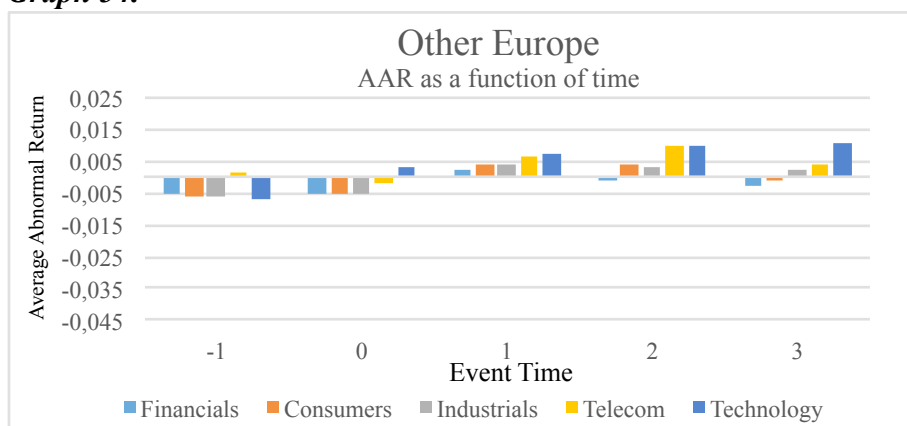
Graph 32 displays average abnormal returns in the Swedish event for the PIIGS group within all sectors on each day of the event window.

Graph 33.



Graph 33 displays average abnormal returns in the Swedish event for the Nordic group within all sectors on each day of the event window.

Graph 34.



Graph 34 displays average abnormal returns in the Swedish event for the PIIGS group within all sectors on each day of the event window.

Robustness Check

Table 13. Country-Level Robustness Check (80 days)

Group	Event	Estimation Window	Event Window	Average CAR	T-Statistic
PIIGS	Greek Event	80 days	3 days, (-1,1)	-0.016335	-0.7424
PIIGS (ex Greece)			3 days, (-1,1)	0.0053913	1.2026
Nordics			3 days, (-1,1)	0.0116745**	3.8934
Other Europe			3 days, (-1,1)	0.0046509*	2.2153
PIIGS	Swedish Event	80 days	3 days, (-1,1)	0.0074041	0.7805
PIIGS (ex Greece)			3 days, (-1,1)	0.0014163	0.1491
Nordics			3 days, (-1,1)	-0.0073631*	-2.4788
Other Europe			3 days, (-1,1)	-0.0104303**	-3.6891
Eurozone	Greek Event	80 days	3 days, (-1,1)	-0.004032	-0.3607
Eurozone (ex Greece)			3 days, (-1,1)	0.0069911***	3.3724
Non-Eurozone			3 days, (-1,1)	0.0066497	1.7109
Eurozone	Swedish Event	80 days	3 days, (-1,1)	-0.0029774	-0.522
Eurozone (ex Greece)			3 days, (-1,1)	-0.0067922	-1.4327
Non-Eurozone			3 days, (-1,1)	-0.0050479	-1.8714

Table 13 shows the results from the Country-level robustness check using an estimation window of 80 days and the main event window (-1,1).

Table 14. Country-Level Robustness Check (160 days)

Group	Event	Estimation Window	Event Window	Average CAR	T-Statistic
PIIGS	Greek Event	160 days	3 days, (-1,1)	-0.0153893	-0.6693
PIIGS (ex Greece)			3 days, (-1,1)	0.0073226	1.5809
Nordics			3 days, (-1,1)	0.0103171*	3.0091
Other Europe			3 days, (-1,1)	0.0051603	1.7965
PIIGS	Swedish Event	160 days	3 days, (-1,1)	0.0064382	0.6969
PIIGS (ex Greece)			3 days, (-1,1)	0.0009062	0.0949
Nordics			3 days, (-1,1)	-0.0080599*	-2.876
Other Europe			3 days, (-1,1)	-0.0099511**	-3.7337
Eurozone	Greek Event	160 days	3 days, (-1,1)	-0.0029051	-0.2494
Eurozone (ex Greece)			3 days, (-1,1)	0.0085763***	3.9253
Non-Eurozone			3 days, (-1,1)	0.0048669	1.2129
Eurozone	Swedish Event	160 days	3 days, (-1,1)	-0.0031362	-0.5737
Eurozone (ex Greece)			3 days, (-1,1)	-0.0066587	-1.4246
Non-Eurozone			3 days, (-1,1)	-0.0056786*	-2.2618

Table 14 shows the results from the Country-level robustness check using an estimation window of 160 days and the main event window (-1,1).

Wilcoxon Sign Rank Test

Table 15. Country-Level

Greek Event	Wilcoxon sign rank z statistic	Wilcoxon sign rank probability
<i>Nordics</i>	1.826	93%
<i>Other Europe</i>	1.782	92%
<i>Eurozone (ex Greece)</i>	2.666	99%
Swedish Event	Wilcoxon sign rank z statistic	Wilcoxon sign rank probability
<i>Nordics</i>	-1.461	85%
<i>Other Europe</i>	-1.992	95%
<i>Non-Eurozone</i>	-1.214	77%

Table 15 shows the results from the Wilcoxon sign rank test including z statistic and rank probability. All tests are performed on the (-1,1) event window using an estimation window of 120 days. The purpose of the non-parametric test is to validate the results that are found to be significant when performing a regular t-test.

Table 16. Industrials

Greek Event	Wilcoxon sign rank z statistic	Wilcoxon sign rank probability
<i>PIIGS (ex Greece)</i>	1.826	93%
<i>Nordics</i>	1.826	93%
<i>Other Europe</i>	1.782	92%
<i>Eurozone (ex Greece)</i>	2.666	99%
<i>Non-Eurozone</i>	1.753	92%
Swedish Event	Wilcoxon sign rank z statistic	Wilcoxon sign rank probability
<i>Nordics</i>	-1.826	93%
<i>Other Europe</i>	-1.782	92%

Table 16 shows the results from the Wilcoxon sign rank test including z statistic and rank probability. All tests are performed on the (-1,1) event window using an estimation window of 120 days. The purpose of the non-parametric test is to validate the results that are found to be significant when performing a regular t-test.

Table 17. Consumer Staples

Greek Event	Wilcoxon sign rank z statistic	Wilcoxon sign rank probability
<i>Other Europe</i>	2.201	97%
<i>Non-Eurozone</i>	2.023	95%
Swedish Event	Wilcoxon sign rank z statistic	Wilcoxon sign rank probability
<i>Nordics</i>	-1.826	93%
<i>Other Europe</i>	-2.201	97%
<i>Non-Eurozone</i>	-2.023	95%

Table 17 shows the results from the Wilcoxon sign rank test including z statistic and rank probability. All tests are performed on the (-1,1) event window using the estimation window of 120 days. The purpose of the non-parametric test is to validate the results that are found to be significant when performing a regular t-test.

Table 18. Financials

Greek Event	Wilcoxon sign rank z statistic	Wilcoxon sign rank probability
<i>PIIGS (ex Greece)</i>	1.826	93%
<i>Other Europe</i>	2.201	97%
<i>Eurozone (ex Greece)</i>	2.666	99%
Swedish Event	Wilcoxon sign rank z statistic	Wilcoxon sign rank probability
<i>Nordics</i>	-1.826	93%
<i>Other Europe</i>	-1.782	92%
<i>Eurozone (ex Greece)</i>	-2.192	97%

Table 18 shows the results from the Wilcoxon sign rank test including z statistic and rank probability. All tests are performed on the (-1.1) event window using the estimation window of 120 days. The purpose of the non-parametric test is to validate the results that are found to be significant when performing a regular t-test.

Table 19. Information Technology

Greek Event	Wilcoxon sign rank z statistic	Wilcoxon sign rank probability
<i>Other Europe</i>	2.201	97%
Swedish Event	Wilcoxon sign rank z statistic	Wilcoxon sign rank probability
-	-	-

Table 19 shows the results from the Wilcoxon sign rank test including z statistic and rank probability. All tests are performed on the (-1.1) event window using the estimation window of 120 days. The purpose of the non-parametric test is to validate the results that are found to be significant when performing a regular t-test.

Table 20. Telecommunication Services

Greek Event	Wilcoxon sign rank z statistic	Wilcoxon sign rank probability
-	-	-
Swedish Event	Wilcoxon sign rank z statistic	Wilcoxon sign rank probability
<i>Other Europe</i>	1.782	92%
<i>Eurozone</i>	2.599	99%
<i>Eurozone (ex Greece)</i>	2.429	98%

Table 20 shows the results from the Wilcoxon sign rank test including z statistic and rank probability. All tests are performed on the (-1.1) event window using the estimation window of 120 days. The purpose of the non-parametric test is to validate the results that are found to be significant when performing a regular t-test.