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**POLITICAL PARTIES AND THE ECONOMY:
MACRO CONVERGENCE, MICRO PARTISANSHIP?**

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ABSTRACT: In the last days of the electoral campaign for the 2004 general election in Spain, on Thursday March 11th 2004, a series of simultaneous terror attacks caused the death of 191 persons in commuting trains in the capital Madrid. Four days later, the opposition party won the election, against all predictions that were made prior to the terror attacks. This change in expectations presents a unique opportunity to take advantage of event study techniques to test some politico-economic hypotheses. The quantitative exercise is carried out employing Seemingly Unrelated Regressions (SUR). Hypothesis testing is improved by means of bootstrapping techniques. Convergence theories prove quite resilient as, jointly, quoted firms were not significantly affected by the election outcome. The results on the impact on particular companies and industries, however, suggest that a combination of capture and agency problems may play a role in explaining the effects of the change in expectations.

Keywords: Event study, median voter, agency, capture, elections.

JEL Codes: G14, G15.

RESUMEN: El jueves 11 de marzo de 2004, durante los últimos días de la campaña electoral para las elecciones generales en España, una serie de atentados terroristas causó la muerte de 191 personas en trenes de cercanías en Madrid. Cuatro días después, el partido hasta entonces en la oposición, el PSOE, ganó las elecciones, en contra de cualquier predicción o sondeo realizado con anterioridad a los atentados. Este cambio de expectativas presenta una oportunidad única para emplear técnicas de ‘estudio de acontecimiento’ para estudiar hipótesis político-económicas. El ejercicio cuantitativo es llevado a cabo mediante regresiones aparentemente no relacionadas (Seemingly Unrelated Regressions o SUR), mientras que el test de hipótesis es ajustado mediante técnicas de bootstrap. Las teorías de convergencia se comprueban bastante resistentes ya que conjuntamente las empresas cotizadas en el mercado de valores no fueron afectadas por el resultado electoral. Sin embargo, el resultado sobre el impacto en determinadas empresas e industrias sugiere que una combinación de problemas de captura y agencia puede jugar un rol importante en explicar los efectos del cambio de expectativas.

Palabras clave: Estudio de acontecimiento, votante mediano, agencia, captura, elecciones.

Clasificación JEL: G14, G15.

^a Comments are welcome. The opinions expressed in the paper do not necessarily reflect the IEB's opinions.

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1. Introduction

In the last days of the campaign for the 2004 general election in Spain, on Thursday March 11th 2004¹, a series of simultaneous terror attacks caused the death of 191 persons in commuting trains in Madrid. The attacks themselves, according to some, or a deliberate attempt by the incumbent government to hide information about the attacks for electoral reasons in the short period of time between the attacks and the election, according to others, are held responsible for the surprise victory of the Socialist opposition in the election on the next Sunday. This change in expectations presents a unique opportunity to take advantage of event study techniques² and use the natural experiment to test some economic and politico-economic hypotheses. One of the problems of many event studies is that long event windows run the risk of including effects of events other than those under analysis; the fact that in this case the election result could not have been predicted four days before the election greatly reduces the meaningful length of the event window and hence the potential for event contamination, except for the potential confusion between the attacks themselves and political change, something we deal with in Section 5.

The Median Voter Theorem³ predicts that if two vote-maximizing parties compete in a single political dimension, and voter preferences are single peaked, then both parties converge presenting the platform that best suits the median voter. The theorem, an application by Downs (1957) of the Hotelling (1929) location model, tries to explain the strong forces towards convergence to the centre of the ideological spectrum that are observed in politics. The median voter theorem has been used in many applications in economics and has become one of the workhorse models of the literature on political economy (see Persson and Tabellini, 2000). However, many authors have pointed out that there is evidence that political parties often differ in some important policy dimensions, so that politics would be partisan⁴ instead of convergent; Roemer (2001) wonders why would a group of citizens bother to undertake the costs of creating a political party if they end up implementing the same policies as their main rival. Which of both theories does evidence support? This question may have different answers depending on time and place. We test it for one country and place were, according to political rhetoric, one would expect to find high divergence: Spain in 2004. In the months prior to the election, Prime Minister Aznar had supported U.S. President Bush on the Irak war, for example, a move that

¹ Electoral campaigns in Spain usually end on Friday, and Saturday is “reflection day.” Vote is on Sunday.

² See Binder (1985, 1988), Mackinlay (1997) and Khotari and Warner (2007).

³ See Downs (1957).

⁴ See Alesina and Rosenthal (1995).

was strongly criticized by the opposition. Socialist candidate José Luis R. Zapatero was according to some commentators to the left of previous socialist leader Felipe González. It was also a period of increasing polarization in many countries (including the US) between the main political parties. Being Spain a member of the European Union in the Euro area, however, implies that the forces of convergence (at least in macroeconomic policies) are also strong, as the European Union establishes very strict norms of fiscal policy and controls monetary policy through the European Central Bank. Whether convergence or partisan forces are stronger is ultimately an empirical question.

Previous studies have analyzed the impact of elections on shareholder's expectations, and we contribute to this literature. For example, Roberts (1990), Shum (1995), Herron et al. (1999), Herron (2000), Pantzalis et al. (2000), Vuchelen (2003), Jensen and Schmith (2005), Leblang and Mukherjee (2005), Füss and Bechtel (2006) and Jayachandran (2006) find different degrees of convergence depending on time and country. Like Jayachandran (2006) we analyze the effect of a surprise political event. But we do it with econometric techniques that improve the reliability of significance tests, such as the Seemingly Unrelated Regressions method and bootstrapping.

We find that, in spite of surrounding political rhetoric, investors on the largest Spanish firms jointly considered did not expect significant differences between both major Spanish political parties. The expectation was that the degree of convergence in policies affecting firms' profits would be high, at least at the macro level. In addition to testing convergence versus partisan theories, we reach the conclusion that the hypothesis of capture of politicians, in itself and combined with agency problems in privatized firms with dispersed shareholdings, is not rejected by the data. This is revealed by examining the stock price reaction of individual companies or groups of companies (a micro level analysis) to the surprise election result.

In the rest of this paper, in Section 2 we provide some background on the events of interest, methodological issues and the hypotheses. In Section 3, we test convergence versus partisan theories looking at the joint reaction of stock prices to the surprise election result. In Section 4, we test some other theories that involve firm value expectations, such as capture and agency theories. Section 5 introduces some notes on the effects of the terror attacks. Finally, Section 6 concludes.

2. Background

2.1. The events

On Thursday March 11th 2004, a major terrorist attack killed 191 persons in commuting trains in Madrid, the Spanish capital. On Sunday March 14th 2004, the Socialist Party (PSOE) won the general election by a large though not overall majority (see Figure 1), beating all expectations as reported by electoral polls.

The special circumstances surrounding the Spanish Election made its final outcome completely unpredictable four days prior to the election,⁵ because it was then that the terrorist attacks of March 11th 2004 in Madrid occurred, killing 191 persons. Until that day, the ruling Popular Party (PP) had led the polls by 2 to 7 points, according to different poll sources (such as newspapers El Pais, El Mundo, ABC). According to a poll performed after the election by an official body in Spain (*Centro de Investigaciones Sociológicas -C.I.S.⁶*), 21.5% of voters declared being influenced by the terrorist attacks in their voting decision.⁷ More interestingly, 9.4% of voters voted for PSOE only because of the terrorist attacks, while only 1.5% of voters voted PP because of the very same reason. It is clarifying to see that the difference between these two values is 7.9%. As the final results gave a 5 point advantage to PSOE, it leaves the results, discounting the effect of the terrorist attack on voters' decisions, in a 2.9 point lead by the PP, which is roughly consistent with poll results prior to the attacks. Therefore, stock returns immediately after the election must incorporate (if the semi-strong version of the financial markets efficiency hypothesis holds⁸) the returns caused by an unexpected political change. If any company's or industry's profit was contingent on the political outcome of the elections, their valuation must have significantly changed after the election, as the results were not expected.

⁵ The poll that gave the incumbent Popular Party (PP) the narrowest advantage among all published polls over the Socialist Party (PSOE) was published in newspaper La Vanguardia seven days before election day (polls cannot be made public by law in Spain after five days before election day, and the last ones are usually published seven days before, on the previous Sunday). According to this poll, PP was at that time two percentage points ahead of PSOE.

⁶ *Estudio Postelectoral del CIS, Marzo-Abril 2004.*

⁷ See next paragraph for a discussion on whether the influence in the voting decision was either for the terrorist attacks themselves or by the way the Government managed the reaction to such attacks.

⁸ According to this version of the hypothesis, stock prices summarize all publicly available information about a particular stock. Then, only new information affects stock prices.

Interpretations of why the terrorist attacks had such an importance in the results have been largely discussed. A stream of opinion seems to think that the attacks confirmed the general opinion in Spain that the PP Government's decision to get involved in Iraq's war was a mistake. Opinion polls showed that almost 85% of Spaniards opposed the war in Iraq. Others argue that the main cause of the fall of the incumbent party were not the terrorist attacks themselves, but the way of managing the crisis by the government. When the attacks happened in the morning of Thursday 11th of March 2004 (see Table 1), the first reaction from many analysts and politicians was to blame ETA, the Basque Separatist terrorist group and usual perpetrator of terrorist attacks in Spain since the 1960s.⁹ Nevertheless, soon the evidence pointed to Al-Qaeda. Later the very same day of the attacks, most international media were concluding that the attacks had been perpetrated by Islamist Terrorist Groups. Yet the PP's Government kept on blaming ETA for the next four days, until the Election Day (see Table 1). Some commentators suggested that the PP feared losing the election because the public would realize that Islamist groups targeted Spain as a result of the Spanish government's support of the Irak war. In addition, the PP focused its pre-election message on the fight against ETA and on the influence of ETA's separatist objectives on nationalist forces in the periphery willing to support a new Socialist government. Therefore, following this line of reasoning, if they could hold for three days until the election blaming ETA, this would reinforce their campaign message. The problem to some was that it became obvious to them that the Government was not really interested in transparently investigating the attacks, which had a large emotional impact on public opinion, but only in re-election.

⁹ See Abadie and Gardeazábal (2003).

Table 1. From March 11 to March 14

Thursday 11th	07:47	Four trains in Madrid are simultaneously bombed. 191 persons are killed and over 1500 are injured
	13:00	The incumbent president J.M. Aznar reports that ETA is behind the attacks
	15:50	The Government leaks a file from the Spanish Intelligence Service pointing to ETA as the most likely perpetrator of the attacks
	20:20	A. Acebes, Minister of the Home Office at that moment, informs of the finding of a tape in Arabic in a suspicious van, but keeps the hypothesis of ETA as the most likely
	21:30	The Islamic group Abu Hafs Al Masri claims they authored the attacks
Friday 12th	18:00	A. Acebes repeats that ETA is the main hypothesis that the police is pursuing
	18:30	ETA claims it had nothing to do with the attacks
Saturday 13th	16:00	Three Moroccan and two Indian men are arrested by the Spanish police
	19:00	Demonstrators gather in front of PP headquarters in all major Spanish cities, asking for a clear information policy on the authors of the attacks
	20:30	A.P. Rubalcaba, a former Cabinet Minister and member of PSOE's direction, strongly criticizes the role of the Government
Sunday 14th	20:00	The election day reaches its end. PSOE win the election

Sources: *El Mundo, El País*

Being the cause of the change in citizen preferences one thing or another, the fact is that the actual results of the election were not the ones anticipated by the market until the attacks occurred. If any company's or industry's profit depended on the political outcome of the election, their stock valuations must have significantly changed between Thursday 11th in the morning and the opening of the stock market on Monday 15th, the day after the election and after the week-end break in the stock market.

2.2. Methodology

We carry out an analysis of the effects in the financial markets of the political change in the March 2004 election in Spain. Based on the semi-strong version of the Efficient Market Hypothesis (EMH), if the political change had any effect on the discounted expected future

stream of profits of quoted companies, the markets would have reacted to the new information accordingly. The special circumstances surrounding this election make this occasion a unique opportunity to test for effects of political change on the performance of companies, groups of companies, and the market as a whole.

The classical abnormal returns computation is not suitable for analysing the effects of an event that affects a group of companies at the same moment of time. When there is event clustering¹⁰ the covariance amongst returns will not be zero, and the asymptotic results of normality no longer hold. An alternative approach which solves this problem is proposed by Binder (1985). He disaggregates the portfolio into a multivariate regression system of returns equations, with one equation for each of the firms experiencing the events:

$$(1) \quad R_{1t} = \alpha_1 + \beta_1 R_{mt} + \sum_{a=1}^A \gamma_{1a} D_{at} + \varepsilon_{1t}$$

$$R_{2t} = \alpha_2 + \beta_2 R_{mt} + \sum_{a=1}^A \gamma_{2a} D_{at} + \varepsilon_{2t}$$

.....

$$R_{nt} = \alpha_n + \beta_n R_{mt} + \sum_{a=1}^A \gamma_{na} D_{at} + \varepsilon_{nt}$$

where $i = 1, \dots, n$ are the number of companies we include; R_{it} are company i 's stock returns¹¹; R_{mt} are the stock market index returns; D_{at} is a dummy variable that takes the value 1 on the days of the events of interest and zero otherwise; α_i , β_i , and γ_{ia} are parameters to be estimated; and we allow the error terms $(\varepsilon_{11}, \dots, \varepsilon_{1t}, \varepsilon_{21}, \dots, \varepsilon_{2t}, \dots, \varepsilon_{n1}, \dots, \varepsilon_{nt})$ to be heteroskedastic across firms but non-correlated across time.

¹⁰ Events affecting different firms occur at the same moment of time.

¹¹ Daily returns can be obtained in the usual fashion

$$r_t = \frac{P_t - P_{t-1}}{P_{t-1}} = \frac{P_t}{P_{t-1}} - 1$$

where P_t stands for prices at time t . Nevertheless, we use the logarithmic transformation

$$R_t = \ln(P_t) - \ln(P_{t-1})$$

where $R_t = \ln(r_t + 1)$, which yields almost identical results, yet a more symmetric distribution, which is clearly convenient for the sake of the analysis as it is far easier to derive the time-series properties of additive processes (such as the natural logarithmic transformation) than of multiplicative processes.

We estimate the model either using the Ibex-35 index of the Madrid stock exchange (M1) or a constant mean return model (M2). The constant mean return model implies that, from the previous equations, we remove $\beta_i R_{mt}$. This structure allows the coefficients to differ across firms. This system is an application of the seemingly unrelated regression methodology, SUR (Chang and Lee, 1977).¹² Testing individual hypotheses is not a problem, as t-tests are available and consistently test hypotheses in the SUR framework. This multivariate regression model assumes that the disturbances are uncorrelated within each equation but allows for the errors to be contemporaneously correlated across equations. It also presents a number of advantages compared to more standard regression models generally used in event studies. First, it can test joint hypotheses (using the Wald test for instance) while other approaches only test for average effects. Secondly, this very same fact allows the coefficients not to cancel out with each other when they have different signs (i.e. if we want to test the joint effect of an event that causes both positive and negative effects in the different firms tested, by using an averaged time series we would conclude there is no effect as those might cancel out while by this method we would indeed find these effects as long as they are statistically significant). Finally, SUR regression allows testing event windows of a reduced length consistently by multiplying the length of the window across firms.

In joint hypotheses Wald tests are available for this type of equations but are only valid asymptotically. In small samples, these tests are biased against the null and tend to over-reject. This implies that if the null hypothesis is not rejected, the evidence is very strong against the null. We need only to be cautious in the case that the null is rejected. Chou (2004) proposes bootstrap methods to sort the problem out. Using Monte Carlo simulations, he shows that bootstrapping the sample provides p-values very close to the nominal size of the test. The bootstrap method (Efron, 1979) is a computationally intensive method that allows computing the distribution of a test statistic by re-sampling the data¹³. Horowitz (2001) shows that critical values obtained from this method are always at least as accurate as standard asymptotic theory. We propose the following procedure: first, estimate with SUR; second, test the hypothesis when necessary with the Wald test, and in the case a null hypothesis is rejected at the 5% level, bootstrap the test to obtain the p-values by re-sampling a certain number of times. The bootstrap

¹² This methodology is also used in a study of financial market perspectives of political expectations by Roberts (1990), without using the bootstrap technique, as we do, to improve the reliability of significance tests.

¹³ Sampling from the original sample. The idea underlying bootstrap is that we pretend that the sample is the population. Thus, we obtain bootstrap samples by sampling from the (original) sample. And this gives a consistent estimation of the distribution of a test statistic.

method applied to the Wald test in a SUR framework can be done in the following steps (Chou, 2004):

1. Estimate the model by Ordinary Least Squares and obtain the residuals $(\hat{\varepsilon}_1, \hat{\varepsilon}_2, \dots, \hat{\varepsilon}_T)$ and the parameters corresponding to the different alphas, betas and gammas. Calculate the Wald test.
2. Estimate the model by Ordinary Least Squares without the observations corresponding to the event window and obtain the parameters of the model and the residuals $(\hat{\varepsilon}_1, \hat{\varepsilon}_2, \dots, \hat{\varepsilon}_{T_1}, \hat{\varepsilon}_{T_2}, \dots, \varepsilon_T)$, where the event window comprises observations between T_1 and T_2 .
3. Repeat a large number of times, say 1000 times, the following steps:
 - a) Draw a bootstrap sample ε_t^* from the residuals in 2. Compute the values of $(R_{1t}, R_{2t}, \dots, R_{nt})$ using the parameters from 2 and the bootstrapped residuals ε_t^* . Call the resulting values $(R_{1t}^*, R_{2t}^*, \dots, R_{nt}^*)$.
 - b) Estimate with OLS using the original independent variables data and the bootstrapped dependent variable data $(R_{1t}^*, R_{2t}^*, \dots, R_{nt}^*)$. Calculate the Wald test and call it τ^* .
4. Calculate the percentage of τ^* 's that are greater than the Wald statistic computed in 1, which gives the bootstrap p-value of the test.

In this way, one can obtain reliable joint tests for the hypotheses of interest. These joint tests can be either for all the companies in the sample (Section 3) or for groups of them (Section 4). We use daily returns data for Spanish companies in Madrid's Continuous Market (MCM) Stock Exchange from Infomercados, a financial web site specialized in Spanish equity markets.

We estimate the model for a sample of companies in the MCM Stock Exchange. 125 companies were originally included in the data set. However, only 87 companies were finally included in the estimation. The 38 remaining companies were excluded because of either thin trading or incomplete data. The estimation period ranges from May 2003 to December 2004, therefore having a pre-event window from May 2003 to March 2004, and a post-event window from March 2004 to December 2004.

Two event windows are included in the estimation. First, a two-day event window for the terrorist attacks. It includes the day of the events, 11th of March, and the day after it, Friday the

12th. In this case the news of the terrorist attacks could not have been discounted, and therefore it does not make any sense to include the day before the event. There are two reasons for including this event window. In the first place, the attacks might have had an effect on the stock markets by themselves. Secondly, as they were the indirect cause for the change in the election results, economic agents might have partially discounted when the attacks happened that the PP was going to lose the election, or more seemingly, that the probabilities of the PSOE to win the election increased.

The second event window we estimate corresponds to the impact of the Spanish general election results in Spain. A three-day event window, which is usually the window length chosen for general event studies with daily data, is not necessarily the best way to estimate in this case. Because the effects of a change in a government are of a higher and deeper importance than particular events affecting a firm, it might take some more days for the agents to fully understand to its whole extend the nature of the change. That is why we prefer a five-day event window instead. In order to ensure the robustness of the results, we roll back and forward the window presenting results for groups of companies for each model with 4, 5 and 6 days (meaning returns from March 15th to 18th, 15th to 19th and 15th to 22nd). In Section 3, we also test for the joint significance of the attacks plus the election as if they were a single event and we do this for windows between the day of the attacks and the next Monday (3 working days), Tuesday (4 days) and so on until Monday of the following week (8 days).

Once the Wald test is computed, we proceed to compute the bootstrapped p-values in those cases where the null hypothesis has been rejected. Due to the fact that this method is very computationally-intensive, if the hypothesis is rejected in all event windows, we bootstrap only for the 5-day event window as in Table 2.

2.3. Hypotheses

We test a number of hypotheses related to the political economy literature (see for example Persson and Tabellini, 2000): the partisan theory at the macro level; the partisan theory at the micro level; the capture theory of policy makers; and the theory of collusion between politicians and managers combined with the agency theory of a conflict of interest inside firms and in the political arena.

- **Macro-level partisan theory.** According to this theory, political parties represent different constituencies with different interests. Due to political transaction costs, issues need to be aggregated in a few dimensions, and political parties differ in these broad dimensions. This is

reflected for example in different macroeconomic policies. Historically, the macro-economic differences that were postulated assumed the existence of a trade-off between unemployment and inflation, left parties being more pro-employment and right parties being more anti-inflation (Hibbs, 1977). More modernly, these macro-policies were assumed to take the form of left parties being more pro-public investment and pro-welfare state and right parties being more pro-market, pro-tax reductions or pro-supply side policies, depending on the interpretation or emphasis (see Boix, 1996). If a higher inflation and a higher public deficit lead to increasing interest rates, this has a negative impact in general on firms' profits, and we should expect a higher probability of left-wing policies being implemented causing lower stock valuations in general.

- **Micro-level partisan theory.** Some authors, such as Herron et al. (1999), claim that macro-level policies may hide partisan differences at the micro-level. Even if public deficits or inflation end up being very similar under right or left governments, differences in defence policies, environmental issues or other policies affecting particular industries may be significantly different. For example, using data for the 1992 US election, Herron et al. (1999) show that 15 out of 74 sectors (20%) had a stock price performance which denoted that investors in these sectors were not indifferent between presidential candidates. In Spain in the first years of the XXI Century, one important specific industry was subject to important policy controversies: the electricity industry. This industry was experiencing a takeover wave all over Europe as a result of the liberalization of energy at the European Union level. As a result, all major Spanish electricity firms were actors in the market for corporate control, either as targets or acquirers. The two main political parties in Spain approached the issue with the objective of keeping Spanish firms under Spanish owners, but whereas the Popular Party tried to do this between 1996 and 2004 by trying to stop any takeover and any subsequent reduction in the number of firms, the Socialist party hinted during the 2004 electoral campaign that it would not block mergers between Spanish firms (see Trillas, 2006).

- **Capture:** groups of citizens may overcome free-riding problems and organize in lobbies or interest groups to influence the policy choices of some politicians (Grossman and Helpman, 2002). It is usually claimed that firm' owners or input providers may find it easier to overcome such free-riding problems than consumers, the latter being more atomized and having less at stake per capita in many policies. The same firms or groups of firms may find it easier to access some political parties than others, for geographic or historical reasons. In Spain, minority Catalan nationalist parties usually have a strong influence on Spanish governments when the Spanish government does not have an overall majority. In addition to this, the Socialist Party is usually the first party in Catalonia in general elections, whereas the Popular Party usually has a

small representation in this region. Besides, just some months before the March 2004 General Election, a new coalition autonomous government had been formed in Catalonia between the Socialist and two other left-wing parties, one of them nationalist. Hence it could be expected that investors in Catalan firms would benefit from a victory of the Socialist Party because Catalan firms could then have an easier access to central policy-makers.

- **Capture and agency.** Agency problems in politics (voters not perfectly controlling politicians) and inside firms with dispersed shareholdings (shareholders not perfectly controlling managers) may be at the root of collusion episodes between politicians and managers (Trillas, 2004). In the case of Spain, the privatization of major firms selling the assets to a dispersed shareholding facilitated the appointment of managers close to the PP government (Bel and Trillas, 2005), something that a new Socialist government would possibly try to reverse.

3. The joint impact of the election on all the firms in the sample

By testing the hypothesis that the attacks and the election had a significant impact on all the companies in the sample, we are effectively testing whether the surprise election following the terror attacks had a significant effect on the stock market as a whole.

In order to do this, we perform a Wald test to the dummy variables and bootstrap results when the variable results are significant due to over-rejection problems of the test in the SUR framework¹⁴. Now the Wald test is performed to the whole of the 87 companies included. Table 2 reports the results, distinguishing between models M1 and M2 and on the event windows used.

Table 2

		M1			M2		
		4 days	5 days	6 days	4 days	5 days	6 days
Terror Attacks Effect	event window length (election effect)						
	<i>Wald test</i>	117.56	117.92	119.57	107.55	107.94	109.41
	<i>p-values</i>	0.0162	0.0153	0.0118	0.0699	0.0637	0.0525
	<i>Bootstrap p-values</i>	-	0.2359	-	-	0.3017	-
Election Effect	<i>Wald test</i>	116.40	97.33	102.14	115.17	97.97	97.96
	<i>p-values</i>	0.0194	0.2106	0.1278	0.0233	0.1978	0.1982
	<i>Bootstrap p-values</i>	0.2470	-	-	0.3966	-	-

¹⁴ As discussed in section 2.2, we then perform the bootstrap in the 5-day window case.

As inspection of Table 2 shows, the Wald test rejects the null hypothesis of no effect of the terror attacks across the different event windows. Nevertheless the bootstrap exercise in the 5-day event window shows that there is no statistically significant effect of the terror attacks in the market as a whole. In the case of the election effect, the Wald test itself already does not reject the null hypothesis of no effect with its asymptotical critical values in 4 out of 6 cases. In order to confirm this result, we compute the bootstrap structure of the test in the other 2 cases, resulting in both cases in the confirmation of the no effect hypothesis of the election results in the stock market. As a whole, one would conclude that neither the terror attacks nor the election result affected the Spanish economy as a whole. That would reject partisanship and it would be consistent with convergence theories such as the median voter theorem.

This methodology has not been used by other studies that test for the effect of political results on the stock market as a whole. Traditionally, these studies (see for example Vuchelen 2003) regressed a national stock market index with dummy variables for the dates in which there were political events. We also did this (and it is available upon request) with mixed results: the variable for the terror attacks was significant (more on this in Section 5) but not the variables including the effect of the election results. However, it is doubtful in statistical terms that one can infer any conclusions from such simple approach. More specifically, one cannot invoke a central limit theorem with 2 observations (in the case of the terror attacks). The randomness of the result is too high.

Table 3

		M1						M2					
event window length (election effect)		3 days	4 days	5 days	6 days	7 days	8 days	3 days	4 days	5 days	6 days	7 days	8 days
Joint effects (2 pre- election days +)	<i>Wald test</i>	195.62	138.73	97.21	99.30	105.23	116.89	238.31	157.79	104.29	109.64	111.82	129.31
	<i>p-values</i>	0.000	0.000	0.213	0.173	0.089	0.018	0.000	0.000	0.099	0.059	0.037	0.002
	<i>Bootstrap p-values</i>	0.0374	0.269	-	-	-	0.384	0.020	0.154	-	-	0.465	0.231

Table 3 shows that the joint effects of the attacks and the election were only significant if we take a very narrow event window (the three working days between the terror attacks on Thursday and the day after the election, and even in this case with border line significance).

Nonetheless, as opposed to standard papers that test only for 'macroeconomic partisanship' in a country using this methodology, we also test for 'microeconomic partisanship' and related hypotheses in the next section.

4. Testing convergence versus partisan at the micro level, agency and capture theories using individual companies' or industries' expectations

4.1. Partisan effects on industries

Political partisanship implies that different parties have different visions about the priorities of the country and, in the equilibrium of the platform setting game, they run into the elections with different platforms, and the platform of the winning party is implemented. For example, a hypothetical partisan industrial policy of the Spanish Socialist party included restructuring the electricity market in Spain, attaining an industry with higher concentration and creating 'national champions' in the electricity market, capable of competing in the European Energy Market, due to come into force in June 2007. We do not imply with this that PSOE favours 'national champions' while PP does not. The partisan hypothesis is not about PSOE generally favouring 'national champions' and PP not¹⁵. It is specific to the electricity sector, as the PP Government had committed itself to keeping the number of companies in the electricity market, and had honoured the commitment by stopping any merger. The arrival of a PSOE government might have caused a change on the prospects of the sector, by making possible the completion of successful transactions in the market for corporate control.

If this were the case, then again the political change in Spain on March 2004 would have caused abnormal returns on the electricity sector as a whole, as the effect of a prospective partisan policy of the socialist party in the electricity sector would have caused the returns to differ from zero, negatively or positively depending on the market's estimate of this policy's effects.

We can test whether whole economic sectors are affected by partisan policies, much in the same way as it is done in Herron et al. (2000) for the American economy.¹⁶ Using the Wald test, we formulate for a number of industries in the Spanish economy the following hypothesis:

¹⁵ In fact, the PP Government (1996-2004) threatened to use its golden share to stop the merger of Telefónica with the Dutch company KPM. Bel and Trillas (2005) find evidence in this particular case that this Government's veto was not driven by a will to protect Telefónica's shareholders, but by the fear of losing its residual control over the company.

¹⁶ We also test whether political change had a significant effect on each company separately. We perform the t-test on all companies included in the estimation (available upon request). Only 3 companies out of a sample of 87 have significant abnormal returns robust to the estimation with both M1 and M2 and the different size of the event windows: Iberpapel, a paper company, Endesa, and Red Eléctrica Española, the two latter ones both electricity companies. Endesa has in all the 6 cases negative abnormal returns at the 1% confidence interval.

$$(3) \quad \begin{cases} H_0 : \gamma_{1a} = \gamma_{2a} = \dots = \gamma_{sa} = 0 \\ H_A : NoH_0 \end{cases}$$

where $i = 1, \dots, s$, and s is the number of companies in a particular sector, while the gammas are the parameter coefficients related to the political change event window.

We use the official industry division of the MCM Stock Exchange to test for the hypothesis that a particular sector was affected by the election results (see Appendix). Table 4 shows that the only economic industries in which the null hypothesis is rejected in all cases are the electricity and gas industries. In these industries, in 5 cases the null is rejected at the 1% confidence interval and in one case at the 5% confidence interval. This result is consistent with the hypothesis that the winners had a partisan interest in changing the structure of the electricity and gas market. The bootstrap p-values in Table 7 (see below, Section 5) confirm these levels of significance of the rejection of the null hypothesis.

The media industry is affected in 5 out of 6 cases, but only at the 10% confidence interval using the standard asymptotic critical values. Using the bootstrap p-values though, it is shown that using M1 the effects are statistically non-significant anymore, while using M2 they remain significant at the 10% confidence interval. Even though these results are weak, this result might express the fact that relevant companies in the industry such as Recoletos, Telecinco or Antena3 where lacking data and could not be included in the regression model. Then only three companies were included, two of them closely related one to another (Prisa and Sogecable), and commonly considered to be supportive of the Socialist party.

Table 4. Effect of the election results on specific industries: Wald test.

H0: No effect of the election results on the industry

event window length	M1			M2		
	4-days	5-days	6-days	4-days	5-days	6-days
Oil	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo
Electricity and gas	RHo***	RHo***	RHo**	RHo***	RHo***	RHo***
Water and others	-	-	-	-	-	-
Minerals, metals and transformation of metal products	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo
Machinery goods	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo	RHo**
Construction	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo	RHo**
Construction materials	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo
Chemical industry	-	-	-	-	-	-
Engineering	-	-	-	-	-	-
Aerospatial	-	-	-	-	-	-
Food and beverages	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo
Clothes	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo
Paper and graphic arts	NoRHo	NoRHo	NoRHo	RHo*	NoRHo	NoRHo
Cars	-	-	-	-	-	-
Pharmaceutical and Biotechnology	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo
Other consumption goods	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo
Tourism and entertainment	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo
Trade	-	-	-	-	-	-
Media	RHo*	RHo*	RHo*	RHo*	RHo*	NoRHo
Transport and distribution	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo
Highways and parkings	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo
Other services	-	-	-	-	-	-
Banking	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo
Insurance	NoRHo	NoRHo	NoRHo	RHo*	RHo*	RHo*
Financial investment	-	-	-	-	-	-
Real Estate	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo
Telecommunications	NoRHo	NoRHo	NoRHo	RHo*	NoRHo	NoRHo
Electronics and software	NoRHo	NoRHo	RHo*	RHo**	RHo*	RHo***
Technological hardware	-	-	-	-	-	-

Note 1: *RHo* (Null Hypothesis is rejected). *NoRHo* (Null Hypothesis is not rejected)

Note 2: When in some industry there are not at least two companies, Wald test is not performed

Note 3: ***, 1% confidence interval; **, 5% confidence interval; *, 10% confidence interval.

4.2. Testing agency and capture theories

Any theory making predictions about the determinants of firm's profits, be these regulatory policies, movements in the corporate control market, managerial or rivals' decisions, etc., can be tested by an event study, if the event is not anticipated. Partisan versus convergence theories are certainly not the only ones that can be tested. We focus here on the potential of this event study to shed light on capture and agency theories relating to the relationship between firms and politics in Spain.

Elsewhere (see Bel and Trillas, 2005) it has been suggested that corporate governance in large Spanish firms give a lot of discretion to managers, and that they may take advantage of this great discretion by sharing rents with politicians in exchange for favours to political parties, in the form of appointing party cronies, funding media empires or supporting particular policies. In this case, an unexpected change in the ruling party implies a break in long term collusion contracts and possibly the signing of new contracts, for example by favouring the government the appointment of new managers through pressures over key shareholders.

Agency problems may explain the fact that society is not fully able of controlling politicians, who can take decisions seeking particular and not general interests. Bel and Trillas (2005) find evidence consistent with collusion between the PP Government (1996-2004) and the managers of Telefónica, a telecommunications firm. Other state-owned companies where this type of collusion between managers and politicians could have happened where privatised as well during the PP government. We hypothesise that the new PSOE government intended to reverse this situation by promoting the replacement of managers in companies previously privatised by the PP. One of the possible ways of doing this is by promoting takeover bids over these companies. If this were the case, abnormal returns would have been experienced in these companies when the PSOE won the election, as this possibility would have been discounted by the market.

The theory of capture (see Grossman and Helpman, 2002) might involve not only capture of the government by firms, but also other agents might find themselves in a position of influencing the government in a certain way. The theory of political coalitions (Riker, 1962) tries to explain the motivations of the political parties to engage themselves in a coalition. This coalition can have very different forms, ranging from ministerial involvement of the minority party to formal

agreements on policies that will be passed during the legislature.¹⁷ Bergman (1995) defines the general motivations of a party to form a coalition: ministries, policies, votes and cohesion. It is very common in many European countries, such as Norway, Finland, Sweden, Germany or Italy, to consistently have minority governments over time (Laver and Schofield, 1998).

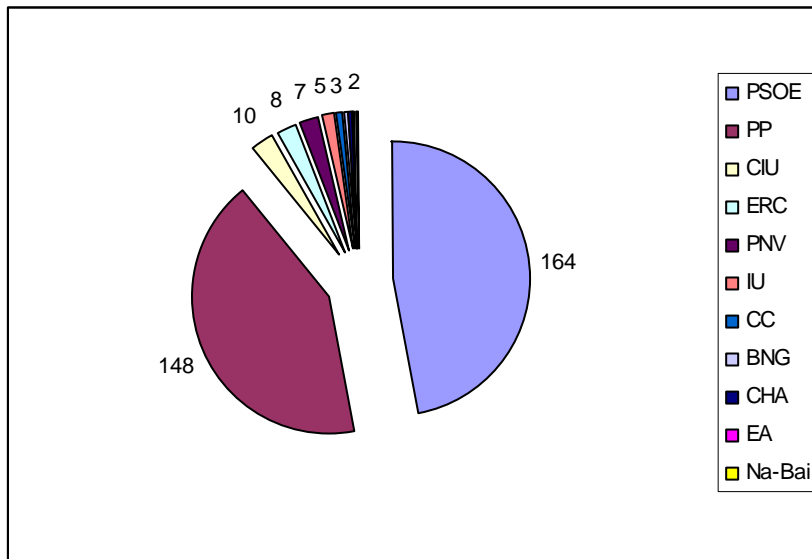
The Spanish political structure consists of two major political parties (PP and PSOE) and a certain number of smaller parties, generally regional and nationalist from Spanish historical regions. It happens rather often that the governing party, should not it have gained overall majority in the election, depends on the votes of these parties, generally Catalan nationalist parties (possibly among others), to rule. Given that PSOE did not obtain an overall majority, political prices might have been paid to Catalan parties, in this case favouring Catalan companies. If this were the case positive abnormal returns would have been obtained by Catalan companies from the prospect of a political coalition between PSOE and the Catalan nationalist parties.

Hence, one hypothesis to test is that *PSOE was favouring Catalan companies in order to satisfy the demands of Catalan parties supporting PSOE's government.*

Looking at chart 1, it is clear that even though the PSOE won the election, it needed other parties to support the new government. In particular, CiU and ERC, two minority nationalist Catalan parties, and the third and fourth parties in the parliament in number of seats, were the most likely candidates for this role, and rapidly offered themselves to collaborate with the PSOE after the election. If the market expected that there was a chance that this alliance could materialise and implement policies in support of Catalan firms, the latter would have experienced positive abnormal returns.

¹⁷ Reniu (2001) notes that in exchange for the parliamentary support to the PSOE (1993-1996) and PP (1996-2000) governments, CiU, a minority nationalist Catalan party, obtained in the first case a very low profile opposition of PSC-PSOE in the regional parliament of Catalonia, while in the second case obtained the support of PP's parliamentarians in the Catalan regional government.

Figure 1. 2004 General election results. Seats in Parliament by political party



Source: *El Mundo*

Then again, a Wald test suffices to test for this hypothesis:

$$(19) \quad \begin{cases} H_0 : \gamma_{1a} = \gamma_{2a} = \dots = \gamma_{sa} = 0 \\ H_A : \text{No}H_0 \end{cases}$$

Where $i = 1, \dots, s$ is referred to all the Catalan companies.

We identify Catalan companies as those companies in the sample having its headquarters in Catalonia. 12 out of 87 are Catalan companies according to this criterion: Abertis, Agbar, Banc Sabadell, Catalana-Occidente, Colonial, DOGI, Ercros, GN, Mecalux, Miquel i Costas, Seda Barna and Service Point. The Wald tests on the three event windows and with the 2 different models described above, as shown in Table 4, do not reject the null hypothesis of no abnormal returns in any case. It follows that the hypothesis is rejected by the data.

Another hypothesis to be tested that combines agency problems (between voters and politicians, and between shareholders and managers) and capture (in the form of collusion between politicians and managers), is that *the new government wanted to promote the replacement of CEOs appointed by the former PP government in key strategic sectors privatised during the PP years.*

If this were the case, then abnormal returns would have occurred in these companies as the expectation of a potential change in the management of these companies would have produced significant movements in the returns.

$$(20) \quad \begin{cases} H_0 : \gamma_{1a} = \gamma_{2a} = \dots = \gamma_{sa} = 0 \\ H_A : NoH_0 \end{cases}$$

where $i = 1, \dots, s$ stands for companies privatised under the PP period and assumed to be under the control of this party.

Six companies were privatised during the PP period in government: Telefónica (which afterwards spun-off Telefónica móviles), Argentaria (which became after a merger BBVA), Iberia, Altadis, Endesa and Repsol. The Wald tests reject the null hypothesis of no effect on the group of companies as a whole at the 1% confidence interval in all cases (Table 5). The bootstrapped p-values confirm these levels of significance (see Table 7 below, in Section 5).

Table 5. Effect of the election results on Catalan companies and companies formerly privatised by the PP government: Wald tests.

event window length	M1			M2		
	4-days	5-days	6-days	4-days	5-days	6-days
Hypothesis 3: Catalan companies	0.422304	0.458308	0.464842	0.655269	0.591586	0.776163
Hypothesis 4: PP privatized companies	4,186278***	4,111859***	2,771734***	4,678475***	4,249329***	3,392266***

Note: ***, 1% confidence interval; **, 5% confidence interval; *, 10% confidence interval

Therefore, the results do not reject the hypothesis of collusive and agency problems as the election results had a significantly different from zero impact on this group of companies.

5. A remark on the effects of the terror attacks

The terror attacks in Madrid on March 11 2004 had a potential double effect in the economy. First, the attacks might have directly affected certain industries. Second, the attacks might have had the effect of increasing the probability of PSOE winning the election, and therefore if any company or group of companies were affected (positively or negatively) by the change of government, the effect of the terror attacks on their returns would have been different from zero. This is why in our model we used two different event windows (one for the terror attacks, another for the election results), in order to avoid considering as consequences of the election results something that was directly related to the attacks themselves. In this short section, we

want to show this double effect of the attacks with an example of its effect on specific industries. Table 6 presents the effects of the attacks by industry as in Table 4. Table 7 presents the bootstrapped p-values for those industries where the null hypothesis of no effect of the terror attacks is rejected robustly.

Table 6. Effect of the terror attacks on industries: Wald test

H0: No effect of the terror attacks on the industry

event window length	M1			M2		
	4-days	5-days	6-days	4-days	5-days	6-days
Oil	NoRHo	NoRHo	NoRHo	RHo**	RHo**	RHo**
Electricity and gas	RHo**	RHo**	RHo**	RHo***	RHo***	RHo***
Water and others	-	-	-	-	-	-
Minerals, metals and transformation of metal products	RHo**	RHo**	RHo**	RHo***	RHo***	RHo***
Machinery goods	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo
Construction	-	-	-	-	-	-
Construction materials	NoRHo	NoRHo	NoRHo	RHo*	RHo*	RHo*
Chemical industry	-	-	-	-	-	-
Engineering	-	-	-	-	-	-
Aerospatial	-	-	-	-	-	-
Food and beverages	NoRHo	NoRHo	NoRHo	RHo**	RHo**	RHo**
Clothes	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo
Paper and graphic arts	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo
Cars	-	-	-	-	-	-
Pharmaceutical and Biotechnology	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo
Other consumption goods	NoRHo	NoRHo	NoRHo	RHo*	RHo*	RHo*
Tourism and entertainment	RHo***	RHo***	RHo***	RHo***	RHo***	RHo***
Trade	-	-	-	-	-	-
Media	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo
Transport and distribution	NoRHo	NoRHo	NoRHo	RHo**	RHo**	RHo**
Highways and parkings	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo
Other services	-	-	-	-	-	-
Banking	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo
Insurance	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo
Financial investment	-	-	-	-	-	-
Real Estate	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo
Telecommunications	NoRHo	NoRHo	NoRHo	RHo*	RHo*	RHo*
Electronics and software	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo	NoRHo
Technological hardware	-	-	-	-	-	-

Note 1: *RHo* (Null Hypothesis is rejected). *NoRHo* (Null Hypothesis is not rejected)

Note 2: When in some industry there are not at least two companies, Wald test is not performed

Note 3: ***, 1% confidence interval; **, 5% confidence interval; *, 10% confidence interval

Three industries are robustly affected by the (two-day event window combined with four, five or six-days event windows for the election event) terror attacks: Tourism and entertainment, Minerals, metals and transformation of metal products and Electricity and gas. As shown in Table 2 the only of these three industries affected by the election result was Electricity and gas. Results reported in Table 4 suggest that while the two former sectors were genuinely affected by the attacks themselves, the effect on the Electricity and gas sector was more likely to be related with the variation in the likely winner of the election that were being held three days after the attacks occurred. This is consistent with results discussed above.

Table 7 shows Bootstrapped p-values obtained from the 5-days election results event window model, compared to the p-values of the Wald test

Table 7. Bootstrapped p-values

		M1		M2	
		Wald	Bootstrap	Wald	Bootstrap
Election results	Media	0,099	0,119	0,079	0,086
	Electronics	-	-	0,095	0,106
	Electricity	0,000	0,001	0,000	0,002
	PP privatised companies	0,000	0,005	0,000	0,004
	Insurance	-	-	0,070	0,112
Terrorist attacks	Electricity	0,042	0,091	0,002	0,022
	Minerals	0,031	0,058	0,004	0,023
	Construction materials	-	-	0,067	0,113
	Food and beverages	-	-	0,048	0,101
	Other consumption goods	-	-	0,071	0,092
	Tourism and entertainment	0,005	0,030	0,000	0,007
	Transport and distribution	-	-	0,021	0,043
	Telecommunications	-	-	0,086	0,118

6. Conclusions

This study shows that the forces of political convergence are quite strong. Political rhetoric in Spain is acrimonious, and memories of the 1936-1939 Century Civil War and the 1939-1975 General Franco's Dictatorship are (and have increasingly been in the recent past) commonly used in the political debate. However, shareholders of quoted firms seem on average quite indifferent between political parties.

Post-election political evolution confirms that macro-economic policy has not been the main political cleavage between right and left in Spain. Although Prime Minister Zapatero was portrayed by the opposition as the most radical Prime Minister in Spanish democratic history,

the Finance Minister between 2004 and 2008 was Pedro Solbes, a former EU Commissioner committed with fiscal discipline and macro-economic stability, who had also been Finance Minister in the González governments of the early 1990's, when Spain applied for membership in the Euro area. The opposition focused on nationalist tensions as the main political issue, and it concentrated on economic issues only¹⁸ on occasion of the takeover of the electricity firm Endesa and similar matters related to corporate control and regulatory institutions (mainly microeconomic issues¹⁹).

The overall results we obtain are consistent with no partisanship in macro terms (so no effect on expected macro policies such as fiscal policy, inflation, public expenditure or unemployment policies that may affect the market as a whole) but partisanship in micro terms (so for particular industries that may be affected by the political structure of Spain and its business-politicians networks). Taking the same (4, 5 and 6 days) event windows, we find a significant impact of elections on two groups of companies and no significant impact on the market as a whole.

A small number of companies were indeed affected by the election result analyzed in this article, but these exceptions seem more related to political capture than to the ideological contour of policies. We conjecture (and presented some statistical evidence consistent with it) that firms in the energy industry were vulnerable to movements in the market for corporate control aimed at removing managers appointed in the privatization process leaded by the previous government. Firms in the media sector may reflect a structure characterized by a strongly partisan nature.

Parties may indeed diverge in non-economic policy dimensions, such as social, religious and cultural norms, foreign policy, or the degree of institutional decentralization (for example, they bitterly fight over how to put an end to violence in the Basque Country). But the profit expectations of the vast majority of quoted firms are unaffected.

Our exercise is based on the event study methodology, which depends on market expectations and, in particular, the results are meaningful only to the extent that the semi-strong version of the efficient financial markets hypothesis holds. Besides, partisan macro-economic effects could have an impact on agents that are not the investors in quoted firms, but workers, consumers, or

¹⁸ In the 2008 general election campaign economic conditions became an issue. In this case, the PP opposition was trying to blame government for slowing economic growth; macroeconomic platform differences, however, remained difficult to spot.

¹⁹ However, in February 2007 the two main political parties were reaching an agreement on takeover and competition policy legislations.

investors in other firms. Finally, the events could have an impact on stock market volatility, something we aim at exploring in future research²⁰. With the quantitative evidence gathered so far, however, we find that investors in quoted firms in general are not significantly affected by partisan policies. Differences over economic policies between right and left vary over time and across countries; in 2004 in a Euro-area country such as Spain, there is no clear and robust evidence of significant differences. If there were any differences these were limited to a few microeconomic policies.

²⁰ We estimated a GARCH (1, 1) on the returns of the IBEX-35 and found some weak evidence of impact on the volatility of the whole market caused by the terror attacks. The terror attacks had a positive and significant effect on the volatility while the election results had a positive but non-significant effect. However and as previously discussed in section 3, it is statistically doubtful one can extract conclusions from such a procedure where a Central Limit theorem is invoked with 2 and 5 observations.

Appendix

Companies grouped by industries

Economic sector	Company
Oil	Cepsa Repsol
Electricity and gas	Endesa Enagas Iberdrola Gas Natural Red Eléctrica Unión Fenosa
Water and others	-
Minerals, metals and transformation of metal products	Acerinox Turbacex
Machinery goods	Azkoyen Gamesa Duro Felguera Mecalux Zardoya Otis
Construction	ACS Acciona FCC Ferrovial Sacyr Vallehermoso
Construction materials	Portland Uralita
Chemical industry	-
Engineering	-
Aerospacial	-
Food and Beverages	Campofrio Ebro Puleva Natra Pescanova SOS Cuetara Viscofan
Clothes	Adolfo Dominguez Dogi Inditex Sniace
Paper and Graphic Arts	Ence Iberpapel Miquel i Costas Europac Unipapel
Cars	-
Pharmaceutical and Biotechnology	Puleva Biotech Faes Natraceutical Zeltia
Other consumption goods	Altadis Vidrala
Tourism and entertainment	NH Hoteles Sol Melia Telepizza
Trade	-
Media	Prisa Sogecable TPI
Transport and distribution	Iberia Logista
Highways and parkings	Abertis Europistas
Other services	-
Banking	Banco Andalucía BBVA Bankinter Banesto Banco Valencia Banco de Credito Balear Banco Guipuzcoano Banco Pastor Banco Popular Banc Sabadell BSCH
Insurance	Catalana Occidente Mapfre
Financial investment and holding	-
Real Estate	Inmocaral Colonial Metrovacesa Urbis
Telecommunications	Tecnocom Jazztel Telefonica Telefonica moviles
Electronics and software	Amper Indra
Technological hardware	-

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