Are Investors Concerned by Annual Corporate Governance Reports? Some Evidence from the Spanish Stock Market

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While prior research has generally shown a positive price reaction to voluntary declarations of compliance with codes of corporate governance, this is the first paper to examine how investors react to the release of mandatory corporate governance reports. Positive reactions to declarations of compliance are generally interpreted in terms of signalling effects for those companies more committed with transparency. However, once corporate governance reports are mandatory, such signalling effects make no sense anymore. In the current context, the market would react according to the relevance of the information conveyed by the report. While prior related research has examined market reactions only through the behaviour of returns, we use three indicators: returns, price volatility and trading volumes. Our main result would be the lack of a significant market reaction to the release of corporate governance reports. This finding is robust as it is reported for each indicator of market reaction. However, for some subsamples of firms we show some weak reactions in the lines suggested by the agency theory. Our results might have some implications for regulators and policy makers when designing corporate governance regulations.

Introduction

According to Aguilera and Cuervo-Cazurra (2009), the globalization of the world economy and the high profile corporate scandals in many countries would explain the relevance of corporate governance for policy makers, business practitioners, media and the academia. On the one hand, because international investors demand better and more standardized corporate governance practices. On the other hand, loss of confidence in firm's accountability caused by corporate scandals has favoured an increasing demand for sounder corporate governance structures and practices.

Implementation and endorsement of codes of corporate governance (hereinafter, CCG) has been governments' typical reaction to the demand of better governance. Following Weil *et al.* (2002), CCG are non-binding set of principles, standards or best practices, issued by a collective body, and relating to the internal governance of corporations. According to Aguilera and Cuervo-Cazurra (2004), since these codes are typically non-binding, they are viewed as 'soft regulation', in contrast to attempts at improving governance through 'hard legislation' (e.g., the US Sarbanes-Oxley Act of 2002). Hence, CCG aim to enhance corporate governance by giving recommendations and/or suggestions of behaviour, assuming that market forces will compel companies to follow them (Goncharov *et al.*, 2006).

In addition to information on compliance with the provisions of CCG, some countries require the disclosure of corporate governance information. For example, Spanish listed companies are required to publish the Annual Corporate Governance Report[1] (hereinafter ACGR). The report shows the compliance with CCG recommendations, as well as very detailed information on, for example, ownership structure, board composition, remuneration and annual general meetings.

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[1]*Informe Anual de Gobierno Corporativo de las Entidades Emisoras de Valores Admitidos a Negociación en Mercado Secundarios Oficiales.*

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As ACGR are mainly the result of market participants' demands of greater transparency, it seems logical to wonder about its informational relevance. With a sample of Portuguese public companies, Alves and Mendez (2004) observed a positive relationship between compliance with corporate governance recommendations about structure and functioning of the board of directors and annual abnormal returns. Similarly, for the German stock market, Goncharov *et al.* (2006) reported that firms with higher levels of compliance with CCG showed significantly higher stock returns. However, both papers studied long-term market reactions. With a short-term focus, both Fernandez-Rodriguez *et al.* (2004) and Del Brio *et al.* (2006) observed a positive price reaction to announcements of compliance with the Spanish CCG. Similar to these authors, we investigate short-term market reactions to the publication of ACGR. We aim to provide evidence on the relevance of ACGR for market participants. There are, however, important differences between our paper and both, Fernandez-Rodriguez *et al.* (2004) and Del Brio *et al.* (2006). When they carried out their respective studies, Spanish companies could voluntarily issue a declaration of compliance with CCG[2] or with some of its recommendations. Thus, both papers studied the impact of voluntary declarations of compliance, understood as an exercise of transparency. According to Nowak *et al.* (2006), due to information asymmetries, outside investors may not be able to differentiate between firms with good and bad governance quality. Hence, when a firm agrees to follow CCG, it demonstrates commitment and initiative in enacting good governance procedures, and a willingness to increase transparency. Conversely, 'if a company decides not to report compliance with the code, it hinders efficient monitoring by the market and, as a result, will immediately be punished by a depressed stock price' (Nowak *et al.* 2006: 19). Since the approval of the Unified Code in 2007, Spanish listed companies are required to fulfil the ACGR. Thus, as declarations of compliance with CCG are not voluntary any more, we are not addressing the signalling effects of declarations of compliance with CCG, but the very relevance of the information conveyed by ACGR for market participants.

This paper aims to contribute to the literature by extending prior research on the relevance of corporate governance information in two ways. First, as discussed above, while the available research focuses on the price effects of voluntary declarations of compliance, our main interest is on the relevance of the information disclosed in ACGR. Therefore, unlike prior research, we address the relevance of the ACGR, which includes not only information about compliance with the CCG but also very

detailed information about governance structure and practices. Second, while prior related research has measured market reaction exclusively through the behaviour of stock returns, we study returns, volatility and trading volumes. This approach, common in other research topics such as the information content of earnings announcements (e.g., Kim and Verrecchia, 1991; Atiase and Bamber, 1994) or shareholders meetings (e.g., Firth, 1981; Olibe, 2002), allows a better understanding of the relevance of corporate events for market participants. The necessity to examine trading volumes is clearly posed by Kim and Verrecchia (1991: 316) 'the use of volume in conjunction with returns could identify systematic differences in investor's knowledge or other characteristics which result in different reactions to public announcements'. Finally, from a more practical view, our results might be useful for regulators and policy makers when deciding about the design of regulations to enhance corporate governance. Companies are currently required to fulfil a very detailed report informing about their corporate governance practices and structures. In this vein, the results of this research may inform the debate about the costs and benefits of this mandatory regulation.

In anticipation of our results, we do not observe significant market reactions to the release of ACGR. Thus, market participants do not seem to view ACGR useful when making investment decisions. This result seems to be robust, as it is observed for each indicator or market reaction and also with both parametric and non-parametric tests. However, for some subsamples of firms we show some weak reactions in the lines suggested by the agency theory. Overall, our results might involve some practical implications for regulators and policy makers, as they question the usefulness of corporate governance reports, or even the very 'comply or explain' approach.

The remainder of the paper is organized as follows. The next section highlights the main features of the Spanish institutional setting. The following sections review the literature and develop the hypotheses, respectively. Then, we present the methodology and describe the dataset. Finally, results are discussed and conclusions are drawn in the last section of the paper.

The Spanish institutional setting

The first Spanish CCG was approved in February 1998 (CNMV, 1998). Officially named, Spanish Code of Best Practices, it was usually known as 'the Olivencia Code', after the president of the committee who prepared the code. It contains 23 recommendations on responsibilities, structure and organization of the board of directors. As in other countries, compliance with the recommendations was purely voluntarily. As posed by Fernandez-Rodriguez *et al.* (2004), the code included some particular provisions

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[2]During the research period in Fernandez-Rodriguez *et al.* (2004) and Del Brio *et al.* (2006) the Spanish CCG was the 'Olivencia Code'.

(i.e., about the protection of minority shareholders) with the aim to reflect institutional characteristics of the Spanish setting.[3] Additionally, those companies which had voluntarily assumed the code had also to fulfil a corporate governance report structured in five blocks.[4] Two years after the publication of the code, the Spanish Supervisory Agency (*Comissão do Mercado de Valores Mobiliários* – CNMV, 2000) issued the first report analysing the level of compliance. Only 61 companies, representing 70% of Spanish stock market capitalization, had answered the questionnaire. Moreover, the respondents followed, on average, 81% of the recommendations and only two companies followed all 23 recommendations. The CNMV explicitly qualified these levels of compliance as 'disappointing'. The recommendations with the lowest levels of compliance were those related to the establishment of age limits for executive directors; formal procedures for the election of directors; transparency in management compensation; and the creation of board committees composed exclusively by non-executive directors. In 2002, the so-called 'Aldama Commission'[5] was created in order to assess the level of compliance of the Olivencia Code and to propose provisions to enhance transparency and security in the stock market. The commission issued the so-called Aldama Report in 2003 (CNMV, 2003). According to the CNMV (2005: 6) 'good practice in corporate governance should remain in the self-regulation sphere, subject to the "comply or explain" approach'. Yet it also proposed self-regulation to be supplemented by certain mandatory rules regarding core duties of transparency and disclosure in corporate governance matters, the definition and regulation of directors' duties of loyalty and diligence and the obligation of listed companies to draw up corporate governance provisions regarding the operation of their board of directors and shareholders meetings. Following the Aldama Report, a number of corporate governance rules found their way into legislation.[6] Afterwards, in 2003 the Spanish Government required the CNMV to draft a single document on good corporate governance practices that would consolidate both, the Olivencia Code and the Aldama Report. As a result, in May 2006 the so-called Unified Code was approved (CNMV, 2006). It includes 58 recommendations relative to company bylaws, general shareholders' meeting, structure and operation of the board of directors and remuneration of directors and senior officers. Following the code's approval, since 2007 listed companies have to take the 58 recommendations as benchmarks in ACGR. The 2012 report of the CNMV (CNMV, 2012) showed that listed companies were compliant, on average, with 81% of recommendations and partially compliant with a further 8%. In 2015 a new CCG was issued by the CNMV.

Literature Review

Fernandez-Rodriguez *et al.* (2004) analysed stock price reactions to announcements of compliance with the Olivencia Code by Spanish firms. They observed positive market reaction to announcements of compliance with practices implying a major restructuring of the board of directors, whereas no wealth effects were reported for announcements related to isolated recommendations. Moreover, as firms with lower leverage and boards with higher percentage of executive directors showed higher abnormal returns, the authors concluded that investors valued the monitoring role of recommendations, especially for firms with lower leverage and in which managers dominated the board. Similarly, Del Brio *et al.* (2006) analysed the effects of compliance with the Olivencia Code on the value of Spanish firms, showing that higher levels of compliance increased value.[7] Alves and Mendes (2004) studied the relationship between the level of compliance with recommendations by CMVM and equity returns in Portugal. However, they did not follow the event study approach, as their interest was not the short-term effects of declarations of compliance, but the general relationship between compliance with the recommendations and stock returns. However, results were strongly consistent with the available evidence for Spain, showing a positive relationship between compliance and returns. As in Fernandez-Rodriguez *et al.* (2004), this relationship was driven by recommendations on the structure and functioning of the board of directors.[8] Following the same approach as Alves and Mendes (2004), Goncharov *et al.* (2006) concluded that compliance with the German code provided value-relevant information, as companies with higher levels of

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[3]For example, it distinguished three types of directors: non-executive directors representing large shareholders, non-executive independent directors and executive directors.

[4]These blocks were: (1) identification of the company; (2) principles guiding the company's corporate governance; (3) description of the companies system of governance; (4) the board of directors; and (5) level of compliance of the Code's recommendations.

[5]The official name of the Commission was: Special Committee to promote transparency and security in the stock market and quoted companies. However, it is usually known as 'Aldama Commission' after the president of the Committee, Professor Aldama.

[6]Most importantly, the Law 44/2002 of 22 November on Financial System Reform Measures and the Law 26/2003 of 17 July, known as 'The Transparency Law'. Among other provisions, it established that all companies with securities traded on official secondary markets had to create an Audit Committee. The Law also imposed measures to enhance auditor independence. The Transparency Law established disclosure regime for shareholder agreements that affect the exercise of voting rights at General Meetings, or restrict or constrain the free transfer of shares.

[7]Results also indicated that more transparent companies as well as those companies with unqualified audit reports showed higher increase in value.

[8]According to the authors, this relationship was mainly attributed to the compliance with recommendations on the executive committee.

compliance were priced with a premium. Conversely, but still for Germany, Nowak *et al.* (2006) did not find significant short or long run effects associated to declarations of compliance.

Hypotheses development

This section presents the hypotheses in the context of prior research on investors' reaction to corporate governance information. The research question is stated as follows: Do market participants find ACGR relevant? If ACGR convey relevant information, market participants will make investment decisions based on this information. We examine the effects of ACGR on three measures of informativeness: stock returns, price volatility and trading volumes. Following Brown and Warner (1985), hypotheses are posed in the null form. The first hypothesis examines the informativeness of ACGR without taking into account the characteristics of the firm. Next, hypotheses 2, 3 and 4 address whether ACGR informativeness depends on ownership structure, firm's size, or financial leverage, respectively.

Hypothesis 1: Market participants do not find ACGR informative

Assuming market efficiency, at least in the semi-strong form, there are two possibilities for H1. First, ACGR convey relevant information, which would have positive (negative) effects on the price of the stock if information is positively (negatively) evaluated by the market. Secondly, stock prices do not react to ACGR if market participants do not consider ACGR relevant. We would also expect higher volatility if the report conveys value-relevant information to the market, even if market participants do not agree on the evaluation (positive or negative) of the information. The examination of volatility is particularly important when (as it is our case) the event might involve positive or negative effects on returns for different companies. Similarly, the necessity to examine trading volumes was also clearly posed, among others, by Beaver (1968), Kim and Verrecchia (1991) and Bamber and Cheon (1995), because trading volumes preserved differences among individual investors beliefs that would be cancelled out in the averaging process implicit in the determination of equilibrium price. Thus, an event could be informatively relevant (increasing trading volume) even if no changes in prices are observed.

Hypothesis 2: Market participants do not find ACGR informative, even for companies with widely dispersed ownership
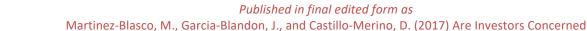
Hypothesis 2 examines the possibility that the relevance of ACGR might depend on ownership structure. High levels of free float (widely disperse ownership) are expected to increase agency problems due to the weaker incentives for the monitoring of managers (Shleifer and Vishny, 1997). As firms with stronger agency problems would be less willing to voluntarily disclose information to the market, the information provided by ACGR should be more relevant. In addition, similar to Gul *et al.* (2010), who observed that stock prices of firms with low ownership concentration were more informative, low ownership concentration makes it difficult the communication between managers and shareholders, thus making ACGR more informative. It could be argued, however, that managers and majority stockholders might expropriate minority stockholders' wealth. Thus, controlling shareholders would face incentives to limit the flow of firm-specific information to the market in order to keep opportunistic behaviour (Boubaker *et al.*, 2014). In such a case, low levels of free float would discourage voluntary information disclosures, making ACGR more informative. Nevertheless, similar to Fernandez-Rodriguez *et al.* (2004), we expect market reaction to be particularly significant for those companies with higher levels of free float.

Hypothesis 3: Market participants do not find ACGR informative, even for small firms

Investors in large firms are more likely to be better informed, as these firms receive more attention from the media and regulators (Diamond and Verrecchia, 1991; Harris, 1994). It is also well documented that large Spanish firms generate greater amounts of information than small firms (Garcia and Monterrey, 1993; Giner, 1997; Garcia and Sanchez, 2006). Moreover, small firms are particularly sensitive to the competitive disadvantages due to the disclosure of private information (Giner, 1997). Given the relatively lower levels of available information for small firms, the incremental information content of ACGR should be more relevant for small than for large firms. Thus, we expect market reaction to be particularly significant for small companies.

Hypothesis 4: Market participants do not find the ACGR informative, even for less indebted firms

Companies with higher financial leverage face greater agency costs, as there is a higher probability of wealth transference from debtholders to stockholders (Jensen and Meckling, 1976; Myers, 1977; Watts, 1977). In order to diminish agency costs and reduce any conflicts of interest, highly leveraged firms provide more detailed information to the market (Jensen and Meckling, 1976). Conversely, low leveraged firms would provide less

information as they are not as scrutinized by the market. However, it could also be argued that, following Jensen's agency problem of free cash flow, leverage could also reduce agency problems by binding the distribution of funds (Stulz, 1990), and therefore, disclosure would be less important in such cases. Nevertheless, given the less information available for low leveraged firms, as Fernandez-Rodriguez *et al.* (2004) we expect market reaction to be particularly significant for these firms.

Dataset and methodology

The following subsections present the sample and dataset used in this research and the methodology we propose to study the informativeness of ACGR, respectively.

Dataset

We examine changes in prices and trading volumes around ACGR release dates in Spain for the 2008–2011 four-year period (corresponding to fiscal years 2007–2010). We include all companies quoted in the Spanish Continuous Market for which ACGR release dates are

provided by the CNMV (see Appendix 1 for the company list). Our dataset was originally formed by 433 events. Yet, we applied the following filters to avoid potentially confounding events during the announcement window. First, we removed 248 events because the release of ACGR concurred with the presentation of financial statements (either intermediate or annual accounts). Second, we removed 10 events as the release of ACGR coincided with corporate announcements requiring a notification to the CNMV. On both filters, we considered a five-day window around the event day [−2, +2]. The sample, without potential confounding effects, consists of 175 events. Yet, one of them had to be removed from price (n = 174) and two from volume (n = 173) calculations due to lack of market information. Table 1 shows some descriptive information for our sample of companies. Next, Table 2 describes the year and industry distribution of events, in the latter case following the Madrid Stock Exchange industry classification scheme.

Methodology

Similar to prior research (e.g., Fernandez-Rodriguez *et al.*, 2004), a two-level analysis has been conducted.

Table 1 This table reports descriptive statistics for the four years' period analysed and the average for the entire period

	Net Income	Revenues	EBITDA	Assets	Equity	ROE
Fiscal year			2010			
Minimum	−119.55	13.80	−53.50	53.68	−44.97	−59.12
Median	6.47	289.72	30.61	625.96	210.09	5.71
Mean	122.85	1,141.60	192.00	8,726.55	1,092.72	1.33
Maximum	1,314.35	11,083.51	2,353.10	130,140.00	8,252.00	34.38
Stan. Desv.	319.73	2,437.62	511.24	27,925.61	2,048.60	21.32
			2009			
Minimum	−229.21	11.07	−192.42	52.27	13.10	−129.17
Median	8.24	430.49	28.21	894.15	252.19	8.86
Mean	529.99	2,699.54	248.96	45,438.10	4,037.36	−3.27
Maximum	8,942.00	28,966.00	2,177.90	1,110,529.00	73,870.00	83.34
Stan. Desv.	1,616.55	5,894.29	521.67	196,031.25	13,105.26	39.70
			2008			
Minimum	−875.06	16.81	−505.70	72.31	10.71	−443.59
Median	19.03	491.27	37.03	822.47	256.03	8.48
Mean	268.36	3,379.41	782.12	11,436.34	1,844.95	−14.30
Maximum	7,592.00	59,384.00	22,639.00	110,376.05	21,004.00	91.20
Stan. Desv.	1,107.73	10,549.40	3,286.98	24,573.85	4,218.30	86.68
			2007			
Minimum	−213.87	8.45	−141.43	54.25	14.83	−426.36
Median	48.43	667.33	79.66	1,053.67	320.09	14.43
Mean	523.41	3,818.66	849.84	24,897.13	2,823.33	2.64
Maximum	9,060.26	57,750.00	21,273.00	912,914.97	57,558.15	55.10
Stan. Desv.	1,663.45	10,256.25	3,086.94	117,098.60	8,371.08	59.67
			2007–2010			
Minimum	−875.06	8.45	−505.70	52.27	−44.97	−443.59
Median	24.12	496.53	40.08	944.30	284.88	9.76
Mean	388.96	3,127.95	635.91	22,143.29	2,501.66	−4.32
Maximum	9,060.26	59,384.00	22,639.00	1,110,529.00	73,870.00	91.20
Stan. Desv.	1,372.84	9,024.02	2,665.50	110,358.18	7,920.02	64.55

Net Income, Revenues, EBITDA, Assets and Equity are expressed in millions of euros. ROE is expressed in percentage. ROE = return on equity. Estimated by dividing the Net Income by the book value of Equity.
Sources: S&P Capital IQ.

Table 2 Distribution of the sample over time and industry sector

Fiscal year	2007	2008	2009	2010
174 events belonging to 89 different firms:	62	58	32	22

Industry Sector	Firms	Percentage		
Petrol and Power	6	6.74%		
Basic Mat., Industry and Construction	25	28.09%		
Consumer Goods	23	25.84%		
Consumer Services	9	10.11%		
Financial Services and Real Estate[a]	21	23.60%		
Technology and Telecommunications	5	5.62%		
	89	100.00%		
[a]of which: Financial Services	11	12.36%		over the total sample
		52.38%		over the total industry sector

Firstly, we use event study methodology to conclude about the four hypotheses developed above. Afterwards, we use regression analysis to assess to what extend firm's characteristics affect the information content of ACGR.

Event study We follow the classical event study approach of Brown and Warner (1985) to assess the informativeness of ACGR in the Spanish market. Informativeness is proxied by variations in stock prices and trading volumes. Variations in stock prices are measured by average abnormal returns (AAR) and average absolute abnormal returns (AAAR). While AAR account for the effects of ACGR on stock returns, AAAR address the effects of ACGR on price volatility. We also test the sum of all individual investors' trades around ACGR dates by analysing the behaviour of average abnormal trading volumes (AAV). To test the market reaction to ACGR (hypotheses 1–4) we use the *t*-test when the data is normally distributed and a non-parametric test (Corrado, 1989; Corrado and Zivney, 1992), otherwise.

Abnormal returns (AR) are computed as the difference between actual and normal returns, the normal return being the expected return without conditioning on the event. Expected returns are obtained from the Fama and French (1993) three-factor model. Appendix 2 describes in detail AR and trading volume computations. AR, however, may hide information effects because positive and negative returns cancel out. To overcome this problem, we also examine stock price volatility as measured by AAAR, and then proceed as with AR. The only difference arises regarding how AR are computed: when AR are computed in absolute values, they cannot be directly used to perform parametric tests because the null hypothesis that a sum of absolute values is zero, will be always rejected. Therefore, we correct absolute returns by the mean absolute value of the pre-event period. Similarly to Menendez (2005), we define abnormal volume (AV) as the number of shares traded on a given

day divided by the average shares traded over the estimation period.

Given the nature of the event, it is meaningful to address the behaviour of prices and trading volumes before and after ACGR dates. Under insider trading, we should observe a market reaction before the release of ACGR. However, a delayed reaction could also be possible depending on market efficiency. To capture these potential effects, we examine a five-day event window [−2, +2]. Hence, cumulative average abnormal return (CAAR), cumulative average absolute value abnormal return (CAAAR), and cumulative average abnormal volume (CAAV) are obtained by adding either AAR, AAAR, or AAV across time intervals within the event window.

Regression analysis We examine the importance of firm's characteristics as the determinants of stock price reactions to ACGR with the same model as Fernandez-Rodriguez *et al.* (2004).

$$
\begin{aligned}
CAAR_i = {}& a + b_1 x FREEFLOAT_i + b_2 x INT_i^2 \\
& + b_4 x FAM_i + b_5 x BSIZE_i + b_6 x BINT_i \\
& + b_7 x CEOPRE_i + b_8 x LEV_i + b_9 x PAYOUT_i \quad (1) \\
& + b_{10} x AUDIT_i + b_{11} x AGE_i + b_{12} x SIZE_i \\
& + b_{13} x ME/BE_i + \varepsilon_i
\end{aligned}
$$

The dependent variable (CAAR) is defined as cumulative abnormal return for the event window [−2, +2]. Next, we describe the independent variables in (1).

Variables related to the firm's ownership Model (1) includes three variables measuring ownership structure: free float (*FREEFLOAT*), managerial ownership (*INT*), and families or individuals controlling for more than

5% of shares (*FAM*). Fernandez-Rodriguez *et al.* (2004) predicted positive sign for *FREEFLOAT*, negative sign for *FAM* and non-monotonic effect for managerial ownership (INT and INT^2). These expectations were justified in terms of the signalling effects associated to declarations of compliance, which should be clearer for those firms with stronger agency problems. In our case, as the signalling effect does not exist anymore, market reaction to ACGR will only depend on the investors' reaction to the information released by ACGR. This reaction could be positive, negative or non-significant, depending on how market participants evaluate the information provided by ACGR. Therefore, while we expect investors of firms with stronger agency problems will find ACGR more informative, unlike Fernandez-Rodriguez *et al.* (2004) we cannot anticipate the sign of the effect.

Variables related with the Board of Directors composition
BSIZE shows the size of the board, *BINT* the percentage of internal directors, and *CEOPRE* distinguishes those companies in which the CEO is also the chairman of the board. Large board members may imply monitoring problems (Jensen, 1993) and a decrease in effectiveness which may lead to a lower tendency to reveal information (Eisenberg *et al.*, 1998; Andres *et al.*, 2005). Moreover, Byard and Weintrop (2006) found that financial disclosure decreases with board size. Based on agency theory, internal directors do not have incentives to disclose information, because they can be monitored in a thorough manner (Leftwich *et al.*, 1981). CEO being also chairman of the board does not only suggest higher agency problems but is also associated to poor disclosure practices (Forker, 1992; Ho and Wong, 2001). Therefore, we expect significant reactions (with positive or negative sign, depending on the nature of the information released by ACGR) associated to *BSIZE*, *BINT* and *CEOPRE*.

Monitoring and prior performance variables The regression model includes the same monitoring (*LEV*, *PAYOUT*, *AGE*, *SIZE*, *AUDIT* and *ME/BE*) and prior performance variables (*MPER*, *ROA*, *CF* and *ROE*) as Fernandez-Rodriguez *et al.* (2004). Following our discussion regarding the former variables groups, we do not anticipate the sign of the effects f<or these variables. As in Fernandez-Rodriguez *et al.* (2004), variables measuring performance are sequentially introduced into model (1) generating regression 2 (*MPER*, Table 10), regression 3 (*ROA*, Table 10), regression 4 (*CF*, Table 10) and regression 5 (*ROE*, Table 10). Lastly, regression 6 includes all performance variables. Tables 3 and 4 provide information about the variables in model (1).

Results

Results of the event study analysis

Univariate results are presented in four tables (Tables 5–8) with the same structure. Each table is divided into three panels showing results for AAR (panel 1), AAAR (panel 2) and AAV (panel 3). Significance levels according to the *t*-test or Corrado test are also reported. At the top of each table we show AAR, AAAR, AAV and the results of the test for each day within the $[-2, 2]$ event window. At the bottom of each table, we report CAAR, CAAAR and CAAV for four different periods. Thus, accumulated results are presented considering the day of the event as well as the two previous days $[-2, 0]$, one day before $[-1, 0]$, one day after $[0, 1]$, and two days after $[0, +2]$. These periods are common in the event study literature (e.g., Peterson, 1989).

Results using the whole sample of events Table 5 summarizes the results of this analysis. The parametric *t*-test shows lack of significance at the usual levels in price (both in returns and volatility) or volume changes associated to the release of ACGR. Although we report marginally positive significant results for the day of the event and the [0, 1] window in the analysis with AAR, we conclude that ACGR does not provide sufficient relevant information to affect investors' decisions. Thus, H1 could not be rejected at the usual levels. This result would contradict prior related evidence for Spain showing a strong positive price reaction to announcement of compliance with CCG (Fernandez-Rodriguez *et al.*, 2004; Del Brio *et al.*, 2006). However, as we discussed in the introductory section, this paper is not fully comparable with prior research, as we address market reaction to mandatory ACGR, while prior studies have investigated market reaction to voluntary declarations of compliance with CCG. Hence, the positive stock price reaction to announcements of compliance was generally explained in terms of a reward for those firms which voluntarily adopted more rigorous corporate governance practices (Chhaochharia and Laeven, 2009). Once ACGR is mandatory, this signalling effect makes no sense any more. Therefore, there is no real contradiction between our findings and prior studies. Once the signalling effect disappears, the stock market reaction should be explained only by the informational content of the report. Following our results, this informational content seems to be scarce. ACGR, as they are currently designed, do not seem to be relevant in the investment decisions process. Furthermore, if markets participants do not find ACGR useful, the very design of the 'comply or explain' approach behind the ACGR might be put into question, as it is based on the assumption that market forces will compel companies to behave according with the recommendations of CCG

Table 3 Variables description for the multivariate analysis

Variables	Definition
FREEFLOAT[a]	Percentage of shares not owned by the board or major shareholders
INT[e]	Percentage of shares held by firm's executive and family members
INT[b]	Percentage of shares held by firm's executive and family members squared
FAM[e]	Dummy variable that takes 1 if an individual or family owns more than 5% of the firm's shares
BSIZE[a]	Natural logarithm of the board size
BINT[a]	Percentage of internal directors
CEOPRE[a]	Dummy variables that takes 1 if the CEO and the Chairman of the Board is the same person
LEV[b]	Total debt over total assets
PAYOUT[b]	Common dividend paid divided by net income
AUDIT[c]	Dummy variable that takes 1 if the auditor's report presents reservations
AGE[d]	Number of days between the ACGR presentation day and the first day of trading of the company
SIZE[b]	Natural logarithm of the total assets (in million)
MPER[d]	Difference between the average return of the firm and the market during the pre–event and the event period
ME/BE[b]	Ratio of market value and book value of equity measured at the end of the accounting year
ROA[b]	Operating income divided by total assets
CF[b]	Net income plus amortization and depreciation
ROE[b]	Net income divided by the book value of equity

Sources:
[a]Annual Corporate Governance Report of entities with securities admitted to tradingon official secondary markets (CNMV 2010, 2011).
[b]S&P Capital IQ.
[c]CNMV.
[d]Thompson Reuters 3000Xtra.
[e]Sistema de Analisis de Balances Ibericos (SABI).

Table 4 Summary of descriptive statistics for the variables in the sample of companies for multivariate analysis

Variable	N	Mean	Minimum	Maximum	Standard deviation
FREEFLOAT	174	43.86	0.05	99.96	21.77
INT	174	0.28	0.00	0.99	0.23
BSIZE	174	2.36	1.61	3.04	0.30
BINT	174	0.20	0.00	0.91	0.14
LEV	174	0.38	0.0004	1.01	0.23
PAYOUT	174	31.92	0.00	801.87	66.92
AGE	174	4,744.45	396.00	8,794.00	2,685.13
SIZE	174	7.29	3.96	13.92	2.11
MPER	174	−0.14	−2.27	0.64	0.41
ROA	174	0.40	−0.51	0.61	0.11
CF	174	0.42	−0.45	0.70	0.12
ROE	174	0.06	−0.97	0.91	0.28
ME/BE	174	3.63	−3.24	50.19	6.52
Dummy variables					
	N	1	0		
FAM	174	61.49	38.51		
CEOPRE	174	62.07	37.93		
AUDIT	174	13.79	86.21		

Table 5 This table summarizes daily average abnormal returns, absolute value abnormal returns, and abnormal trading volumes around ACGR presentation date for the total sample

Event day	Panel 1 n = 174		Panel 2 n = 174		Panel 3 n = 173	
	AAR	t-student	AAAR	t-student	AAV	t-student
−2	0.0014	0.657	0.0001	0.045	−0.1208	−0.849
−1	−0.0001	−0.050	0.0008	0.386	−0.0912	−0.640
0	0.0039	1.823*	−0.0001	−0.045	0.0595	0.418
1	0.0011	0.501	0.0018	0.900	0.0621	0.436
2	−0.0032	−1.472	0.0016	0.784	0.0586	0.411
	CAAR	t-student	CAAAR	t-student	CAAV	t-student
[−2,0]	0.0052	1.403	0.0008	0.223	−0.1525	−0.618
[−1,0]	0.0038	1.253	0.0007	0.241	−0.0317	−0.157
[0,+1]	0.0050	1.643*	0.0017	0.605	0.1216	0.604
[0,+2]	0.0018	0.492	0.0033	0.947	0.1802	0.731
[−2,+2]	0.0031	0.652	0.0042	0.926	−0.0318	−0.100

* Significant at 10%.
** Significant at 5%.
*** Significant at 1%.

(Goncharov *et al.*, 2006). Hence, these results might encourage policy makers to work in the design of more effective corporate governance regulations.

Results using subsamples of events Before addressing H2, H3 and H4, we perform two robustness checks. First, we check whether the industry distribution of events could affect the results. As Fernandez-Rodriguez *et al.* (2004), we split the sample into financial and non-financial firms, due to the peculiarities of the formers in terms of leverage and corporate governance structures. Results (not reported) would not differ across subsamples, being similar to those in Table 5. Second, it could be expected stronger market reaction associated to first than subsequent ACGR releases, the latter only reflecting annual changes in corporate governance practices or structures. Results (not reported) do not show any significant reactions associated to first ACGR releases.

Effects of ownership structure Following our discussion above, we examine whether the informativeness of ACGR depends on the firm's ownership structure as proxied by the free float. We expect ACGR to be particularly relevant for firms with large free float. After ordering the events by the firm's free float (highest to lowest), we choose the events placed in the top quartile of the distribution. Results of this analysis, in Table 6, do not show significance for AAR, AAAR or AAV on the event day. Thus, the null hypothesis H2 cannot be rejected. However, we report significant results for AAR on $t = −1$ (positive sign) and $t = +2$ (negative sign), as well as higher volatility (AAAR) on $t = −2$, suggesting some kind of anticipated reaction by the market, which is corrected two days after the ACGR date. We also report significant results for CAAAR for the [−2, 2] window, indicating relevant informative

Table 6 This table summarizes daily average abnormal returns, absolute value abnormal returns, and abnormal trading volumes around ACGR presentation date for companies with the highest free float

Event day	Panel 1 AAR	n = 43 t-student	Panel 2 AAAR	n = 43 t-student	Panel 3 AAV	n = 42 t-student
−2	−0.0007	−0.209	0.0058	2.090**	0.0946	0.526
−1	0.0079	2.248**	0.0028	1.022	0.0858	0.477
0	−0.0009	−0.248	−0.0020	−0.734	−0.0745	−0.414
1	−0.0058	−1.628	0.0038	1.372	0.0547	0.304
2	−0.0082	−2.334**	0.0039	1.395	0.0380	0.211
	CAAR	t-student	CAAAR	t-student	CAAV	t-student
[−2,0]	0.0063	1.034	0.0066	1.373	0.1060	0.340
[−1,0]	0.0071	1.414	0.0008	0.204	0.0114	0.045
[0,+1]	−0.0066	−1.327	0.0018	0.452	−0.0197	−0.078
[0,+2]	−0.0149	−2.431**	0.0056	1.174	0.0182	0.059
[−2,+2]	−0.0077	−0.972	0.0143	2.301**	0.1987	0.494

* Significant at 10%.
** Significant at 5%.
*** Significant at 1%.

Table 8 This table summarizes daily average abnormal returns, absolute value abnormal returns, and abnormal trading volumes around ACGR presentation date for less indebted firms

Event day	Panel 1 AAR	n = 42 Corrado	Panel 2 AAAR	n = 42 Corrado	Panel 3 AAV	n = 42 Corrado
−2	0.0047	0.730	0.0014	0.876	0.0784	1.088
−1	0.0030	1.649*	0.0017	0.387	−0.2533	0.324
0	0.0075	1.229	0.0053	1.892*	0.0040	1.929*
1	0.0043	0.022	0.0011	−1.407	−0.1232	1.022
2	−0.0025	−0.262	0.0008	1.341	0.1416	1.695*
	CAAR	Corrado	CAAAR	Corrado	CAAV	Corrado
[−2,0]	0.0152	2.083**	0.0084	1.822*	−0.1709	1.929*
[−1,0]	0.0106	2.035**	0.0069	1.612	−0.2493	1.593
[0,+1]	0.0118	0.884	0.0064	0.343	−0.1192	2.087**
[0,+2]	0.0093	0.571	0.0072	1.055	0.0225	2.683**
[−2,+2]	0.0170	1.506	0.0103	1.382	−0.1524	2.710**

* Significant at 10%.
** Significant at 5%.
*** Significant at 1%.

content associated to the event. Moreover, results for cumulative volumes do not show any significant effects. As a robustness check, we have replicated the analysis by terciles instead of quartiles. Results for the firms in the top tercile of free float (not reported) are very similar to those reported for the top quartile.

Summing up, results in tables 5 and 6 offer some weak support to a significant effect, in the predicted direction, of ownership structure on the informativeness of ACGR.

Effects of size and leverage We examine whether the informativeness of ACGR depends on size and leverage. Table 7 shows AAR, AAAR and AAV for the smallest firms in the sample (lowest quartile by capitalization in market value terms). For the event day, we do not observe significant results for any of the three indicators used in

Table 7 This table summarizes daily average abnormal returns, absolute value abnormal returns, and abnormal trading volumes around ACGR presentation date for the smallest companies

Event day	Panel 1 AAR	n = 42 t-student	Panel 2 AAAR	n = 42 t-student	Panel 3 AAV	n = 42 Corrado
−2	−0.0011	−0.245	−0.0021	−0.661	−0.3197	−0.649
−1	0.0031	0.715	0.0007	0.223	−0.4428	0.370
0	0.0038	0.868	0.0003	0.106	−0.3846	0.546
1	0.0074	1.704	0.0045	1.393	−0.0311	0.689
2	−0.0042	−0.968	0.0025	0.779	0.0866	0.108
	CAAR	t-student	CAAAR	t-student	CAAV	Corrado
[−2,0]	0.0058	0.772	−0.0011	−0.191	−1.1472	0.154
[−1,0]	0.0069	1.119	0.0011	0.233	−0.8274	0.648
[0,+1]	0.0112	1.819*	0.0048	1.060	−0.4157	0.873
[0,+2]	0.0070	0.926	0.0073	1.316	−0.3291	0.775
[−2,+2]	0.0090	0.927	0.0059	0.823	−1.0917	0.475

* Significant at 10%.
** Significant at 5%.
*** Significant at 1%.

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the analysis. Thus, H3 cannot be rejected. However, for AAR, we report a marginally significant result for the subperiod [0, +1], with positive sign. This would suggest some slight market reaction (though only in returns) to the release of ACGR for the smallest companies.

We argued above that, as companies with high levels of debt are generally asked to provide more complete information, ACGR should be more informative for less indebted firms. Table 8 shows AAR, AAAR and AAV for firms in the lowest quartile of financial leverage. Focusing on the day of the event, we report marginally significant results for volatility and trading volume, in all cases with the predicted positive sign. Therefore, H4 cannot be rejected at the usual levels. We also report significance at marginal levels for AAR in $t = −1$ and AAV in t = +2. Our results are more significant when cumulative periods are considered. Hence, we report significantly positive cumulative returns before the event day ([−2, 0] and [−1, 0]), and significantly higher cumulative trading volumes ([0, +1], [−2, 0] and [−2, +2]). These results indicate that, although there is not a significant market reaction on a day-by-day basis, ACGR provide some relevant information to market participants who seem to take actions across the event window resulting in statistically significant cumulative returns and trading volumes. As we did in the analysis of free float, we have replicated the analysis by terciles instead of quartiles of size and leverage. Results for firms in the top tercile of size (not reported) are very similar to those in Table 6. However, for firms in the lowest tercile of leverage, results (not reported) show stronger significance than for firms in the lowest quartile.

Table 5 showed that ACGR might involve a slight release of relevant information to the market. Following the segmented analyses in this section, we observe some

Table 9 Correlations between variables (Pearson correlation below the diagonal; Spearman correlations above)

	CAR(−1,1)	FREEFLOAT	INT	FAM	BSIZE	BINT	CEOPRE	LEV	PAYOUT	AUDIT	AGE	SIZE	MPER	ROA	ROE	CF	ME/BE
CAR (−1,1)		−0.05	−0.05	−0.11	0.01	0.11	0.02	−0.15**	0.01	0.01	0.05	−0.04	−0.01	−0.01	0.06	0.11	0.003
FREEFLOAT	0.002		−0.39***	−0.13*	0.04	−0.09	0.12	0.04	0.05	0.02	0.14*	−0.07	−0.004	−0.10	−0.02	−0.11	0.12
INT	−0.13*	−0.46***		0.14*	−0.10	0.07	−0.18**	0.15*	−0.14*	0.12	−0.13*	−0.14*	−0.05	−0.07	−0.17**	−0.08	−0.13*
FAM	−0.07	−0.17**	0.08		−0.05	−0.03	−0.25***	0.16**	−0.18**	0.08	0.003	−0.13*	−0.24***	−0.27***	−0.34***	−0.21***	−0.27***
BSIZE	0.10	0.03	−0.06	−0.02		−0.24***	0.11	0.15*	0.36***	−0.34***	0.13*	0.60***	0.09	0.10	0.32***	0.07	0.10
BINT	−0.10	−0.09	0.07	−0.06	−0.24***		0.17**	−0.13*	−0.04	0.04	0.04	0.002	0.09	0.06	0.15*	0.17**	0.04
CEOPRE	−0.14*	0.14*	−0.16**	−0.25***	0.10	0.10		−0.09	0.12	−0.10	0.07	0.20***	0.03	0.03	0.19**	0.02	0.13*
LEV	−0.03	0.03	−0.16**	0.15	0.14	−0.10	−0.06		−0.14*	0.21***	−0.21***	0.12	−0.13*	−0.43***	−0.31***	−0.52***	0.01
PAYOUT	0.01	0.01	0.01	−0.01	0.17**	−0.08	−0.03	0.03		−0.36***	0.03	0.35***	0.20***	0.50***	0.54***	0.35***	0.34***
AUDIT	0.01	−0.01	0.10	0.08	−0.34***	0.09	−0.10	0.19**	0.02		−0.09	−0.22***	−0.30***	−0.28***	−0.35***	−0.31***	−0.10
AGE	−0.10	0.15*	−0.13	−0.001	−0.09	−0.04	0.06	−0.25***	−0.04	−0.10		0.23***	0.09	0.09	0.09	0.09	−0.11
SIZE	0.20***	0.07	−0.13*	−0.11	0.62***	−0.02	0.24***	0.11	0.09	−0.22***	0.25***		0.10	0.11	0.41***	0.03	0.11
MPER	−0.13*	0.07	−0.11	−0.22***	0.11	−0.03	0.04	−0.15**	0.09	−0.37***	0.13*	0.07		0.23***	0.31***	0.27***	0.16**
ROA	0.05	−0.05	−0.07	−0.19*	0.04	0.05	0.02	−0.45***	0.17**	−0.26***	0.19*	0.09	0.20***		0.64***	0.79***	0.34***
ROE	0.02	0.06	−0.13*	−0.10	0.25***	0.01	−0.01	−0.38***	0.14*	−0.39***	0.08	0.16**	0.19***	0.47***		0.73***	0.43***
CF	0.06	−0.12	−0.04	−0.15**	0.06	0.18**	0.01	−0.47***	0.14*	−0.33***	0.07	0.08	0.21***	0.69***	0.56***		0.23***
ME/BE	0.06	0.12	−0.09	−0.15	−0.12	0.13*	0.15*	0.06	0.0084	0.0803	−0.002	−0.1101	0.004	0.12	−0.37***	−0.02	

Percentage of shares not owned by the board or major shareholders

INT	Percentage of shares held by firm's executive and family members
BSIZE	Natural logarithm of the board size
BINT	Percentage of internal directors
LEV	Total debt over total assets
PAYOUT	Common dividend paid divided by net income
AGE	Number of days between the ACGR presentation day and the first day of trading of the company
SIZE	Natural logarithm of the total assets (in million)
MPER	Difference between the average return of the firm and the market during the pre–event and the event period
ROA	Operating income divided by total assets
CF	Net income plus amortization and depreciation
ROE	Net income divided by the book value of equity
ME/BE	Ratio of market value and book value of equity measured at the end of the accounting year
FAM	Dummy variable that takes 1 if an individual or family owns more than 5% of the firm's shares
CEOPRE	Dummy variables that takes 1 if the CEO and the Chairman of the Board is the same person
AUDIT	Dummy variable that takes 1 if the auditor's report presents reservations
FREEFLOAT	

* Significant at 10%.
** Significant at 5%.
*** Significant at 1%.

Table 10 Cross-sectional determinants of cumulated abnormal returns

	REG. 1	REG. 2	REG. 3	REG. 4	REG. 5	REG. 6
FREEFLOAT	−0.0005** (−2.54)	−0.0005** (−2.4)	−0.0006*** (−2.70)	−0.0005** (−2.38)	−0.0005** (−2.53)	−0.0006*** (−2.59)
INT	0.102** (2.01)	0.100** (1.98)	0.085* (1.71)	0.101** (1.99)	0.102** (2.03)	0.083* (1.66)
INT^2	−0.208*** (−2.66)	−0.204*** (−2.67)	−0.184** (−2.35)	−0.207*** (−2.65)	−0.209*** (−2.67)	−0.176** (−2.26)
FAM	−0.018 (−1.56)	−0.016 (−1.46)	−0.020* (−1.78)	−0.019 (−1.56)	−0.018 (−1.52)	−0.017 (−1.57)
BSIZE	0.015 (0.70)	0.015 (0.72)	0.013 (0.63)	0.015 (0.72)	0.014 (0.64)	0.008 (0.37)
BINT	0.034 (1.26)	0.034 (1.25)	0.035 (1.29)	0.035 (1.25)	0.032 (1.16)	0.028 (1.01)
CEOPRE	−0.010 (−1.01)	−0.010 (−0.99)	−0.013 (−1.26)	−0.010 (−1.01)	−0.010 (−0.98)	−0.012 (−1.20)
LEV	−0.002 (−0.10)	−0.002 (−0.10)	−0.026 (−1.16)	−0.002 (−0.10)	.0007 (0.03)	−0.020 (−0.85)
PAYOUT	.00003 (0.97)	.00002 (0.63)	.00006 (1.65)	.00003 (0.96)	.00002 (0.79)	.00005 (1.12)
AUDIT	−0.026 (−1.58)	−0.021 (−1.14)	−0.032** (−2.06)	−0.026 (−1.57)	−0.025 (−1.48)	−0.002 (−1.29)
AGE	0.003 (0.78)	0.003 (0.65)	0.004 (0.96)	0.003 (0.79)	0.003 (0.81)	0.004 (0.97)
SIZE	−0.003 (−1.15)	−0.003 (−1.11)	−0.002 (−0.92)	−0.003 (−1.03)	−0.003 (−1.14)	−0.002 (−0.74)
ME/BE	0.008* (1.76)	0.008* (1.69)	0.001*** (2.64)	0.008* (1.75)	0.009* (1.70)	0.002*** (2.79)
MPER		.010 (0.56)				.012 (0.67)
ROA			−0.115** (−2.47)			−0.150*** (−2.59)
CF				−0.005 (−0.41)		−0.002 (−0.14)
ROE					0.002 (0.42)	0.012* (1.88)
Constant	0.018 (0.40)	0.017 (0.39)	0.034 (0.71)	0.015 (0.31)	0.019 (0.42)	0.042 (0.87)
F–test	2.10**	1.91**	2.18**	2.42***	2.09**	3.04***
Adjusted R^2	0.138	0.142	0.171	0.138	0.139	0.190
N	174	174	174	174	174	174

FREEFLOAT	Percentage of shares not owned by the board or major shareholders
INT	Percentage of shares held by firm's executive and family members
INT^2	Percentage of shares held by firm's executive and family members squared
BSIZE	Natural logarithm of the board size
BINT	Percentage of internal directors
LEV	Total debt over total assets
PAYOUT	Common dividend paid divided by net income
AGE	Number of days between the ACGR presentation day and the first day of trading of the company
SIZE	Natural logarithm of the total assets (in million)
MPER	Difference between the average return of the firm and the market during the pre–event and the event period
ROA	Operating income divided by total assets
CF	Net income plus amortization and depreciation
ROE	Net income divided by the book value of equity
ME/BE	Ratio of market value and book value of equity measured at the end of the accounting year
FAM	Dummy variable that takes 1 if an individual or family owns more than 5% of the firm's shares
CEOPRE	Dummy variables that takes 1 if the CEO and the Chairman of the Board is the same person
AUDIT	Dummy variable that takes 1 if the auditor's report presents reservations

** Sig. 5%.
* Sig. 10%.
*** Sig. 1%.

significant effects on returns, volatility and/or trading volumes for those companies that, according to our discussion above, should show the strongest reactions. It could be argued, however, that the higher levels of significance reported in the segmented analyses could be due to the low number of events included in these analyses. To check the robustness of our findings, similar to Tables 6, 7 and 8 we compute returns, volatility and trading volumes for firms with the lowest free float (lowest quartile of free float), largest size (top quartile of market capitalization), and highest leverage (top quartile of financial leverage). Each of these additional analyses contains the same number of events as Tables 6,7, and 8. The results of these studies (not reported) show no significant effects of ACGR on returns, volatility or trading volumes, for the day of the event, for any day within the event window or for any cumulative period, with a single exception in the top quartile size subsample. Thus, this analysis reinforces the conclusion that firms' characteristics play a significant role to explain the relevance of corporate governance information.

Regression analysis

Although the results of the event study do not suggest strong informational content of ACGR, regression analysis might shed some light on the importance of firms' characteristics as determinants of this informational content. Accordingly, model (1) has been estimated with ordinary least square regression. Significant tests have been conducted with robust standard errors. As shown in Table 10, all estimations are globally significant at the

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usual levels with adjusted R-squared ranging between 14 and 19%. Although the correlation matrix indicates some potential multicollinearity problems (see Table 9), examination of variance inflation factors (VIFs) suggest that none of our coefficients are seriously affected by multicollinearity.[9] Besides, as empirical studies in the field of corporate governance are usually affected by endogeneity, we have performed the Ramsey test for each single regression to check for the existence of significant omitted variables. Although the results of the test do not suggest endogeneity problems in our models,[10] endogeneity is a rather complex issue and therefore we cannot be completely sure about its lack of effects.

Results show that ownership structure (*FREEFLOAT*, *INT* and *FAM*) would influence investors' valuation of the ACGR, while board characteristics (*BSIZE*, *BINT* and *CEOPRE*) would not. However, Fernandez-Rodriguez *et al.* (2004) reported significant effects for board characteristics variables but not for ownership variables. We find these differences interesting as they indicate that the determinants of abnormal returns in a voluntary compliance environment changed once reports became mandatory. From a 'signalling effect' viewpoint, the structure of the board seems to be the key determinant of abnormal returns. However, when we focus on the specific information released by ACGR, ownership structure becomes the key factor.

Focusing on monitoring variables, we report significance for *ME/BE*. (P-value <0.1 or <0.01 depending on the estimation), indicating that investors of high market to book firms are more concerned with ACGR. This is consistent with Faccio *et al.* (2006) but contrary to Fernández-Rodríguez *et al.* (2004), who reported non-significant results in a voluntary compliance environment. We also find some evidence of a significant effect of *AUDIT* (reg. 3, P-value <0.05) on cumulated abnormal returns, indicating that investors of firms with qualified audit reports seem to be more concerned with the information released by ACGR.

Results for variables measuring performance show significance for *ROA* (P-value <0.05 in reg. 3 and <0.01 in reg. 6) indicating that information content for firms with higher *ROA* seems to be more useful for investors. Although Fernández-Rodríguez *et al.* (2004) failed to report any significant effects for variables measuring performance, this finding would support prior research (Zhang and Wiersema, 2009; Zhang *et al.*, 2014) suggesting ACGR being more informative in companies with high returns, as investors may use all disclosed information for future returns' estimates.

To check the robustness of the results of the regression analysis, we have reestimated model (1) with an alternative definition of the dependent variable CAAR: cumulative abnormal returns for the event window [−1, +1]. Results of the new estimation (not reported) remain largely unchanged compared to those in Table 10.

Concluding remarks

A growing number of countries require companies to release corporate governance reports containing very detailed information on governance structures and practices. It thus seems logical to wonder whether market participants find these reports useful in the decision-making process. While some papers have investigated the related issue of market reaction to declarations of compliance with codes of good governance, none has addressed the impact of the release of corporate governance reports.

Our main result is the lack of significant market reaction to the release of corporate governance reports, thus suggesting lack of relevant information associated to these reports. This result seems robust, as it has been reported for the three measures of market reaction and with parametric and non-parametric tests. Considering that our research period covers the years of the dramatic Spanish financial and economic downturn, the reported lack of significant effects is rather surprising. Higher risk aversion, as well as stronger necessity of sounder governance practices and structures shown by the crisis, would have suggested significant market reaction to the issuance of corporate governance reports. Our results might have some practical implications for regulators and policy makers in order to design more efficient tools to enhance corporate governance since, as currently designed, they do not seem to be too relevant for market participants. If market participants do not find corporate governance reports useful, the very assumption behind the 'comply or explain' approach that market forces will compel companies to comply with recommendations might be too optimistic.

The literature suggests that market reaction to corporate governance information depends on some firms' characteristics, most notably, ownership structure, size and leverage. We have performed segmented analyses with the groups of firms for which stronger effects should be expected. Results show some significant, although generally weak, market reactions for these subsamples of firms. Therefore, we cannot completely discard some relevant content of the corporate governance report.

We have further extended the analysis of firms' characteristics as determinants of the informativeness of corporate governance reports through regression analysis.

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[9]None of the VIF values is above 10.
[10]In all six regressions we cannot reject the null hypothesis of the non-existence of omitted variables at usual 5% level, being P > F higher than 0.10 in regressions 3, 5 and 6, and between 0.05 and 0.10 in regressions 1, 2 and 4.

Results show ownership structure and past performance as the main determinants of the informational content. In particular, we find the report especially relevant for companies with high returns on assets and more disperse ownership. In the latter case, the regression analysis supports the results of the event study with segmented samples.

A natural extension of this research would be to segregate the reports according to the nature of the information released, as being 'good news', 'bad news' and 'neutral news'. This would enable to conduct more sensitive tests regarding the market's use of the information contained in the report. In addition, prior related research has shown that the only significant factors to explain market reaction to voluntary declarations of compliance would be the characteristics of the board. Conversely, our results show that once corporate governance reports are mandatory, the characteristics of the board are no longer important, although the informativeness of the report depends on ownership structure and performance variables. Working on possible explanations and/or implications for these differences could also provide interesting research opportunities.

The main limitation of this research would be the relatively low number of events used to conduct the segmented analyses. Beyond the thinness of the Spanish stock market, in many cases the release of corporate governance reports coincides in time with the publication of financial statements, leading to a further reduction of the sample.

Acknowledgments

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Appendix A

Table A1   Companies belonging to the sample

Company Name	Sector	Subsector
Acciona	Basic Mat., Industry and Construction	Construction
Acerinox	Basic Mat., Industry and Construction	Mineral, Metal and Transf.
Actividades de Construc. y Servicios	Basic Mat., Industry and Construction	Construction
Adolfo Dominguez	Consumer Goods	Textile, Clothing and Shoes
Amper	Technology and Telecommunications	Electronics and Software
Banco de Sabadell	Financial Services and Real Estate	Banks
Banco de Valencia	Financial Services and Real Estate	Banks
Banco Popular	Financial Services and Real Estate	Banks
Banco Santander	Financial Services and Real Estate	Banks
Bankinter	Financial Services and Real Estate	Banks
Baron de Ley	Consumer Goods	Food and Beverage
Biosearch	Consumer Goods	Pharmacy Products & Biotech.
Bodegas Riojanas	Consumer Goods	Food and Beverage
Bolsas y Mercados Españoles	Financial Services and Real Estate	Investment Services
Caixabank	Financial Services and Real Estate	Banks
Campofrio Good Group	Consumer Goods	Food and Beverage
Cementos Portland Valderrivas	Basic Mat., Industry and Construction	Construction Materials
Levantina Edif. de Obras Públicas	Basic Mat., Industry and Construction	Construction
CIE Automotive	Basic Mat., Industry and Construction	Mineral, Metal and Transf.
Corp. Financiera Alba	Financial Services and Real Estate	SICAV
Corporación Dermoestestica	Consumer Services	Other Services
Deoleo	Consumer Goods	Food and Beverage
Dinamia Capital Privado	Financial Services and Real Estate	Portfolio and Holding
Dogi International Fabrics	Consumer Goods	Textil, Clothing and Shoes
Duro Felguera	Basic Mat., Industry and Construction	Engineering and others
Ebro Foods	Consumer Goods	Food and Beverage
Elecnor	Basic Mat., Industry and Construction	Manufac. & Assembly of Capital Goods
Enagas	Petrol and Power	Electricity and Gas
Ence Energia y Celulosa	Consumer Goods	Paper and Graphic Arts
Endesa	Petrol and Power	Electricity and Gas
Ercros	Basic Mat., Industry and Construction	Chemical
Faes Farma	Consumer Goods	Pharmacy Products and Biotech.
Fergo Aisa	Financial Services and Real Estate	Real Estate and Others
Ferrovial	Basic Mat., Industry and Construction	Construction
Fersa Energias Renovables	Petrol and Power	Renewable Energy
Fluidra	Basic Mat., Industry and Construction	Engineering and Others
Fomento de Constr. y Contratas	Basic Mat., Industry and Construction	Construction
Gamesa Corp. Tecnologica	Basic Mat., Industry and Construction	Manufac. & Assembly of Capital Goods
General Alquiler Maquinaria	Basic Mat., Industry and Construction	Engineering and Others
Grifols	Consumer Goods	Pharmacy Products and Biotech.
Grupo Catalana Occidente	Financial Services and Real Estate	Insurance
Grupo Ezentis	Technology and Telecommunications	Telecommunications and Others
Grupo Tavex	Consumer Goods	Food and Beverage
Indo Internacional	Consumer Goods	Other Consumer Goods
Indra Sistemas	Technology and Telecommunications	Electronics and Software
Industria de Diseño Textil	Consumer Goods	Textile, Clothing and Shoes
Inmobiliaria del Sur	Financial Services and Real Estate	Real Estate and Others
Inypsa Informes y Proyectos	Basic Mat., Industry and Construction	Engineering and Others
Jazztel	Technology and Telecommunications	Telecommunications and Others
La Seda de Barcelona	Basic Mat., Industry and Construction	Chemical
Lingotes Especiales	Basic Mat., Industry and Construction	Mineral, Metal and Transf.
Mediaset España Comunicación	Consumer Services	Communication and Publicity
Melia Hotels International	Consumer Services	Leisure, Tourism and Hotel Industry
Miquel y Costas & Miquel	Consumer Goods	Paper and Graphic Arts
Montebalito	Petrol and Power	Renewable Energy
Natra	Consumer Goods	Food and Beverage
Nicolas Correa	Basic Mat., Industry and Construction	Manufac. & Assembly of Capital Goods

Table A1 *(Continued)*

Company Name	Sector	Subsector
NH Hoteles	Consumer Services	Leisure, Tourism and Hotel Industry
Nyesa Valores Corporación	Financial Services and Real Estate	Real Estate and Others
Obrascon Huarte Lain	Basic Mat., Industry and Construction	Construction
Papeles y Cartones de Europa	Consumer Goods	Paper and Graphic Arts
Pescanova	Consumer Goods	Food and Beverage
Prim	Consumer Goods	Pharmacy Products and Biotech.
Prosegur, cia. de Seguridad	Consumer Services	Other Services
Quabit Inmobiliaria	Financial Services and Real Estate	Real Estate and Others
Realia Business	Financial Services and Real Estate	Real Estate and Others
Red Electrica Corporacion	Petrol and Power	Electricity and Gas
Renta 4 Banco	Financial Services and Real Estate	Investment Services
Renta Corporacion Real Estate	Financial Services and Real Estate	Real Estate and Others
Repsol	Petrol and Power	Petrol
Reyal Urbis	Financial Services and Real Estate	Real Estate and Others
Sacyr	Basic Mat., Industry and Construction	Construction
Service Point Solutions	Consumer Services	Retailing
Sniace	Consumer Goods	Textile, Clothing and Shoes
Sotogrande	Financial Services and Real Estate	Real Estate and Others
Tecnicas Reunidas	Basic Mat., Industry and Construction	Engineering and Others
Telefonica	Technology and Telecommunications	Telecommunications and Others
Testa Inmuebles en Renta	Financial Services and Real Estate	Real Estate and Others
Tubacex	Basic Mat., Industry and Construction	Mineral, Metal and Transf.
Tubos Reunidos	Basic Mat., Industry and Construction	Mineral, Metal and Transf.
Uralita, S.A.	Basic Mat., Industry and Construction	Construction Materials
Urbas Grupo Financiero, S.A.	Financial Services and Real Estate	Real Estate and Others
Vertice Trescientos Sesenta Grados	Consumer Services	Communication and Publicity
Vidrala	Consumer Goods	Other Consumer Goods
Viscofan	Consumer Goods	Food and Beverage
Vocento	Consumer Services	Communication and Publicity
Vueling	Consumer Services	Transport and Distribution
Zardoya Otis	Basic Mat., Industry and Construction	Manufac. & Assembly of Capital Goods
Zeltia	Consumer Goods	Pharmacy Products and Biotech.

Appendix B. Abnornal return and volume calculations

B.1. Abnormal return

We obtain the expected return by using the Fama–French three–factor model:

$$R_{it} - R_{ft} = a_i + b_i(R_{mt} - R_{ft}) + s_i(SMB_t) \quad \text{(A1)}$$
$$+ h_i(HML_t) + \varepsilon_i,$$

where b_i, s_i, and h_i are the unconditional sensitivities of the asset to the factors.

$$R_{mt} = \ln\left(\frac{Continuos \ market \ Index_t}{Continous \ market \ Index_{t-1}}\right). \quad \text{(A2)}$$

R_{ft} is the daily return in the secondary market of three–months treasury bills. SMB_t is the difference between the return on a portfolio for small stocks minus the return of a

portfolio of large stocks HML_t is the return on a portfolio of stocks with high book–to–market ratios minus the return on a portfolio of stocks with low book–to–market ratios.

We compute abnormal returns (AR) by as the difference between the actual and the expected return without conditioning on the event. We estimate the security normal returns through a pre-event period of 159 days from day −169 to day −11, with day 0 being the event day.

After estimating daily abnormal returns (AR) for each firm, the average abnormal returns (AAR) for the sample on day t is calculated:

$$AAR_t = \frac{1}{N}\sum_{i=1}^{N} AR_{it}. \quad \text{(A3)}$$

The cumulative average abnormal return (CAAR) is obtained by adding the average daily AAR for different time intervals (a, b), within the event window [−2, +2]:

$$CAAR = \sum_{t=a}^{b} AAR_t. \qquad (A4)$$

B.2. Volatility measured as absolute abnormal return

The average absolute abnormal return (AAAR) and the t–statistic is given by:

$$AAAR_t = \frac{1}{N} \sum_{i=1}^{N} |ARit| - \overline{AAAR_t}, \qquad (A5)$$

$$t - statistic = \frac{AAAR_t}{S_p} \qquad (A6)$$

Where $\overline{AAAR_{it}}$ is the AAAR mean over the pre-event period.

The cumulative average absolute abnormal return (CAAAR) is obtained by adding average daily absolute abnormal returns across different time intervals (a, b), within the event window $[-2, +2]$:

B.3. Abnormal volume

Following Menendez (2005), we define abnormal trading volumes for stock i on day t as:

$$AV_{it} = \frac{V_{it}}{\left(\sum_{t=-84}^{-11} V_{it} + \sum_{t=11}^{84} V_{it} \right) x \frac{1}{150}}, \qquad (A7)$$

where: V_{it} is the traded volume in euros of stock i on day t.

As we did with returns, once abnormal daily volumes have been computed for each firm, the average abnormal trading volume (AAV) on day t is calculated as:

$$AAV_i = \frac{1}{N} \sum_{i=1}^{N} AV_{it} - 1 \qquad (A8)$$

The cumulative average abnormal volume (CAAV) is obtained by adding average daily abnormal volumes across different time intervals (a, b), within the event window $[-2, +2]$.