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Corporate governance and impression management in annual press releases*

Beatriz García and Encarna Guillamón-Saorín**

Abstract

We study the association between corporate governance and impression management in annual results press releases (ARPRs). Press releases constitute a timely vehicle to communicate firm performance to third parties. However, oftentimes, managers provide self-serving disclosures that attempt to distort readers' perceptions of corporate achievements. Corporate governance mechanisms actively monitor managerial disclosures, improving firm transparency. Thus, we predict that strong governance (i) increases firm voluntary release of ARPRs, and (ii) reduces impression management in those ARPRs. Tests are based on a sample of Spanish firms. The results confirm that strong governance firms are more likely to release an ARPR. In particular, board independence and the existence of remuneration and audit committees significantly determine this type of voluntary disclosure. We also show that strong governance limits impression management practices, consistent with governance monitoring effectively reducing self-serving disclosures by management. Our evidence is consistent with impression management being associated to firm news, suggesting that these practices respond, at least partly, to informative motivations.

Keywords: Corporate governance, impression management, voluntary disclosure.
JEL Classification: G10, G38, M41.

Resumen

En este trabajo investigamos la asociación entre el gobierno corporativo y la manipulación de la presentación de la información en las notas de prensa. Las notas de prensa son uno de los medios que usan las empresas para comunicarse con terceras partes. A veces, las empresas revelan información con la intención de mostrar una imagen sesgada de la empresa. El gobierno corporativo es uno de los mecanismos que controlan la manipulación en la revelación de información y mejora la transparencia. Nuestras expectativas son que empresas con mejor gobierno corporativo (i) incrementen la revelación voluntaria y (2) muestren menos manipulación de la presentación de información en sus notas de prensa. Hemos analizado empresas Españolas cotizando en la Bolsa de Madrid. En particular, hemos encontrado que la independencia de los directivos y la existencia de comités de remuneración y de auditoria determinan el tipo de revelación de información voluntaria. Estos resultados confirman el papel de control que ejerce el gobierno corporativo para reducir efectivamente la presentación engañosa de la información. Nuestros resultados también muestran que la manipulación esta relacionada con las noticias de las empresas, lo que sugiere que estas practicas responden, al menos en parte, a razones informativas.

Palabras clave: Gobierno corporativo, manipulación de la presentación, revelación voluntaria

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1. Introduction

We analyse the association between firm corporate governance mechanisms and potentially misleading disclosure practices in firm press releases. Although the importance of press releases as part of a firm's disclosure strategy is widely accepted (Lang and Lundholm, 2000; Bushman and Smith, 2001; Francis *et al.*, 2002), academic research on this area has been limited. Press releases are easily accessible by the public and represent an important instrument for managers to communicate firm performance. However, through them, managers can influence the perceptions of third parties for their own benefit (Bowen *et al.*, 2005; Brennan *et al.*, 2008). Oftentimes, managers provide self-serving disclosures that cast their performance in a positive light or that blame poor performance on temporary external factors (Barton and Mercer, 2005). In this paper, we analyze the role of internal corporate governance mechanisms in (i) driving the decision to voluntary prepare and issue an annual results press release and in (ii) limiting self-serving disclosure practices by management in those press releases. Finally, we also study whether impression management practices respond to informative or opportunistic incentives.

Extant research provides mounting evidence of the monitoring and disciplining role of governance mechanisms, and highlights the role of boards of directors in facilitating and improving the control exerted over senior managers, ensuring that management acts in the interests of investors. Prior academic work confirms that efficient governance mechanisms limit earnings management practices (Dechow *et al.*, 1996; Peasnell *et al.*, 2005); demand more conservative accounting (Ahmed and Duellman, 2007; Garcia Lara *et al.*, 2007; 2008); and increase voluntary disclosure in annual reports (Cheng and Courtenay, 2006; Lim *et al.*, 2007). However, while there is general agreement that governance influences accounting information quality, there is limited evidence on its association with voluntary disclosure practices, and no previous evidence on whether these mechanisms can influence impression management practices in narrative disclosures.

In the context of corporate reporting, we interpret that impression management occurs when management selects the information to release, and presents it in a way that distorts readers' perceptions of corporate achievements (Neu, 1991; Neu *et al.*, 1998). We focus on one type of disclosure: the information contained in annual results press releases (ARPRs). These releases are generally issued once a year within the first quarter of the following fiscal year. In addition to other information, they normally include a summary of

the financial annual results thus providing stakeholders with valuable information before the annual report is available. One important aspect of ARPRs is that their content is unregulated, allowing managers full discretion to include the information they consider more appropriate and also providing them with a tool with greater potential for impression management and higher short-term flexibility than other more rigid publications, such as annual reports (Lang and Lundholm, 1993, p. 269). Research into disclosure practices in press releases is scarce. Some research investigates disclosure practices in quarterly earnings announcements (Bowen *et al.*, 2005; Johnson and Schwartz, 2005; Davis *et al.*, 2008) or in specific press releases, such as those announcing accounting restatements (Gordon *et al.*, 2007; Swanson *et al.*, 2008). However, there is limited research on the quality and content of disclosures in ARPRs (Henry, 2008).

We carry out two separate analyses. First, we analyse the association between strong corporate governance mechanisms and firm likelihood of voluntarily releasing an ARPR. Second, we study the relation between corporate governance and the content of those press releases, identifying managerial self-serving practices. Although there are contrary views, extant research predicts that managers voluntarily disclose information that is favourable to the entity, shying away from full disclosure otherwise (Dye, 2001). Signalling theory similarly predicts that managers in well-performing companies signal their superiority by increasing transparency in their disclosure and presentation of information (Smith and Taffler, 1992; Rutherford, 2003). To the extent that strong corporate governance mechanisms (i) demand greater (full) information disclosure to outsiders; and (ii) reduce managerial manipulation of the disclosed information, we expect to observe a positive association between our measures of strong governance and both firm probability of preparing and releasing an ARPR and the quality of the information contained in the ARPR (i.e., lower impression management).

The evidence is based on a sample of 106 Spanish firms. We manually collect all available ARPRs of Spanish quoted companies for the year 2000 and analyze them in search of potentially misleading disclosure practices. We also manually collect corporate governance data from 1999 to 2001 to build a score that aggregates several measures of the functioning and characteristics of the board of directors and its delegated committees. Using these data, we study if the individual governance variables and the composite governance score drive ARPRs disclosure. The results show that firms with strong governance mechanisms in place are more likely to issue an ARPR. In particular, board

independence and the existence of audit and remuneration committees are strongly associated to this type of voluntary disclosure. This evidence is consistent with prior work on the links between governance and disclosure (Eng and Mak, 2003; Gul and Leung, 2004; Cheng and Courtenay, 2006; Lim *et al.*, 2007).

In a second step, we analyse the links between potentially misleading disclosure practices and the strength of firm corporate governance. To measure impression management we follow the method in Brennan et al. (2008). We create three composite scores that aggregate different techniques of managing impressions. These composite scores are used to develop a measure of bias that applies to both qualitative and quantitative information. Specifically, we consider: (i) thematic manipulation; (ii) emphasis; (iii) performance comparisons; and (iv) selectivity in ARPRs. The results show that strong governance lowers the incidence of disclosure practices consistent with impression management using qualitative (or narrative) information, whilst the evidence regarding the use of quantitative disclosures to produce potentially misleading narratives is less conclusive. This is as could be expected. Overall, quantitative disclosures are less likely to be managed, as they can be checked back to the financial statements. If management wants to manipulate the numbers, other techniques, such as direct manipulation of the financial statements are likely preferred.

Interestingly, our results show that a significant driver of impression management is current and forthcoming news. We show that impression management is strongly associated to current and future good news about the firm. This is consistent with managers making more optimistic disclosures when there are good news to report and when they expect good news in the following period. This would suggest that impression management in ARPRs is driven, at least partly, by informative motives.

Our paper adds to two different streams of research. First, we add to the literature on the determinants of voluntary disclosure. We analyse if strong governance leads to greater likelihood of management voluntarily issuing an ARPR. Prior work on the links between disclosure and corporate governance has not studied this type of corporate reporting. In addition, we consider different governance variables to those used by prior academic work. Our results are consistent with prior literature, and suggest that strong governance is associated to greater voluntary disclosure of timely information, although not all governance characteristics appear to be determinants of this type of disclosure. This

evidence is of particular interest to standard setters aiming to improve the efficiency and transparency of firm corporate disclosures. Second, our research adds to prior work on the role of corporate governance mechanisms. We show that strong governance results in lower manipulation of narrative disclosures, and that managerial impression manipulation in ARPRs appears to stem, at least partly, from informative motivations. To the best of our knowledge, there is no prior academic work on the association between impression management techniques in narrative disclosures and corporate governance. Finally, we provide new evidence on managerial motivations for impression management.

The remainder of the paper is structured as follows. The following section revises the prior literature and presents the predictions. Section 3 describes the method and data used in the study. The results are discussed in Section 4, and finally, Section 5 concludes.

2. Background and research questions

In this section, first we describe impression management and review the existing evidence on the monitoring role of corporate governance bodies over corporate financial reporting. Second, we present our predictions on the association between corporate governance, voluntary disclosure and impression management practices.

2.1. Impression management in accounting

The origin of impression management research is generally attributed to Goffman (1959). Goffman explains impression management as the way in which managers manage impressions of themselves on their audiences. Impression management serves the basic psychological human need of self-presentation (Schlenker, 1980). Hooghiemstra (2000, p. 60) defines it as a field of study "*within social psychology studying how individuals present themselves to others to be perceived favourably*". From this broad perspective, both individuals and organizations can try to bias the information they provide in an attempt to manipulate the image third parties have of them (Leary and Kowalski, 1990). In the context of accounting, the aim of impression management is to present a self-serving view of corporate and managerial performance (Neu, 1991; Neu *et al.*, 1998). Managerial performance cannot be observed directly. This signifies that the providers of finance have to base their evaluation of management effort and performance, at least partly, on reports

that are prepared by managers themselves (Lambert, 2001). This, in turn, creates managerial incentives to distort the perception of third parties either directly, by manipulating the financial statements (earnings in particular) or indirectly, manipulating corporate communications to enhance the perception of corporate and managerial performance or at the very least, to minimize the repercussions of negative news (Subramanian *et al.*, 1993).[1]

Corporate voluntary disclosures are a vehicle with great potential to present self-serving views of corporate performance, because these disclosures are normally unregulated and need not be audited. Managers can distort the perceptions of third parties by selecting only positive information to discuss in their communications, by choosing which figures to highlight, distorting graphical presentation of data, withholding bad news information, etc. Common impression management practices consist of selecting to include in their reports the most favourable items within the whole range of information available. Also, managers can focus on positive outcomes by selecting a benchmark that allows favourable period-to-period comparison, by for example, discussing the most favourable change in earnings out of all the possible ones (Schrand and Walther, 2000; Krische, 2005). Presentational and visual techniques can also be used to emphasise positive performance while downplaying negative outcomes (Beattie and Jones, 2002; So and Smith, 2002; Courtis, 2004; Bowen *et al.*, 2005; Cheng and Courtenay, 2006).

Impression management is thus based on the presumption that "*preparers manipulate transparency by reducing clarity when they wish to disclose less about their underlying circumstances*" (Rutherford, 2003, p. 189). Therefore, impression management translates into a discretionary disclosure strategy that can be operationalised in a number of ways.

Recent research analyses accounting narratives in search of impression management practices. One common type of impression management is *thematic manipulation* in accounting narratives, which consists of the use of positive language, keywords and statements in financial communications (as opposed to neutral or negative language) to convey a positive outlook of performance. Research by Abrahamson and Park (1994) and

[1] Thus, there is a clear difference between earnings managements and impression management. Where the first focuses on direct manipulation of the numbers disclosed, the later deals with potentially misleading presentation of the information. However, both represent serious risks of capital misallocations if successful.

Abrahamson and Amir (1996) study accounting narratives and examine concealment of negative corporate outcomes by investigating negative language in presidents´ letters. Clatworthy and Jones (2003) use thematic analysis by reference to keywords. They follow a method consisting on word counts (positive and negative keywords) to study the relationship between impression management and firm performance. In a second study, Clatworthy and Jones (2006) also consider textual characteristics such as quantitative disclosures, financial performance variables, personal references, passive sentences and future-orientated sentences. These studies conclude that managers behave opportunistically when producing accounting narratives.

Managers may also manipulate impressions by putting the *emphasis* on the positive outcomes. They may achieve this by (i) placing the positive information in a prominent location, such as the headline of the press release (Guillamon-Saorin *et al.*, 2008b), (ii) repeating the positive information through the disclosure; or (iii) by reinforcing the positive information.[2]

Another potentially misleading impression management practice is the *selectivity* of performance numbers to be included in narrative disclosures. In financial reporting, selectivity consists of picking the most favourable information from within the whole range of information. Managers can also select the benchmark for their *performance comparisons* that permits more favorable comparisons, for example, they may choose to compare this year's growth in sales with last year growth, or with the average growth of the industry, or with the growth of a specific competitor, etc. In the extreme, management may create their own numbers instead of using those in the financial reports, if those do not allow for favorable comparisons. Johnson and Schwartz (2005, p. 924) argue that the use of *pro forma* earnings (earnings numbers other than those calculated under GAAP) has the purpose of "*managing readers perceptions of earnings*".

A basic premise in impression management research is that quantitative data is precise in comparison with qualitative expressions that are interpreted by readers and can be easily biased (Behn and Vaupel, 1982; Wallsten and Budescu, 1990). However, quantitative disclosures are not entirely bias-free. Although numerical disclosures are

[2] An example of reinforcing information would be a sentence such as "we expect high growth", where growth is a positive keyword, and "high" acts as reinforcement. For further explanations see Brennan *et al.* (2008).

subject to *ex-post* verification (Healy and Palepu, 2001) managers can also resort to potentially misleading disclosure practices using quantitative information.

A number of studies have compared the use of qualitative and quantitative information in corporate disclosures, finding mixed evidence. Gibbins *et al.* (1990) provide evidence that firms disclose good (bad) news in a qualitative (quantitative) format. However, Skinner (1994) shows that good news is disclosed with quantitative data whereas qualitative information is used when management discloses bad news. Research on accounting narratives supports the findings by Skinner (1994) and concludes that companies with good news include more quantitative performance references in accounting narratives than companies facing a bad year (Clatworthy and Jones, 2006). News about the firm can therefore be considered a significant driver not only of disclosure practices (Dye, 2001), but potentially also of impression management practices.

2.2. Corporate Governance and corporate financial reporting

Classic agency theory models the relations among the different parties to the firm as being fraught with conflicting interests (Jensen and Meckling, 1976; Fama and Jensen, 1983; Jensen, 1986). Managers are expected to base their decision-making on the owners' best interests. However, they can act as utility-maximizing agents because they are experts with access to superior information about the firm and become better informed about the true performance of the company than the principal. These asymmetries in the access to information result in adverse selection and moral hazard problems on the part of management (Beaver, 1998). For example, managers can act in a self-interested way by concealing deteriorating firm performance in their reports, thus avoiding debt covenant violations or attaining a higher compensation (Watts and Zimmerman, 1986).

Against this backdrop, corporate governance provides the architecture of accountability. It encompasses all the provisions and mechanisms that guarantee that the assets of the firm are managed efficiently and in the interests of the providers of finance, mitigating agency problems (Shleifer and Vishny, 1997). The board of directors is at the centre of this decision-making and control system and, therefore, it plays a fundamental role in the governance of large companies (Fama and Jensen, 1983). Corporate boards and particularly independent directors monitor and control senior managers, ensuring that they act in the interests of investors. Extant research on directors' influence and characteristics confirms that independent directors influence board decisions (Byrd and Hickman, 1992),

reduce the CEO's ability to extract rents from the firm (Laux, 2008), are capable of detecting and constraining earnings management (Dechow *et al.*, 1996), and demand more conservative accounting Garcia *et al.* (2007; 2008).

Prior work on the links between corporate governance and voluntary disclosure focuses on disclosures in annual reports. The results presented by this literature support the notion that strong boards are more likely to pursue policies that ensure higher financial transparency, i.e., increased disclosure. The effect of corporate governance mechanisms on voluntary disclosure in Asian companies has been widely investigated. Focusing on Honk Kong firms, Ho and Wong (Ho and Wong, 2001) find evidence that audit committee existence is positively associated with greater voluntary disclosure and that the proportion of family members on the board reduces voluntary disclosure, whilst Gul and Leung (2004) show that CEO duality lowers the level of voluntary disclosures, and that board independence ameliorates this negative impact. Analysing the case of Singapore, Cheng and Courtenay (2006) demonstrates that board independence increases voluntary disclosure in annual reports. More recently, Lim *et al.* (2007) show that board independence is associated with the disclosure of particular types of voluntary information in Australian annual reports. They show that board independence affects the disclosure of forward-looking information, but not the disclosure of non-financial data. Only the work of Eng and Mak (2003) reports a conflicting result. They show that an increase in outside directors reduces corporate disclosures.

A growing body of literature examines whether corporate governance mechanisms are effective in mitigating opportunistic management behaviour in calculating earnings (Beasley, 1996; Xie *et al.*, 2003; Peasnell *et al.*, 2005; Garcia Osma and Gill-de-Albornoz, 2007). However, to the best of our knowledge, only one study has investigated the relationship between corporate governance and impression management, focusing on graph disclosure. Mather and Ramsay (2007) investigate if boards are effective in limiting graph selectivity in the financial reports of companies that change CEOs. Their results show that boards with a higher proportion of independent directors are more effective in limiting the selectivity of graphs, while the concentration of the roles of CEO and chairman of the board in the same person is associated with an increase in graph selectivity in the period following a change in CEO. Also related to this area of research, Abrahamson and Park (1994) investigate the concealment of negative outcomes by companies, a strategy consistent with self-interested communication. According to their work, directors have a

duty to ensure that proper reports are given to stockholders (Conference Board 1967, p. 2). They hypothesise that outside directors, despite having limited access to firm-specific information, limit concealment of negative organizational outcomes. Additionally, Corporate Board Member Magazine (2004) identifies as one of the key role of directors to evaluate investors communications. Ajinkya *et al.* (2005) mention that one of the New York Stock Exchange listing requirements is that the audit committee of the board discusses with management information that is presented in the press releases.

We expect that corporate governance mechanisms will be associated to firm preparation and issuance of ARPRs, as well as to the content of those releases. We briefly provide some indication of how ARPRs are prepared.

2.2.1. Preparation of Annual Results Press Releases (ARPRs).

ARPRs are firm-initiated earnings announcements usually elaborated by the company investor relations department. Although the ultimate person responsible for the content of these press releases is the company chairman, they can be signed by a wide range of people or departments. These contact details, commonly located at the end of the press release, indicate the person or department who has produced the press release. For example, in our sample of Spanish press releases, we find either: the press office, an internal press department, the corporate communication department or the investor relations department details at the end of the body of the ARPRs. However, sometimes, there are no contact details at the end of the release. Prior research comments on the difficulties to determine the authorship of corporate narratives (Staw *et al.*, 1983; Merkl-Davies and Brennan, 2007). In particular, Staw *et al*. (1983) argue that letters to shareholders can be considered organizational rather than individual communications devices because, although they are usually signed by the CEO, some other internal or external parties (i.e. public relations officers) may contribute to the final version of the corporate narrative report. ARPRs are different from the official filings (i.e. annual report, quarterly results or other relevant facts) that companies have to send to the Spanish Stock Exchange Commission (CNMV). Once they have been prepared, ARPRs appear in the company Website and are also sent to the media. Together with other sources, journalists use these press releases to elaborate their news articles. Some companies send the press release to the CNMV although this is not required.

2.3. Research questions

This study focuses on the association between potentially misleading disclosure practices (i.e. impression management) in firm ARPRs and corporate governance. First, we analyse the likelihood that a firm will release an ARPR. Based on the previously reviewed evidence, we expect that strong governance will demand greater financial transparency, i.e., increased disclosure. We test the following hypothesis:

H1: Strong corporate governance increases the probability of firms releasing ARPRs.

We also expect that corporate governance will be negatively associated with the incidence of impression management. Managers are expected to use the flexibility inherent to narrative disclosures to attempt to favourably impress the reader. To the extent that strong governance reduces the information manipulation and increases the precision of the information disclosed, minimizing managerial biases, we predict that firms with strong governance will release ARPRs with a lower level of potentially misleading disclosure practices, i.e., impression management will be less pervasive. Thus, our main hypothesis is as follows:

H2: Strong corporate governance is associated with decreased impression management.

If impression management responds to managerial self-serving biases, we expect that strong governance mechanisms will constrain it and there will be a negative association between impression management and corporate governance. Impression management could also be driven by managerial attempts to convey future information about the firm. To the extent that impression management is associated to news about the firm, it could be considered informative. This theory is investigated in the context of accounting narratives by Staw *et al.* (1983). They test if the use of self-serving attribution bias in letters to shareholders is a genuine expression of optimism rather than a product of impression management. Their results support the idea that managers engage in self-serving disclosures. Thus, we control in our tests for the existence of news about the firm.

3. Method and sample selection procedure

We investigate the relation between firm corporate governance mechanisms and impression management in corporate disclosures. The release of an ARPR involves different departments within the organization as explained in section 2.2.1 above. Their ultimate content, however, is the responsibility of management. As a corporate communication with potential economic consequences (Tetlock *et al.*, 2008), we hypothesize that ARPRs contents are also the responsibility of corporate boards. To the extent that boards are concerned with information transparency, comparability and quality, they are expected to monitor all major corporate communications. We do not predict that there is a specific characteristic of the board or a delegated committee that reviews these ARPRs, but rather, that corporate governance acts as the architecture of accountability at all levels of communication. Consequently, we use several characteristics of the board that are associated with strong governance and positive outcomes in prior research to proxy for the influence of governance mechanisms. It is not expected that these governance elements are individually responsible for the level of impression management in accounting narratives. However, they all may contribute to the strength of the overall governance system, and are expected to jointly limit the use of management self-serving disclosures.

3.1. Measuring corporate governance and impression management

3.1.1. Measure of corporate governance

To measure the level or quality of firms' governance, we use several proxies for the functioning and structure of the board of directors that have been identified by prior literature as proxies of strong governance.

(1) *The proportion of independent directors on the board* (*PrInd*). Extant research shows that independent directors affect firm decisions (Byrd and Hickman, 1992) and fulfil their monitoring role, limiting the incident of fraudulent accounting (Beasley, 1996), and demanding less aggressive reporting (Peasnell *et al.*, 2005). *PrInd* is calculated as the number of independent directors divided by total board size.

(2) *The proportion of institutional directors on the board* (*PrDom*). Three types of directors commonly sit in Spanish boards: (i) executive; (ii) independent and (iii) institutional (dominical) directors. Institutional directors represent the interests of large

institutional investors. These large investors undertake the responsibility of monitoring managers (Shleifer and Vishny, 1986), reducing agency problems. Recent research by Garcia and Gill-de-Albornoz (2007) confirms that their presence on the board of Spanish firms is associated to lower accrual manipulation. *PrDom* is calculated as the number of institutional directors divided by total board size.

(3) *CEO influence* (*CEOinf*). Hermalin and Weisbach (1998) argue that the main factor affecting the effectiveness of the board is its independence from the CEO. Thus, boards are expected to be more independent and efficient in fulfilling their monitoring duties when the chairman of the board is not an executive director. *CEOinf* takes the value of 1 if the chairman is an outside director and zero otherwise.

(4) *Number of board meetings* (*BMeet*). To be efficient monitors, boards have to be active. The number of board meetings is one way to measure how active a board is in its monitoring role (Vafeas, 1999). The greater the number of board meetings (*BMeet*), the more intense the monitoring exerted by the board.

(5) *Existence of a nomination-remuneration committee* (*RCom*). Dechow *et al.* (1994) show that remuneration committees adjust CEO compensation to minimise opportunistic behaviour, and García and Gill-de-Albornoz (2007) show that these committees improve the efficiency of the board and the audit committee in constraining manipulation practices. *RCom* takes the value of 1 if the firm has this committee; 0 otherwise.

(6) *Existence of an audit committee* (*ACom*). Audit committees constrain earnings management practices (DeFond and Jiambalvo, 1991). The Olivencia Report recommends the creation of an audit committee with responsibility to hire external auditors and to facilitate and supervise their work. *ACom* takes the value of 1 if the firm has an audit committee; 0 otherwise.

(7) *Board size* (*BSize*). Oversized boards are less efficient in performing their duties because of the increasing problems of communication and coordination as board size increases, and also, because of the decreased ability of large boards to control management. Yermack (1996) suggest that board size affects firm value negatively. *BSize* is the number of members in the board.

Following Bertrand and Mullainathan (2001) and Garcia *et al.* (2007; 2008), we develop an aggregate score (*TotGov*) that incorporates these seven characteristics of the function and structure of the board of directors. We define our aggregate governance measure (*TotGov*) as the mean of the seven standardized variables. By standardizing the variables the tests should not be affected by scale problems associated to differences in the measurement of the variables that make up the indexes. It is expected that greater values of *TotGov* will be associated to strong governance structures.

3.1.2. Measure of impression management

Impression management is analysed in both qualitative and quantitative disclosures following the schema in Brennan *et al.* (2008). Of the four impression management techniques examined in this paper, some involve the analysis of both qualitative and quantitative disclosures and others involve the analysis of only qualitative or only quantitative disclosures (see Appendix 1 Panel A). Emphasis is analysed by examining location, repetition and reinforcement, with reinforcement representing exclusively a qualitative concept. One important aspect to bear in mind is that impression management cannot be observed directly in accounting narratives but we can observe disclosure practices or trends that are consistent with impression management. We can then say that managers are using this accounting narratives in a self-serving manner rather than reporting performance objectively (Clatworthy and Jones, 2003).

Three composite scores are computed based on the nine basic impression management practices described in Brennan *et al.* (2008) (four qualitative and five quantitative). The analysis is based on the study of: (1) keywords/statements and (2) quantitative performance numbers. The method to calculate the composite scores is summarised in Appendix 1 Panel B.

The data necessary to calculate the scores come from the manual content analysis which is the basic methodology in this study. To calculate the qualitative composite score we coded: (1) keywords and statements (positive and negative), (2) repetition of statements (positive and negative), (3) reinforcement of keywords (positive and negative), (4) location of the information within the press release (most, next-most and least emphasised section of the press release). Similarly, the quantitative composite score is based on: (1) amounts (positive and negative), (2) repetition of amounts (positive and negative), (3) performance comparisons (positive and negative) and (4) location of the information within the press

release (most, next-most and least emphasised section of the press release). Moreover, within the quantitative score we also consider selectivity which occurs when the amount included in the press release is selected from the profit and loss account. We calculate a score including selectivity and a second score excluding selectivity. The qualitative and quantitative composite scores are based on weightings to capture all the disclosure practices explained above (see Appendix 1 Panel B). The weightings are subjective and the system to apply these weightings is developed by Brennan *et al.* (2008) and empirically tested by Guillamon-Saorin *et al.* (2008a). Guillamon-Saorin *et al*. (2008a) carry out a sensitivity test consisting in varying the weights to check whether these variations affect the results. No significant differences are found.

The three composite scores are further manipulated to capture a measurement of bias within the impression management context. The measure of bias (*IMSC*) is calculated as the difference between the total composite scores for all positive qualitative/quantitative amounts minus the total composite score for all negative qualitative/quantitative amounts, divided by the total composite scores for all qualitative/quantitative amounts (Brennan *et al.*, 2008). This measure of bias is similar to that used by Gordon *et al.* (2007) and Tetlock *et al.(2008)*. This is illustrated in the example provided in Appendices 2 and 3. The example shows that the disclosures for Azkoyen Company are positively biased. The example is simplified by focusing in qualitative information and excluding quantitative information. The process to calculate the composite score and the measure of bias for quantitative information is similar.

3.2. Multivariate tests

To test the association between corporate governance and voluntary releases of ARPRs we estimate the following multivariate logistic regression relating the probability of releasing an ARPR to the strength of corporate governance mechanisms and a vector of control variables:

$$\log\left[\frac{p_{it}}{1-p_{it}}\right] = \gamma_0 + \gamma_1 CorpGov_{it} + \gamma_2 ROA_{it} + \gamma_3 SIZE_{it} + \gamma_4 MTB_{it} + \gamma_5 LOSS_{it}, \qquad (1)$$

where p_{it} is the latent probability that firm *i* releases an ARPR in year *t* ($y_{it} = 1$) and $1 - p_{it}$ is the latent probability that firm *i* does not voluntary prepare a press release in year *t* ($y_{it} = 0$); *CorpGov* is our measure of the strength of corporate governance mechanisms. We run

several specifications of model (1), using alternatively as our *CorpGov* proxy several of the individual governance proxies described above, as well as the composite governance score (*TotGov*). We do so because prior work on voluntary disclosure suggests that not all corporate governance characteristics are associated to the extent of voluntary disclosure, as previously reviewed. The main coefficient of interest in model (1) is γ_1. Under *H1*, strong corporate governance is expected to result in a greater demand for voluntary corporate disclosures. Thus, we predict γ_1 to be significantly positive.

The model also includes several controls for the propensity or opportunities for management to voluntary disclose information. Following Francis *et al*. (2008), the *Controls* vector includes measures of firm size ($SIZE_{it}$), profitability (ROA_{it}) and the market-to-book ratio (MTB_{it}). Firm size is measured as the natural logarithm of total assets, and it controls for firm-specific factors that influence disclosure policy, such as proprietary costs, and ensures that any relation observed between hypothesized determinants and disclosure is not an artefact of firm size (Bamber and Cheon, 1998). *MTB* controls for growth opportunities and proprietary costs. Firms facing greater growth opportunities are less likely to reveal information (Bamber and Cheon, 1998; Nagar *et al.*, 2003). Finally, *ROA* is calculated as net income divided by lagged total assets, and it controls for the effect of poor performance on voluntary disclosure (Skinner, 1994; Nagar *et al.*, 2003). Previous research shows that firm performance is positively related to disclosure quality. As an additional control, we also include an indicator variable (*LOSS*) that takes the value of 1 if the firm has bad news to report; 0 otherwise. A firm has bad news to report if it reports a loss. Theory indicates that a central premise in voluntary disclosure is that firms are more likely to provide disclosures when there is favourable information to be communicated to the market (Dye, 2001).

In our second set of tests, we study the association between corporate governance and impression management in ARPRs. For this test, we estimate the following multivariate OLS regression relating our impression management scores to the strength of corporate governance mechanisms and a vector of control variables:

$$IMSC_{it} = \alpha_0 + \alpha_1\, GoodGov_{it} + \alpha_2\, GNews_{it} + \alpha_3\, GNews_{it+1} + \Sigma\, \beta_k\, Industry_{kit}$$

$$+ \Sigma\, \delta_j\, Controls_{jit} + \varepsilon_{it}, \qquad (2)$$

where $IMSC_{it}$ is alternatively one of our three impression management scores for firm *i* in year *t*; *GoodGov* is our measure of the overall strength of corporate governance mechanisms. *GoodGov* takes the value of 1 if the firm's governance score (*TotGov*) is above the median; 0 otherwise. In model (2), α_1 is the main coefficient of interest. Strong governance is expected to result in a lower impression management in press releases. Thus, we predict α_1 to be significantly negative.

We are also interested in analysing whether impression management responds to informative or opportunistic motivations. To test for managerial motivations, we include a proxy for the sign of current and future news. $GNews_{it}$ is an indicator variable equal to 1 if reported earnings for firm *i* are greater than prior period earnings in year *t*, and zero otherwise; $GNews_{it+1}$ is an indicator variable equal to 1 if reported earnings are greater than prior period earnings in year *t*+1; 0 otherwise. Similar inferences are obtained if we define good news as reporting a profit (earnings above zero), instead of a growth in earnings. This definition of *GNews* increases the variability of this proxy, as nearly all firms under analysis report positive earnings (95.7%), while 75.8% (56.9%) report increases in earnings in the current (following) period. To the extent that current positive impression management is associated to good news and particularly to future good news, we might interpret such management as being informative of positive events in the near future. In that case, we would expect α_2 and α_3 to be positive. *Industry* is a vector of industry dummies that controls for potential industry-specific differences.

Finally, $Controls_{it}$ is the vector of *j* controls for the propensity or opportunity for management to manage the information contained in the ARPRs. The *Controls* vector includes measures of firm size ($SIZE_{it}$), performance as measured by firm fiscal year return (RET_{it}), and the market-to-book ratio (MTB_{it}). *SIZE* and *MTB* are defined as previously explained. We choose *RET* as our measure of firm performance to avoid any mechanical correlations with our proxies of *GNews*, which are based on changes in profitability. Results are however similar if we use *ROA* instead of *RET*.

3.3. Sample selection procedure and data

The entire population of publicly listed Spanish companies in 2000 is considered for this study. Foreign companies and investment societies are excluded from the Spanish list

of companies quoted on the Madrid Stock Exchange.[3] This results in an initial set of 123 firms. ARPRs are gathered primarily from the companies' websites (normally, by following the link "Press Office" within the section "Investor Relations"). When the press release is not available from this source the Website of the CNMV is used. The CNMV includes a section on "relevant facts" where some companies may include their press releases. If none of these sources are successful, direct contact is made with the company and the press release is requested. This process ensures that all press releases issued by the companies in the sample are included in the study.[4] Once all press releases are collected we proceed to the content analysis. Corporate governance data is manually compiled from the replies to the questionnaires of compliance with the Olivencia Report for the years 1999-2001 from the Spanish Stock Exchange Commission (CNMV) Website. If governance data is missing, we complete the information using the data of *Stuart Spencer* Reports. Accounting and financial data are downloaded from *Extel Finantials*. We require three years of consecutive accounting data (1999-2001) to be included in the sample.

The cross-section of these different databases results in 106 firms with accounting, financial and corporate governance data available, out of which 55 (51.89% of full sample) release an ARPR in 2000, whilst 51 of them do not (48.11%). Table 1 Panels A and B provide descriptive evidence of main variables.

4. Results

We report two sets of results. First, we study if strong governance mechanisms are associated to increased likelihood of firms' voluntary issuing an ARPR. Second, we analyse the links between governance and the content of those ARPRs. To the extent that strong governance demands greater information disclosure and lower managerial manipulation, we expect to observe a positive association between our measure of strong governance and (1) the probability of releasing an ARPR; and (2) the quality of the information contained in the ARPR.

[3] Open-ended investment companies registered on the Madrid Stock Exchange are excluded due to their specific legal accounting framework and the nature of their activities.

[4] All companies contacted either sent us the release requested or replied that they had not issue an ARPR.

Table 1 Descriptive statistics of corporate governance variables

PrInd is the proportion of independent directors on the board. *PrDom* is the proportion of dominical directors on the board. *CEOinf* equals 1 if the Chairman of the board is not an executive director; 0 otherwise. *BMeet* is the annual number of board meetings. *ACom* takes the value of 1 if the firm has an audit committee; 0 otherwise. *RCom* equals 1 if the firm has a remuneration or nominations committee; 0 otherwise. *BSize* is board size. Values are averaged over the 1999-2001 three year period. *ROA* is return-on-assets. *MTB* is the market-to-book value. *SIZE* is the natural logarithm of total assets. *LOSS* takes the value of 1 if the firm has bad news to report, defined as reporting losses; 0 otherwise. Panel C reports results of a *t*- (Wilcoxon) test of equality of means (median).

Panel A: Firms that do not prepare an annual press release (N=51)

	Mean	Std	Q1	Median	Q3
PrInd	0.319	0.205	0.177	0.333	0.423
PrDom	0.448	0.209	0.300	0.442	0.579
CEOinf	0.327	0.459	0.000	0.000	1.000
BMeet	9.211	3.294	6.667	10.000	11.000
ACom	0.542	0.485	0.000	1.000	1.000
RCom	0.411	0.479	0.000	0.000	1.000
BSize	11.193	4.294	8.000	10.000	13.000
ROA	0.047	0.042	0.016	0.034	0.061
MTB	2.187	2.808	0.887	1.283	2.279
SIZE	5.881	1.158	5.374	5.711	6.493
LOSS	0.034	0.186	0.000	0.000	0.000

Panel B: Firms that prepare an annual press-release (N=55)

	Mean	Std	Q1	Median	Q3
PrInd	0.389	0.229	0.222	0.417	0.545
PrDom	0.422	0.24	0.286	0.381	0.556
CEOinf	0.355	0.460	0.000	0.000	1.000
BMeet	8.688	3.198	6.000	8.333	11.500
ACom	0.730	0.407	0.500	1.000	1.000
RCom	0.703	0.437	0.000	1.000	1.000
BSize	13.352	5.524	9.333	11.500	16.000
ROA	0.009	0.211	0.018	0.039	0.056
MTB	4.222	8.041	1.265	1.943	3.809
SIZE	6.672	2.176	5.568	6.555	8.313
LOSS	0.052	0.223	0.000	0.000	0.000

Panel C: Differences across groups (preparers vs. non-preparers)

	Mean			*Median*		
	difference	t-stat	p-val	difference	z-value	p-val
PrInd	0.070	1.67	(0.09)	0.084	1.73	(0.08)
PrDom	-0.026	-0.58	(0.56)	-0.061	-0.80	(0.42)
CEOinf	0.028	0.31	(0.75)	0.000	0.39	(0.71)
BMeet	-0.523	-0.86	(0.39)	-1.667	-0.75	(0.45)
ACom	0.188	2.08	(0.04)	0.000	1.84	(0.07)
RCom	0.292	3.26	(0.00)	1.000	3.11	(0.00)
BSize	2.159	2.22	(0.03)	1.500	2.21	(0.03)
ROA	-0.038	-1.32	(0.19)	0.005	0.22	(0.82)
MTB	2.035	1.70	(0.09)	0.660	2.27	(0.02)
SIZE	0.791	2.21	(0.03)	0.844	2.31	(0.02)
LOSS	-0.018	-0.38	(0.70)	0.000	0.35	(0.73)

4.1. The decision to voluntary release an ARPR

Out of the 106 firms analysed, over half of them (55 firms, 51.89%) release an ARPR. Table 1 Panels A and B provides descriptive evidence of corporate governance and main control variables across preparers and non-prepares of ARPRs. Panel C presents a test of differences in means and medians across groups. From this descriptive evidence, it can be observed that firms that release an ARPR, on average (a) have significantly more independent boards, with a mean (median) value of *PrInd* of 38.9% (22.2%), versus 31.9% (17.7%) for non-preparers; and (b) are more likely to have an audit (remuneration) committee, with 73.0% (70.3%) of preparers having them, for only 54.2% (41.1%) of non-preparers. This is consistent with preparers having generally stronger corporate governance, and in line with prior work on corporate governance and voluntary disclosure (Cheng and Courtenay, 2006; Lim *et al.*, 2007). However, not all governance characteristics appear to influence voluntary disclosure. This descriptive evidence suggests that some governance variables do not weight in this managerial decision.

The descriptive evidence also suggests that preparers have slightly larger boards, with a mean (median) of 13 (9) board seats versus the 11 (8) of non-preparers. Both board sizes are within the recommendations of the Olivencia Report (between 5 and 15 members). *SIZE* and *MTB* are also different across groups. Firms that prepare an ARPR are generally larger and have greater growth opportunities. This is consistent with our expectations that size and growth opportunities are significant drivers of voluntary disclosure.

Table 2 shows the correlation matrix. Pearson (Spearman) correlation coefficients are reported above (below) the diagonal. Unsurprisingly, several of the governance variables are highly correlated. This is consistent with prior work in Spain by Garcia and Gill-de-Albornoz (2007). In particular, *ACom* and *RCom* are highly correlated (Pearson *corr*=0.643), as are *PrInd* and *PrDom* (*corr*=-0.812). This evidence supports our decision to create a governance score (*TotGov*) that aggregates all governance data. Because of the high correlation between governance variables, we follow prior work by Xie *et al*. (2003) and Garcia and Gill-de-Albornoz (2007) and do not include them all in the same model. Table 3 presents results of model (1) using as our *GorpGov* measure the individual governance variables that significantly drive the decision to release an ARPR identified in the univariate tests (models 1 to 4). In model 5, we use the *TotGov* score that aggregates all governance information.

Table 2 Correlation matrix

PrInd is the proportion of independent directors on the board. *PrDom* is the proportion of dominical directors on the board. *CEOinf* equals 1 if the Chairman of the board is not an executive director; 0 otherwise. *BMeet* is the annual number of board meetings. *ACom* takes the value of 1 if the firm has an audit committee; 0 otherwise. *RCom* equals 1 if the firm has a remuneration or nominations committee; 0 otherwise. *BSize* is board size. Values are averaged over the 1999-2001 three year period. *MTB* is the market-to-book value. *SIZE* is the natural logarithm of total assets. *LOSS* takes the value of 1 if the firm has bad news to report, defined as reporting losses; 0 otherwise.

Pearson (Spearman) correlation coefficients are reported above (below) the diagonal.

	PrInd	*RCom*	*ACom*	*BSize*	*CEOinf*	*BMeet*	*PrDom*	*SIZE*	*MTB*	*LOSS*
PrInd		**0.290**	**0.340**	-0.155	-0.048	0.122	**-0.812**	0.169	0.157	-0.122
		(0.00)	(0.00)	(0.13)	(0.64)	(0.23)	(0.00)	(0.12)	(0.15)	(0.26)
RCom	**0.308**		**0.643**	-0.156	0.055	0.130	-0.127	0.141	-0.072	0.054
	(0.00)		(0.00)	(0.13)	(0.60)	(0.21)	(0.21)	(0.19)	(0.51)	(0.62)
ACom	**0.355**	**0.634**		-0.013	0.103	0.119	**-0.233**	0.148	-0.073	0.018
	(0.00)	(0.00)		(0.90)	(0.31)	(0.24)	(0.02)	(0.17)	(0.50)	(0.87)
BSize	-0.126	-0.142	-0.005		0.066	-0.856	0.058	**-0.500**	0.106	0.001
	(0.22)	(0.16)	(0.96)		(0.52)	(0.40)	(0.57)	(0.00)	(0.34)	(0.99)
CEOinf	-0.075	0.039	0.093	0.083		-0.101	**0.198**	**-0.234**	-0.086	**0.181**
	(0.46)	(0.70)	(0.36)	(0.41)		(0.33)	(0.05)	(0.03)	(0.43)	(0.09)
BMeet	0.147	0.149	0.138	-0.094	-0.103		-0.086	**0.233**	0.047	**-0.250**
	(0.15)	(0.14)	(0.17)	(0.35)	(0.31)		(0.40)	(0.03)	(0.67)	(0.02)
PrDom	**-0.779**	-0.126	**-0.197**	0.048	**0.211**	-0.109		-0.147	-0.128	0.137
	(0.00)	(0.22)	(0.05)	(0.65)	(0.03)	(0.28)		(0.17)	(0.24)	(0.20)
SIZE	0.101	0.167	0.167	**-0.501**	-0.188	0.188	-0.104		-0.071	**-0.339**
	(0.35)	(0.12)	(0.12)	(0.00)	(0.08)	(0.08)	(0.33)		(0.52)	(0.00)
MTB	0.123	0.146	**0.227**	-0.028	-0.138	0.069	-0.149	**0.327**		-0.008
	(0.26)	(0.21)	(0.04)	(0.80)	(0.21)	(0.52)	(0.18)	(0.00)		(0.93)
LOSS	-0.144	0.005	0.002	0.002	0.176	**-0.270**	0.136	-0.131	-0.035	
	(0.18)	(0.64)	(0.98)	(0.98)	(0.10)	(0.01)	(0.21)	(0.22)	(0.74)	

Under *H1*, we predict that the strength of governance is positively associated to ARPRs release. The results of Table 3 confirm our prediction. In particular, the evidence suggests that board independence and the existence of a remuneration committee significantly determine the release of an ARPR. Specifically, both *PrInd* and *RCom* are significantly positive across all specifications (*PrInd*=1.999, *p*-val=0.08; *PrInd*=2.359, *p*-val=0.05, *PrInd*=2.001, *p*-val=0.08, *PrInd*=1.959, *p*-val =0.08 in models 1 to 4; and *RCom*=0.938, *p*-val=0.05; *RCom*=0.937, *p*-val=0.05; *RCom*=0.975, *p*-val=0.04; in models 1, 3 and 4, respectively). Model 5 presents results of running model (1) using as *CorpGov* proxy the composite governance score (*TotGov*). The univariate results in Table 1 suggest that not all governance variables may be equally relevant in determining the voluntary

Table 3 Modelling the decision to release an ARPR

PrInd is the proportion of independent directors on the board. *ACom* takes the value of 1 if the firm has an audit committee; 0 otherwise. *RCom* equals 1 if the firm has a remuneration or nominations committee; 0 otherwise. Corporate governance values are averaged over the 1999-2001 three year period. *MTB* is the market-to-book value. *SIZE* is the natural logarithm of total assets. *LOSS* takes the value of 1 if the firm reports a loss; 0 otherwise. *GNews* takes the value of 1 if the firm reports earnings above zero in t+1; 0 otherwise. *EQR* is change in equity capital in year t+1. *DebtR* is change in total debt outstanding in t+1. TACC is total accruals.

	Expected Sign	(1) Coeff. (p-val)	(2) Coeff. (p-val)	(3) Coeff. (p-val)	(4) Coeff. (p-val)	(5) Coeff. (p-val)	(6) Coeff. (p-val)
Intercept		-3.909	-3.977	-3.917	-3.613	-2.913	-5.879
		(0.04)	(0.04)	(0.05)	(0.02)	(0.03)	(0.01)
PrInd	(+)	1.999	2.359	2.001	2.351	.	3.029
		(0.08)	(0.05)	(0.08)	(0.05)	.	(0.04)
RCom	(+)	0.938	.	0.937	.	.	0.828
		(0.05)	.	(0.05)	.	.	(0.11)
ACom	(+)	.	0.492	.	0.492	.	.
		.	(0.27)	.	(0.21)	.	.
TotGov	(+)	.	.	.	.	0.657	.
		.	.	.	.	(0.10)	.
ROA	(+)	3.720	5.657	3.714	5.677	2.673	14.524
		(0.30)	(0.20)	(0.29)	(0.16)	(0.35)	(0.07)
SIZE	(+)	0.407	0.436	0.407	0.436	0.459	0.559
		(0.03)	(0.01)	(0.02)	(0.02)	(0.01)	(0.01)
MTB	(+)	0.072	0.067	0.072	0.066	0.086	0.049
		(0.17)	(0.19)	(0.17)	(0.19)	(0.15)	(0.38)
LOSS	(-)	-0.441	-0.326	-0.433	-0.316	-0.198	0.066
		(0.38)	(0.41)	(0.37)	(0.83)	(0.37)	(0.96)
$Gnews_{t+1}$	(+)	.	.	0.019	-0.045	0.289	0.242
				(0.48)	(0.48)	(0.30)	(0.77)
EQR	(+)						-0.700
							(0.37)
DebtR	(+)						0.098
							(0.12)
TACC	(+)	.	.				-5.265
							(0.20)
N. Observations		106	106	106	106	106	97
Concordant percent		76.7	73.9	76.6	74.4	73.3	79.5
Pseudo R-sq.		0.267	0.239	0.266	0.240	0.191	0.335

release of an ARPR. However, *TotGov* is significantly positive in Table 3, although only at the 10% level (*TotGov*=0.657; *p*-val=0.10). Untabulated results of running model (1), using alternatively the other individual *CorpGov* measures, confirms that *BSize*, *CEOinf*, *NMeet*

and *PrDom* are not drivers of the decision to release an ARPR. In all specifications, the individual governance variables are insignificant. This confirms that governance is a significant driver of voluntary release of ARPRs, but that, likely, not all of the considered governance variables affect this decision.

We are also interested in analysing the extent to which voluntary disclosure is associated to news about the firm. Prior work suggests that firms are more likely to disclose information that is favourable to the entity (Dye, 2001). We control for the sign of current and future news about the firm: *LOSS* and good news in year t+1: $GNews_{t+1}$, where good news is defined as reporting profits, a target that has been identified as relevant for firm managers (Burgstahler and Dichev, 1997). Results are consistent with theory in that they have the expected signs across most specifications; however they are not significant at conventional levels. This is perhaps unsurprising as nearly all sample firms have good news to report (see Table 1). The vector of *Control* variables behave as expected. *SIZE* is significantly positive across all models, confirming that large firms are more likely to voluntary disclose information, whilst *ROA* and *MTB* are not significant at conventional levels. This is consistent with evidence in Francis *et al*. (2008) and Nagar *et al.* (2003) who show that *SIZE* is a significant driver of voluntary disclosure but fail to find evidence of *MTB* and *ROA* driving disclosure.

As a sensitivity test, we run an additional specification (model 6) that accounts for other potential variables that may drive the decision to provide additional information. Specifically, we control for the possibility that the firm issues debt or equity in the following period, and thus, needs to disclose additional information in the current period. We also control for the level of earnings management. To the extent that financial information is of low quality, other firm communications may also show signs of lower transparency. *EQR* is the change in equity in year t+1. *DebtR* is the change in total debt outstanding in t+1.[1] As a measure of earnings management, we use total accruals (*TACC*). Table 3 model 6 presents results of this alternative specification. None of the additional control variables are significant. The main variable of interest, *PrInd* is still significantly positive (*PrInd* = 3.016, p-val = 0.01), however, the inclusion of these additional variables reduces the significance of *RCom*, which is still positive but no longer significant at conventional levels (*RCom* = 0.782, p-val = 0.13).

[1] Results are similar if we define these variables as taking the value of 1 if the firm equity and total debt outstanding increases by 20 per cent or more in t+1; and 0 otherwise. Or even if we set the threshold at 10%.

4.2. Corporate governance and impression management

Under *H2*, we expect that impression management in ARPRs is negatively related to the strength of firm corporate governance. As shown in Table 1, 55 sample firms voluntary release an ARPR. To run our second test, we classify sample firms into strong and weak governance using our composite score (*TotGov*). A firm is classified as having strong (weak) governance if its *TotGov* score is above (below) the median value. Table 4, Panels A and B, provide descriptive statistics of governance variables for firms classified as having strong (*GoodGov*=1) and weak governance (*GoodGov*=0). Panel C provides a test of mean and median differences in governance variables across groups. Strong governance firms have more independent directors on the board (*PrInd*=0.464 vs. *PrInd*=0.312); are more likely to have a non-executive director as chairman of the board (*CEOinf*=0.506 vs. *CEOinf*=0.198); have boards that meet more frequently (*BMeet*=9.506 vs. *BMeet*=7.839); and are more likely to have both an audit (*ACom*=0.976 vs. *ACom*=0.475) and a remuneration committee (*RCom*=0.940 vs. *RCom*=0.457). This evidence confirms the internal validity of *TotGov* as an aggregate measure of the strength of corporate governance and signifies that *GoodGov* is a valid measure to segregate sample firms.

Table 5 provides some descriptive evidence of differences in impression management across governance types. Panel A shows that strong governance firms have lower levels of qualitative impression management. Specifically, the average number of positive (negative) keywords and statements is significantly lower (higher) in strong (weak) governance firms. Strong governance firms have an average of 20.286 (2.357) positive (negative) keywords in their ARPRs, compared with 24.512 (1.146) in the ARPRs of firms with weak governance. Similarly, when we analyse the number of statements, strong governance firms have an average of 12.643 (2.000) positive (negative) statements, for 16.244 (0.951) positive (negative) statements in the ARPRs of weak governance firms. We also report differences in the number of positive and negative amounts disclosed in ARPRs. The descriptive evidence is again consistent with our expectation, with strong governance firms disclosing more negative amounts and weak governance firms including more positive amounts in their ARPRs. However, in this case, the differences are not statistically significant. For a more precise test of differences in impression management across governance groups, we compare our measures across groups: *IMSC1*, *IMSC2* and *IMSC3*

Table 4 Descriptive statistics of variables across governance levels

Firms are classified using *GoodGov*, a composite variable that aggregates seven good governance indicators. Firms are classified as having good governance (*GoodGov*=1) if their aggregate governance score is above the annual median. The governance indicators are: *PrInd* is the proportion of independent directors on the board. *PrDom* is the proportion of dominical directors on the board. *CEOinf* equals 1 if the Chairman of the board is not an executive director; 0 otherwise. *BMeet* is the annual number of board meetings. *ACom* takes the value of 1 if the firm has an audit committee; 0 otherwise. *RCom* equals 1 if the firm has a remuneration or nominations committee; 0 otherwise. *BSize* is board size. Values are averaged over the 1999-2001 three year period.

Panel C reports results of a *t*- (Wilcoxon) test of equality of means (median). Reported *p-val*s are for a two-tail test.

Panel A: Firms classified as having good governance (GoodGov =1) (N=28)

	Mean	Std	Q1	Median	Q3
PrInd	0.464	0.197	0.283	0.456	0.591
PrDom	0.386	0.198	0.293	0.360	0.527
CEOinf	0.506	0.474	0.000	0.583	1.000
BMeet	9.506	3.161	7.000	8.667	12.167
ACom	0.976	0.087	1.000	1.000	1.000
RCom	0.940	0.204	1.000	1.000	1.000
BSize	13.714	6.216	9.833	11.583	15.000

Panel B: Firms classified as having poor governance (GoodGov =0) (N=27)

	Mean	Std	Q1	Median	Q3
PrInd	0.312	0.238	0.083	0.312	0.444
PrDom	0.459	0.276	0.281	0.399	0.750
CEOinf	0.198	0.395	0.000	0.000	0.000
BMeet	7.839	3.066	5.000	7.000	11.000
ACom	0.475	0.452	0.000	0.500	1.000
RCom	0.457	0.479	0.000	0.333	1.000
BSize	12.975	4.792	9.000	11.500	17.500

Panel C: Differences across governance levels

	Mean			*Median*		
	difference	t-stat	p-val	difference	z-value	p-val
PrInd	0.152	-2.59	(0.01)	0.144	-2.36	(0.02)
PrDom	-0.073	1.14	(0.26)	-0.039	0.91	(0.36)
CEOinf	0.308	-2.61	(0.01)	0.583	-2.51	(0.01)
BMeet	1.667	-1.98	(0.05)	1.667	-2.03	(0.04)
ACom	0.501	-5.75	(0.00)	0.500	-4.52	(0.00)
RCom	0.483	-4.84	(0.00)	0.667	-3.97	(0.00)
BSize	0.739	-0.49	(0.62)	0.083	-0.27	(0.78)

Table 5 Impression management across governance levels

N=55 Annual press releases (APRs). Panel A presents average number of positive and negative keywords and statements found in the APRs of firms classified across governance levels. *GoodGov*=1 (*GoodGov*=0) are good (poor) governance firms. It is expected that firms with stronger governance mechanisms in place will show a lesser degree of impression management in their APRs. Thus, *GoodGov*=1 firms are expected to include less (more) positive (negative) keywords and statements in their APRs. Difference in means is calculated using a *t*-test. Reported *p-val*s are for 1-tail tests of significance.

In Panel A, definition of measures is as follows: *Positive/negative keyword*: (1) sentence in which word is mentioned communicates a negative/positive outcome for the company and (2) the sentence mentions the environment affecting the company positively/ negatively. *Positive/negative amount*: Amounts are categorised into positive or negative by reference to prior year results.

Panel B presents differences of impression management measures across governance levels.. Firms are classified using *GoodGov*, a composite variable that aggregates seven good governance indicators. Firms are classified as having good governance (*GoodGov*=1) if their aggregate governance score is above the annual median. Impression management measures are calculated aggregating several scores of qualitative and quantitative impression management. *IMSC1* is a measure of qualitative impression management. *IMSC2* is a measure of quantitative impression management including selectivity. *IMSC3* is a measure of quantitative impression management without selectivity. Appendices 1, 2 and 3 provide information on how the measures are calculated.

Panel A: Differences in average number of keywords and statements across governance levels

	Governance Level		Difference across governance levels			
	GoodGov=1	*GoodGov*=0	*Exp. Sign*	*difference*	*t-stat*	*p-val*
Keywords						
Positive keywords	20.286	24.512	(-)	4.226	0.92	(0.18)
Negative keywords	2.357	1.146	(+)	-1.211	-1.46	(0.07)
Statements						
Positive statements	12.643	16.244	(-)	3.601	1.21	(0.10)
Negative statements	2.000	0.951	(+)	-1.049	-1.52	(0.06)
Amounts						
Positive amounts	7.333	7.600	(-)	0.267	0.21	(0.42)
Negative amounts	0.455	0.320	(+)	-0.135	-0.61	(0.27)

Panel B: Impression management scores across governance levels

	GoodGov=1			GoodGov=0			Exp.	Dif. Mean *t-stat*	Dif. Median *z-stat*
Scores	*Mean*	*Median*	*Std.*	*Mean*	*Median*	*Std.*	Sign	(p-val)	(p-val)
IMSC1	0.890	1.000	0.175	0.959	1.000	0.072	(-)	-0.069	0.000
								2.04	*0.87*
								(0.02)	(0.19)
IMSC2	0.901	1.000	0.155	0.951	1.000	0.131	(-)	-0.050	0.000
								1.34	*1.58*
								(0.09)	(0.06)
IMSC3	0.903	1.000	0.153	0.954	1.000	0.127	(-)	-0.051	0.000
								1.35	*1.59*
								(0.09)	(0.06)

(see Appendices 1, 2 and 3 for a description of how the measures are calculated).[2] Table 5 Panel B presents descriptive evidence of differences in *IMSC* values across governance levels. The results are consistent with *H2*. Mean and median *IMSC* measures are lower for strong governance firms, consistent with good governance limiting impression management in ARPRs.

Table 6 presents a formal test of *H2*. In Panel A, we use as dependent variable a measure of qualitative impression management (*IMSC1*), and a quantitative measure (*IMSC2*) in Panel B. We use *IMSC2* because the quantitative measures are very highly correlated and *IMSC2* is more complete (includes selectivity). In both panels, the main coefficients of interest are *GoodGov* and our proxies of the existence of good news about the firm: *GNews* and $GNews_{t+1}$. The results confirm that strong governance is negatively associated to impression management. *GoodGov* is negative across all model specifications. In Panel A (*GoodGov*=-0.057, *p*-val=0.07 and *GoodGov*=-0.077, *p*-val=0.03), in Panel B only the specification without Industry controls is significantly negative (*GoodGov*=-0.064, *p*-val=0.06). This is in line with prior work on impression management that suggests that qualitative data is more easily managed, as it is more difficult to check it back to the numbers. If management wants to manipulate quantitative numbers it is more likely that accounting techniques will be used, coming up with the desired number by, for example, using accrual accounting manipulation to increase earnings directly.

Regarding the association between impression management and news about the firm, $GNews_t$ is significantly positive in all models (Panel A, $GNews_t$=0.188, *p*-val=0.01, and $GNews_t$=0.178, *p*-val=0.01; Panel B, $GNews_t$=0.212, *p*-val=0.01, and $GNews_t$=0.198, *p*-val=0.02), Future news about the firm $GNews_{t+1}$ is also positive and significant in Panel A ($GNews_{t+1}$=0.055, *p*-val=0.08, and $GNews_t$=0.066, *p*-val=0.08). This indicates that managers are more optimistic in their narrative disclosures when current and forthcoming news is good. This evidence suggests that impression management responds, at least partly, to informative motivations.

[2] Untabulated correlation coefficients show that all three measures of impression management are highly correlated. The correlation coefficient between *IMSC1*, our measure of qualitative impression management and *IMSC2* and *IMSC3*, our measures of quantitative impression management are of 0.560 and 0.555, respectively, whilst the correlation between *IMSC2* and *IMSC3* is nearly 1.

Table 6 Impression management and corporate governance

Firms are classified using *GoodGov*, a composite variable that aggregates seven good governance indicators. Firms are classified as having good governance (*GoodGov*=1) if their aggregate governance score is above the annual median. Impression management measures are calculated aggregating several scores of qualitative and quantitative impression management. *IMSC1* is a measure of qualitative impression management. *IMSC2* is a measure of quantitative impression management including selectivity. *IMSC3* is a measure of quantitative impression management without selectivity. Appendices 1, 2 and 3 provide information on how the measures are calculated. *SIZE* is the natural logarithm of total assets. *MTB* is the market-to-book value. *GNews* (*GNews*$_{t+1}$) takes the value of 1 if the firm has good news to report in the current (next) period, defined reporting increases in earnings; 0 otherwise. *Industry* is a vector of six industry dummies.

		Panel A: Dep Variable (IMSC1)		Panel B: Dep Variable (IMSC2)	
	Exp sign	Coef. (p-val)	Coef. (p-val)	Coef. (p-val)	Coef. (p-val)
Intercept		0.856	0.915	0.861	0.939
		(0.01)	(0.01)	(0.01)	(0.01)
GoodGov	(-)	-0.057	-0.077	-0.064	-0.051
		(0.07)	(0.03)	(0.06)	(0.13)
RET	(+)	0.013	0.026	0.022	0.01
		(0.73)	(0.27)	(0.61)	(0.83)
SIZE	(-)	-0.015	-0.021	-0.014	-0.021
		(0.07)	(0.03)	(0.11)	(0.04)
MTB	(+)	0.001	0.001	0.001	-0.001
		(0.80)	(0.79)	(0.97)	(0.85)
GNews	(+)	0.188	0.178	0.212	0.198
		(0.01)	(0.01)	(0.01)	(0.01)
Gnewst+1	(+)	0.055	0.066	0.001	-0.019
		(0.08)	(0.08)	(0.45)	(0.35)
Industry Dummies		Excluded	Included	Excluded	Included
N. observations		55	55	55	55
R-square		0.28	0.39	0.31	0.37

4.3. Sensitivity analyses

4.3.1. Additional control variables: Information environment

Prior literature documents that the level of disclosure in a company can be affected by the firm's information environment. Some research proxies for the firm's information environment by its analyst following (for example, Lys and Soo, 1995; for example, Hope, 2003). We control for the robustness of our findings as follows. Fist, we incorporate into model (2) additional variables that may influence the level of firm transparency. In

particular, we control for whether the firm is included in the Ibex 35 —an Index that incorporates the 35 firms with the largest market capitalization quoted in the Madrid Stock Exchange (*IBEX35*). We also control for the number of analysts following the firm (*ANAFLW*). Both *IBEX35* and *ANAFLW* are expected to be negatively associated to the level of impression management. Firms incorporated into the Ibex 35 and with large analyst following are predicted to face a greater demand for transparent information and thus, to provide higher quality disclosures. Slightly over half of our sample firms (54.38%) belong to the Ibex 35. The average analyst following in the sample is of 14 analysts. The results of this alternative specification are reported in Table 7 Panel A. The inclusion of these alternative measures does not affect our main variable of interest: *GoodGov* continues to be negative and significant. *IBEX35* and *ANAFLW* are not significant in any of the specifications; this is likely due to the characteristics of the information environment that create incentives for transparency already being captured by the other control variables.

4.3.2. Controlling for self-selection

It is likely that the decisions to produce an ARPR and to manage the content of that ARPR are jointly determined. In the extreme, it could be argued that firms with weak corporate governance issue these ARPRs so that they can manipulate third party impressions. This would generate a prediction opposite to H1, as firms with weak corporate governance will then be more likely to issue ARPRs, generating a negative γ_1 in model (1). Our results from model (1) appear to reject this possibility; however those results do not consider potential endogeneity issues. To control for potential endogeneity concerns, as a sensitivity check we run models (1) and (2) as a system of equations. Using the Heckman (1979) method, we use equation (1) to calculate the inverse Mill's ratio that is then used as an additional regressor (*Lambda*) in model (2). This method corrects for potential sample self-selection biases. The results of this test are reported in Table 7 Panel B. We run model (2) with and without including the *Industry* controls using the Heckman procedure. In all four regressions, *Lambda* is insignificantly different from zero (Panel A *Lambda*=-0.014, *p*-val=0.44, and *Lambda*=-0.130, *p*-val=-0.14; Panel B, *Lambda*=-0.016, *p*-val=0.43, and *Lambda*=-0.023, *p*-val=0.43). All other results are consistent with what was previously reported. The main coefficients of interest are consistent with all prior results, if anything, they are slightly stronger. Specifically, *GoodGov* is negatively associated to our impression management scores and $GNews_t$ is significantly positive in all regression models. This suggests that our results do not suffer from self-selection biases.

Table 7 Sensitivity checks of impression management and corporate governance

Firms are classified using *GoodGov*, a composite variable that aggregates seven good governance indicators. Firms are classified as having good governance (*GoodGov*=1) if their aggregate governance score is above the annual median. Impression management measures are calculated aggregating several scores of qualitative and quantitative impression management. *IMSC1* is a measure of qualitative impression management. *IMSC2* is a measure of quantitative impression management including selectivity. *IMSC3* is a measure of quantitative impression management without selectivity. Appendices 1, 2 and 3 provide information on how the measures are calculated. *SIZE* is the natural logarithm of total assets. *MTB* is the market-to-book value. *GNews* (*GNews*$_{t+1}$) takes the value of 1 if the firm has good news to report in the current (next) period, defined reporting increases in earnings; 0 otherwise. *Industry* is a vector of six industry dummies. *IBEX35* takes the value of 1 if the firm belongs to the Ibex 35 index; 0 otherwise. *ANAFLW* is the number of analysts following the firm.

Panel A: Additional controls for information environment

		Dependent Variable (IMSC1)		Dependent Variable (IMSC2)	
	Exp sign	Coef. (p-val)	Coef. (p-val)	Coef. (p-val)	Coef. (p-val)
Intercept		0.864	0.947	0.865	0.929
		(0.01)	(0.01)	(0.01)	(0.01)
GoodGov	(-)	-0.058	-0.081	-0.066	-0.051
		(0.07)	(0.02)	(0.06)	(0.14)
RET	(+)	0.003	0.035	0.014	0.003
		(0.93)	(0.22)	(0.37)	(0.47)
SIZE	(-)	-0.021	-0.042	-0.018	-0.019
		(0.11)	(0.02)	(0.18)	(0.21)
MTB	(+)	0.001	0.001	0.001	-0.001
		(0.82)	(0.70)	(0.98)	(0.41)
GNews	(+)	0.203	0.209	0.222	0.198
		(0.01)	(0.01)	(0.01)	(0.01)
Gnewst+1	(+)	0.052	0.091	-0.03	-0.024
		(0.11)	(0.05)	(0.47)	(0.33)
IBEX35	(+)	0.041	-0.009	0.033	0.023
		(0.23)	(0.48)	(0.28)	(0.37)
ANAFLW	(+)	0.001	0.005	-0.001	-0.001
		(0.42)	(0.13)	(0.48)	(0.42)
Industry Dummies		Excluded	Included	Excluded	Included
N. observations		55	55	55	55
R-square		0.30	0.43	0.32	0.39

Panel B: Control for self-selection problems

	Exp sign	Dependent Variable (IMSC1) Coef. (p-val)	Dependent Variable (IMSC1) Coef. (p-val)	Dependent Variable (IMSC2) Coef. (p-val)	Dependent Variable (IMSC2) Coef. (p-val)
Intercept		0.889	1.092	0.883	0.969
		(0.01)	(0.01)	(0.01)	(0.01)
GoodGov	(-)	-0.060	-0.104	-0.068	-0.058
		(0.09)	(0.02)	(0.08)	(0.16)
RET	(+)	0.023	0.029	0.021	0.008
		(0.28)	(0.25)	(0.33)	(0.42)
SIZE	(-)	-0.016	-0.035	-0.016	-0.024
		(0.18)	(0.03)	(0.16)	(0.12)
MTB	(+)	0.001	-0.001	-0.001	-0.001
		(0.45)	(0.32)	(0.45)	(0.40)
GNews	(+)	0.174	0.176	0.215	0.202
		(0.01)	(0.01)	(0.01)	(0.01)
Gnewst+1	(+)	0.066	0.064	-0.001	-0.019
		(0.06)	(0.09)	(0.45)	(0.46)
Lambda		-0.014	-0.130	-0.016	-0.023
		(0.44)	(0.14)	(0.43)	(0.43)
Industry Dummies		Excluded	Included	Excluded	Included
N. observations		55	55	55	55
R-square		0.29	0.40	0.31	0.37

Panel C: Different method estimation (Limited dependent variable estimation using QLM)

	Exp sign	Dependent Variable (IMSC1) Coef. (p-val)	Dependent Variable (IMSC1) Coef. (p-val)	Dependent Variable (IMSC2) Coef. (p-val)	Dependent Variable (IMSC2) Coef. (p-val)
Intercept		-0.437	0.915	0.861	0.939
		(0.23)	(0.01)	(0.01)	(0.01)
GoodGov	(-)	-0.396	-0.077	-0.064	-0.051
		(0.05)	(0.01)	(0.04)	(0.09)
RET	(+)	0.093	0.026	0.022	0.010
		(0.35)	(0.22)	(0.28)	(0.39)
SIZE	(-)	-0.107	-0.021	-0.014	-0.021
		(0.04)	(0.01)	(0.08)	(0.02)
MTB	(+)	0.004	0.001	0.001	-0.001
		(0.39)	(0.37)	(0.45)	(0.41)
GNews	(+)	1.305	0.178	0.212	0.198
		(0.01)	(0.01)	(0.01)	(0.01)
Gnewst+1	(+)	0.384	0.065	0.001	-0.019
		(0.06)	(0.04)	(0.45)	(0.33)
Industry		Excluded	Included	Excluded	Included
N. observations		55	55	55	55
Log Likelihood		34.11	37.57	30.54	32.99

As an additional robustness check, we rerun all the results in Table 7 Panel B using *IMSC3* as our measure of quantitative impression management. The results do not change if we use this alternative definition of impression management as our dependent variable. This is expected, as untabulated results show that *IMSC2* and *IMSC3* are highly correlated (*corr*>0.9).

4.3.3. Alternative specification

Considering the information contained in ARPRs is generally positive for all firms in the sample, sample firms have *IMSC* scores that are either positive and near to 1. In fact, we do not have any cases of ARPR showing a negative bias. This means that *IMSC1* and *IMSC2* have an upper limit bound at 1 and a lower bound at 0, with a number of firms taking the value of 1. As a sensitivity test, we rerun model (2) using a limited dependent variables approach, in particular, we use a quasi-linearization method to run the model. QLM estimation permits Box-Cox transformation of the dependent variable, as well as estimation of the model defining upper and lower limits for the dependent variable. Results of this alternative specification are presented in Table 7 Panel C. Results are consistent with our previous evidence. In fact, they are the strongest evidence reported in the paper, *GoodGov* is now significantly negative across all model specifications, both for *IMSC1* and *IMSC2* (*IMSC1* models, *GoodGov*=-0.396, *p*-val=0.05 and *GoodGov*=-0.077, *p*-val=0.01; *IMSC2* models, *GoodGov*=-0.064, *p*-val=0.04 and *GoodGov*=-0.051, *p*-val=0.09).

5. Summary and conclusions

We analyse the association between firm corporate governance mechanisms and potentially misleading disclosure practices in firm ARPRs. Through these releases, managers can influence the perceptions of third parties in their own benefit (Bowen *et al.*, 2005). Oftentimes, managers provide self-serving disclosures that cast their performance on a positive light or that blame poor performance on temporary external factors (Barton and Mercer, 2005). We analyze the role of internal corporate governance mechanism in (i) affecting the likelihood of voluntary releasing an annual results press release and in (ii) limiting self-serving disclosure practices by management in those press releases. Finally, we also study whether impression management practices respond to informative incentives.

The results show that firms with strong governance mechanisms in place are more likely to issue an ARPR. In particular, board independence and the existence of audit and remuneration committees are positively associated to this type of voluntary disclosure. This evidence is consistent with prior work on the links between governance and disclosure. We also provide evidence that strong governance lowers the incidence of qualitative (or narrative) impression management, whilst the evidence regarding quantitative impression management is less conclusive. Interestingly, our results show that a significant driver of impression management is current and forthcoming news. We show that impression management is associated to current and future good news about the firm. This is consistent with managers making more optimistic disclosures when news are good, or when they expect good news in the following period. This would suggest that managerial impression management in ARPRs is, at least partly, driven by informative motives.

Our paper adds to two different streams of research. First, we add to the literature on the determinants of voluntary disclosure. We analyse if strong governance leads to greater likelihood of management voluntary issuing an ARPR. Prior work on the links between disclosure and corporate governance had not studied this type of corporate reporting. In addition, we consider different governance variables to those used by prior academic work. Our results are consistent with prior literature, and suggest that strong governance is associated to greater voluntary disclosure of timely information, although not all governance characteristics appear to be determinants of corporate disclosure. This evidence should be of interest particularly for standard setters looking to improve the efficiency and transparency of firm corporate disclosures. Second, our research adds to prior work on the role of corporate governance mechanisms. We show that strong governance results in lower manipulation of narrative disclosures, and that managerial impression manipulation in ARPRs appears to steam from informative motivations. To the best of our knowledge, there is no prior academic work on the association between impression management techniques in narrative disclosure and corporate governance. Finally, we provide new evidence on managerial motivations for impression management.

Research dealing with management communication strategies helps individuals and institutions who invest in companies and depend on truthful information to guide their investment decisions. This type of research helps to enrich agency theory as it explains how agents use information to pursue self-interested behaviour (Eisenhardt, 1989) and how this behaviour can be corrected using monitoring mechanisms inherent in corporate governance.

The results of the present research have significant implications for accounting. Institutions such as board of directors that are entrusted with the task of regulating management communication to shareholders to ensure the integrity of the company have, therefore, a fundamental role within the company. The quality of the board of directors might be considered as an indicator of the quality of information disclosed by the company.

An area that needs to be extended in relation to accounting narratives is who is accountable for their content. We mention in this study the difficulties to attribute authorship to press releases. This was also one of the problems found by Staw *et al.* (1983) with letters to shareholders. They claimed that this type of corporate reports should be considered organizational rather than individual communications. One of the issues arising and that would need of further research in this context is that if we cannot establish the person or group of people who produce the press release we cannot be sure about the motivation that can lead those people to include impression management practices in these releases.

Appendix 1 Measuring Impression Management

Adapted from Brennan *et al.* (2008). Definition of these measures is as follows: *Positive/negative keyword*: (1) statement in which word is mentioned communicates a negative/positive outcome for the company or (2) the statement mentions the environment affecting the company positively/ negatively. *Positive/negative amount*: Amounts are categorised into positive or negative by reference to prior year results (as reported in the actual press release) (Bowen *et al.* 2005). Most-, Next-most, Least-emphasised section: Each press release is assigned three levels of emphasis. Following methodology developed by Brennan *et al*. (2008) *Repetition of statements*: when the same issue is mentioned more than once in the ARPR (repeated statements are not included/counted in the positive statements). *Repetition of amounts*: When the same amount is mentioned more than once in the ARPR. (repeated amounts are not included/counted in the positive amounts). *Reinforcement:* A keyword is reinforced when a qualifier is included to emphasise its positive or negative meaning. *Performance comparison*: When the current year amount is accompanied by a benchmark / prior year amount showing increase/decrease in the current year amount. *Selectivity*: Choice/selection of performance number, from the highest to lowest amounts on the face of the profit and loss account based on monetary value to be included in the press release.

Panel A. Method to measure impression management

Technique	**Object of technique**	**Measure**
(1) Thematic analysis	Keywords①/Quantitative amounts②	Number of positive and negative keywords Number of quantitative positive and negative amounts
(2) Emphasis	(a)Location/positioning/presentation of disclosure③,④	Most-, Next-most, Least-emphasised section
	(b) Repetition of statements⑤/Quantitative amounts⑥	Number of positive and negative repetitions of statements Number of positive and negative repetitions of amounts
	(c) Reinforcement of keywords⑦	Number of positive and negative reinforcements
(3) Performance comparisons	Quantitative amounts⑧	Benchmark, Prior year amount, Both
(4) Selectivity	Quantitative amounts⑨	High, Medium and Low level of selectivity

Panel B: Method to calculate the composite scores (SC)

Qualitative score		**SC1** *Weighting*	
(1) Thematic①	Keywords	1.0	
(2)(a) Emphasis③	Location: Most-, next-most, least-emphasised	1.0/0.5/0.0	
(2)(b) Emphasis⑤	Repetition (statements only)	0.5	
(2)(c) Emphasis⑦	Reinforcement (Keywords only)	0.5	
Maximum possible composite score per keyword/statement		2.5	
Minimum possible composite score per keyword/statement		1.0	
Quantitative score		**SC2** *Selectivity applies Weighting*	**SC3** *No selectivity Weighting*
(1) Thematic②	Disclosure of quantitative performance monetary and non-monetary amounts	1.0	1.0
(2)(a) Emphasis④	Location: Most-, next-most, least-emphasised	1.0/0.5/0.0	1.0/0.5/0.0
(2)(b) Emphasis⑥	Repetition	0.5	0.5
(3) Emphasis⑧	Performance comparisons	0.5	0.5
(4) Selectivity⑨	Highest/medium/lowest category of amounts from which selection can be made	1.0/0.5/0.0	
Maximum possible composite score per quantitative amount		4.0	3.0
Minimum possible composite score per quantitative amount		1.0	1.0

Appendix 2: Coding qualitative information (Azkoyen ARPR 2000)

6 March 2001

St+[1] In 2000 the Azkoyen Group's turnover increased[KW+1] to 12.3% (23,866 million pesetas)

RPS+[1] The Azkoyen Group improved[KW+2] its sales by 12.3% during the 2000 financial year, with a consolidated turnover of 23,866 million pesetas (143.4 million euros).

St+[2] Sales on the foreign markets increased[KW+3] more [RFW+1] (20.9%) than those in Spain

St-[1] (7.9%). Profits before tax were down[KW-1] by 3.9%, a considerable[RFW+2]

St+[3] improvement[KW+4] on the third quarter.

Turnover for exports was 8,708 million pesetas (52.3 million euros), which consolidates Azkoyen's position on the international markets, with exports representing 36.5% of the Group's total sales.

Profits after tax were 1,583 million pesetas (9.5 million euros). Investments in

St+[4] fixed assets were more [KW+5] than 1,290 million pesetas (7.77 million euros) and expenditure on R&D was 1,139 million pesetas (6.8 million euros). In December, Azkoyen's shareholders (21,337,500 shares with a nominal value of 100 pesetas/0.60 euros) received 15 pesetas gross (0.09 euros) per share, as a dividend on account for 2000.

In the first few days of 2001, the Board of Directors of Azkoyen approved a reorganization of its industrial and sales companies (nine in total) into just three companies set up as business units with autonomy in terms of assets, finance and management: Azkoyen Industrial, Azkoyen Medios de Pago and Azkoyen Comercial.

St+[5] Specialist analysts viewed that decision as very[RFW+3] positive[KW+6], as they say it

St+[6] will improve[KW+7] the Group's position on the global market and its competitive capacity. During the first two months of this year, the price of Azkoyen shares

St+[7] rose[KW+8] by more [RFW+4] than 41%, and they were among the ten stocks on the Spanish Mercado Continuo that had appreciated[KW+9] the most[RFW+5] since 1

St+[8] January.

Most emphasised section

Next most emphasised section

Least emphasised section

Key:
KW#+/- : Keyword positive/negative
ST#+/- : Statement positive/negative
RPS#+/- : Repetition statement positive/negative
RFW#+/- : Reinforcement keyword

Appendix 2 (continued): Recording coding of qualitative information in Azkoyen ARPR 2000

Analysis of keywords and statements;
Emphasis - Location/positioning

	Number
Most-emphasised section of the ARPR	
Positive keywords	1
Negative keywords	0
Positive statements	1
Negative statements	0
Next-most-emphasised section of the ARPR	
Positive keywords	3
Negative keywords	1
Positive statements	2
Negative statements	1
Least-emphasised section of the ARPR	
Positive keywords	5
Negative keywords	0
Positive statements	5
Negative statements	0
Totals	
Total positive keywords	9
Total negative keywords	1
Total keywords	10
Total positive statements	8
Total negative statements	1
Total statements	**9**
Emphasis by repetition	
Repetitions of positive statements	1
Repetitions of negative statements	0
Total repetitions of statements	**1**
Emphasis by reinforcement	
Reinforcements of positive keywords	5
Reinforcements of negative keywords	0
Total reinforcements of keywords	**5**

Appendix 3 Calculating impression management score using qualitative disclosures (Azkoyen ARPR 2000)

This example is based on Azkoyen press release for year 2000 which includes nine positive and one negative keywords. One of the keywords is located in the most emphasised section of the press release (i.e. headline), three are placed in the next-most emphasised section (i.e. first paragraph) and five are located in the least-emphasised section (i.e. main body) of the press release. One positive statement was repeated and five keywords were reinforced. Quantitative information is not considered in this example. According to this scenario the composite score (SC1) and the measure of bias (IMSC) for quantitative disclosures would be calculated as explained below. See Brennan *et al.* (2008) for a full explanation of how these measures are calculated.

The measure of bias should be interpreted as follows: +1=completely positively biased; 0=no bias; –1=completely negatively biased

Measure	*Positive keywords*	*Negativ keywords*	*Total keywords*
Disclosures			
Total keywords disclosed	**9**	**1**	**10**
Composite score (SC1 for Azkoyen)			
(1) Disclosure of keywords	9	1	10
(2)(a) Emphasis – Location:			
- Most	1 x 1	0	1
- Next-most	3 x 0.5	1 x 0.5	2
- Least-emphasised	5 x 0.0	0	0
(2)(b) Emphasis – Repetition of statements	1x 0.5	0	0.5
(2)(c) Emphasis – Reinforcement of keywords	5x0.5	0	2.5
Total composite score	**14.5**	**1.5**	**16**
Measure of bias (IMSC1 for Azkoyen)			
$14.5_{\text{Positive score}} - 1.5_{\text{Negative score}} = 13_{\text{Net positive score}}/16_{\text{Total score}} = +0.81$			

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