BANK OWNERSHIP AND INFORMATIVENESS OF EARNINGS

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Abstract

This paper analyses the relations between earnings informativeness, measured by the earnings-return relation, and bank ownership in Spain. Results show that bank ownership is positively associated with earnings explanatory power for returns. This finding is consistent with the role of banks as a monitoring institution. What is more, there exists no entrenchment effect associated with a high level of bank ownership. In general, major shareholder ownership is negatively associated with earnings explanatory power for returns. I suggest that at medium levels of major shareholder ownership the convergence-of-interest effect is dominant and the informativeness of earnings increases. At high levels of major shareholder ownership, however, the entrenchment effect is dominant and hence the informativeness of earnings decreases.

Keywords:

Informativeness of earnings, bank ownership, bank monitoring, ownership structure

JEL classification:

G21, G32, M40

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1. Introduction

Previous studies have analysed how the separation of corporate ownership and control and concentrated ownership affect both the informativeness of accounting earnings and the accounting choices of managers. Agency theory suggests that management and external shareholder interests diverge when managers own a lower number of shares in the firm (Jensen and Meckling, 1976), thus increasing the need for accounting-based performance measures to monitor managers. However, management typically have the possibility of exerting discretion over the recognition of accruals and this discretion can be used by managers to signal their private information or to opportunistically manipulate earnings. Insofar as managers use their discretion to manipulate accruals, earnings will become less informative. Moreover, via its choice of accepted accounting procedures, management could choose to reflect either the economics underlying the transactions or accounting numbers for personal benefit. This would suggest that earnings quality is expected to increase with the level of managerial ownership. Warfield *et al.* (1995) examines US data, evidencing a positive relationship between managerial ownership and the information content of earnings.

Several papers have extended the study of Warfield *et al.* (1995). On one hand, Gabrielsen *et al.* (2002) find a negative relationship between managerial ownership and the information content of earnings among Danish firms. This finding highlighted the difference between the two institutional settings (the US and Denmark). While capital market pressure and the convergence of shareholder and managerial interests apparently play major roles in accounting decisions made in the US, manager entrenchment may constitute a more important factor in countries where concentrated ownership exists.

Yeo *et al.* (2002), on the other hand, examine how managerial ownership and external unrelated block holdings affect the informativeness of earnings for companies listed on the Singapore Stock Exchange. Their results show that there exists a non-linear relation between managerial ownership and the informativeness of earnings. At low levels of management ownership, the informativeness of earnings increases with managerial ownership. At higher levels of managerial ownership, however, the relationship is reversed, suggesting that the entrenchment effect may have set in. In keeping with the role of a large shareholder acting as a monitor, the evidence also shows a positive relationship between external unrelated block holdings and the informativeness of earnings.

Fan and Wong (2002) examined the relations between earnings informativeness and ownership structure in seven East Asian economies where ownership is typically concentrated in the hands of large shareholders. Results show that earnings informativeness is significantly negatively related to the ultimate owner's level of control. Moreover, earnings informativeness is significantly and negatively related to the degree of divergence between the ultimate owner's control and the equity ownership level. Jung and Kwon (2002), on the other hand, when examining the relationship between corporate ownership structure in Korea and the informativeness of earnings, show that earnings are more informative as the holdings of the owner increase, supporting the convergence-of-interest explanation in a country characterized by the predominant role of the owner-largest shareholder. There is, therefore, no consensus in the previous literature as regards the relationship between corporate ownership structure and informativeness of earnings.

Theoretical work models the banking firm as a response to financial contracting problems caused by private information. This literature, typified by Diamond (1984), Ramakrishnan and Thakor (1984), and Boyd and Prescott (1986), implies that intermediaries possess a comparative advantage at collecting asymmetric information about firm value and monitoring the activities of the firm. Moreover, when a bank takes equity in a firm, it can access new information about the firm's quality and become an insider. As Petersen and Rajan (1994) and Berger and Udell (1995) have shown, this can help the firm obtain additional debt from the bank. It can also have an influence on earnings informativeness, since the bank has greater information and incentives to monitor the firm.

Within this context, the aim of this paper is to analyse the relation between earnings informativeness, measured by the earnings-return relation, and bank ownership in Spain. Spain represents a natural setting for examining this issue, as it features relatively weak protection of minority shareholders, high ownership concentration and an abundance of bank ownership. These characteristics are common to many countries (La Porta *et al.*, 1999) and hence the results obtained may be extrapolated.

An important strand of the finance and accounting literature examines issues related to the informativeness of earnings and ownership structure[1]. The present paper further extends previous studies by examining how bank ownership affects the informativeness of earnings. The paper contributes to the existing literature in the following ways. Firstly, the role of banks as a monitor of managers is analysed along with its influence on the informativeness of earnings. The existence of large bank ownership is likely to

[1] Adding to the papers mentioned above, Vafeas (2000), Gul and Wah (2005) and Ahmed *et al.* (2004) have analysed whether the informativeness of earnings, proxied by the earnings-return relationship, varies with the board structure.

mitigate the agency conflict between managers and owners and potentially affect the informativeness of earnings. The findings are likely to be relevant for investment decisions in continental Europe and other countries where banks can hold equity. Thus, although this study only examines Spanish data, the results may apply to companies in a variety of non-US economies. Secondly, the analysis is carried out in an institutional setting that is different from the US setting. Two important difference between the US and Spanish settings are that: i) legislation prevents US bank from holding large stakes in industrial companies[2], whereas similar restrictions do not apply to Spanish banks; and ii) a widely held corporation is a common organizational form for large firms in the US, but not in Spain. In fact, La Porta *et al.* (1999), analysing ownership structure in 27 wealthy countries, conclude that the widely held corporation is far from universal. Instead, most firms have controlling shareholders. Another survey by Becht and Roell (1999) shows that in many parts of continental Europe there are generally large block holders with some degree of control over management. Within this context, the present paper analyses the influence of the ownership structure on informativeness of earnings. Since the previous evidence has not reached any consensus, this is a relevant issue. Thirdly, the paper considers bank ownership and the equity ownership of the main shareholder jointly. Incorporating both bank ownership and major shareholder ownership into the analysis, I provide more comprehensive evidence on the linkage between ownership structure and the quality of financial reporting. Moreover, the existence of a non-linear effect of bank ownership and ownership of the main

[2] Recently, the Gramm-Leach-Billey Financial Services Modernization Act of 1999 has loosened restrictions on bank ownership of equity in non-financial firms. However, this regulation maintains the separation between banking and commerce by limiting the time that banks may hold equity stakes and the amount of shares relative to the bank's capital.

shareholder on the informativeness of earnings is examined, analysing whether a convergence-of-interest effect or an entrenchment effect predominates in the results.

The remainder of the study is organized as follows: Section 2 reviews the role of banks as monitors. Attention is also drawn in this section to the entrenchment effect or convergence-of-interest effect. Section 3 describes the data and methodology, while Section 4 presents and discusses the results of the influence of bank ownership on the informativeness of earnings. In addition, the evidence of a non-linear effect of the major shareholder ownership on informativeness of earnings and the difference according to the sign of the earnings are also shown in this section. Finally, Section 5 summarizes and concludes the study.

2. Bank ownership and earnings informativeness

This section discusses the relations between banking stake and earnings informativeness. Two potential arguments that may explain the relations are provided. The first argument is based on the entrenchment effect and is applicable regardless of the type of major shareholder. In fact, it depends only on the amount of shares held by the controlling shareholder. The second argument is related to the special nature of banks, which will be detailed below.

2.1. Entrenchment effect

The degree of ownership concentration affects the nature of contracting, creating agency problems between managers and outside shareholders. When ownership is diffuse, for example as in the US and the UK, agency problems stem from the conflicts of interest between outside shareholders and managers who own an insignificant amount of equity in the firm (Berle and Means, 1932; Jensen and Meckling, 1976). In this respect, Warfield *et al.* (1995) have shown that managerial ownership is positively associated with the informativeness of accounting earnings, in line with the theory on the separation of ownership and control and with the predominance of a convergence of interest.

However, when ownership is concentrated, as is typical in Spain, the nature of the agency problem shifts away from manager-shareholder conflicts to conflicts between the major shareholder (controlling owner) and minority shareholders. Minority shareholders face the uncertainty of whether the entrenched controlling owner may opportunistically deprive them of their rights. Thus, an increase in major shareholder ownership may entrench them, as they are increasingly less subject to governance by boards of directors and to discipline by the market for corporate control. This is further influenced by weak legal systems (La Porta *et al.*, 1999). Spain, as a civil law country, has poor shareholder protection.

The entrenchment effect of the ownership structure potentially affects the financial reporting of firms. As the controlling owner oversees the accounting reporting policies and is recognized as having strong opportunistic incentives to expropiate minority shareholders, the market expects the owner not to report high-quality accounting information. This market perception will reduce the credibility of accounting earnings reports and consequently the informativeness of those earnings. In other words, accounting numbers produced by entrenched insiders should be less informative to the market.

A complementary argument is that a higher ownership stake allows firms to limit their information disclosure to the public (Fan and Wong, 2002). Opacity can be a good strategy, because it prevents leakage of propietary information about specific knowledge to competitors. In this respect, it is in the interest of both the major shareholder and the minority shareholders to release as little accounting information to the public as possible. This information effect argument suggests that high ownership concentration is associated with low earnings informativeness, as likewise found for the entrenchment effect.

2.2. Bank monitoring effect

The main hypothesis tested in this paper is that bank ownership exerts an influence on earnings informativeness. Since banks are often characterised as sophisticated investors who have advantages in acquiring and processing information, they can be considered as monitoring institutions that scrutinize management, thus implying lesser opportunities for accruals management or earnings manipulation.

Information asymmetries are central to the literature on financial intermediation as developed by Diamond (1984) and others (see Bhattacharya and Thakor (1993) for a review). In fact, the rationale underlying the existence of banks may well reside in the role in mitigating informational asymmetries. Theoretical work by Leland and Pyle (1977), Diamond (1984), Ramakrishnan and Thakor (1984), and Fama (1985) suggest that banks possess certain cost advantages in the domain of information collection and processing. For example, Fama (1985) argues that banks, as insiders, have access to inside information, whereas outside (public) debtholders must rely mostly on publicly available information. Because they have superior information, banks can provide more efficient monitoring, which lowers the monitoring and bonding costs of other debt claimants. Diamond (1984) demonstrates, for example, how diversification can underpin a comparative advantage for banks as “delegated monitors” on behalf of depositors. Empirical work by Mikkelson and Partch (1986), James (1987), and

Lummer and McConnell (1989), which reveals that borrowing firms experience positive abnormal returns upon announcing bank loan agreements, has been interpreted as evidence in favour of the hypothesis that banks are, indeed, special types of monitors. James (1987) notes, for instance, that "banks know more about a company's prospects than other investors do" and that the loan announcement signals this information to market participants.

If scale economies exist in information production, and information is durable and not easily transferred, these theories suggest that a firm with close ties to financial institutions should have a lower cost of capital and greater availability of funds compared with a firm without such ties. Petersen and Rajan (1994) and Berger and Udell (1995) show that relationships with banks have value, since they lower the price of credit and allow additional debt to be obtained from the bank. Datta *et al.* (1999) report that bank cross-monitoring lowers at-issue yield spread for the first public straight bond offer.

Banks can hold equity stakes in industrial firms in different countries such as Germany, Japan or Spain. In Spain, banks are not only lenders, but also take equity in firms and play an active role in General Assemblies of Shareholders and maintain board representation. Ownership concentration and the close ties between banks and firms are the main control mechanisms in Spain. Zoido (1998) shows that banks exercise their control rights as shareholders over the decisions that firms make. This control is reflected in a lower cost of financing new projects and in the way that firms solve their problems of financial distress.

If banks are active shareholders monitoring the firms in which have equity stakes, this situation leads to closer monitoring or scrutiny of managers and implies lesser opportunities for accruals management or earnings manipulation. Several papers have shown evidence along these lines. Jiambalvo *et al.* (2002) also shows that the extent to which stock prices lead earnings is positively related to the percentage of institutional ownership, since institutional investors are better informed than individual investors and this reduces the perceived benefit of managing accruals. Douthett and Jung (2001) show that the close relationships within the *keiretsu* group increase the informativeness of earnings. Yeo *et al.* (2002) show a strong positive relationship between external unrelated block holdings and the informativeness of earnings, in a way which is consistent with the role of a large shareholder acting as a monitor. Dechow *et al.* (1996) find that firms subject to SEC enforcement actions for earnings manipulation are less likely to have outside block holders. In this sense, I expect the informativeness of accounting earnings as an explanatory variable for returns to be systematically and positively related to bank ownership.

3. Database and empirical analysis

The degree to which the banking stake in firms affects earnings informativeness is analysed for the Spanish Stock Exchange listed firms over the 1991-2003 period. The Spanish financial system is a bank-oriented system in which banks maintain close ties with industrial firms, taking equity in them. Ownership data are collected from the Ownership Database distributed by CNMV (Spanish SEC) and are available for the end of each year from 1990 to 2003. The ownership database reports ownership stakes higher than 5% and the ownership stakes of board members. Bank ownerships (the main concern of this paper) and firm ownership concentrations are collected from the database. We consider both direct and indirect ownership.

Earnings, stock returns data and financial data are drawn from the 1990-2003 period[3]. The stock returns data of publicly traded companies are obtained from the Madrid Stock Exchange Database. The financial data of listed firms are collected from the Financial Database distributed by CNMV. To be included in the sample, ownership data, annual earnings-per share and data necessary to compute stock returns must be available. These criteria yield 235 firms. The complete sample consists of 1,680 firm-year observations.

The average banking stake in non-financial firms and ownership concentration are reported in Table 1. In 52.97% of the firm-year observations, a bank has a percentage of the firm equity. The mean (median) percent of bank ownership in the sample is 10.50 (3.46) percent. The skewed nature of the ownership data is apparent. In fact, 1,133 of the 1,680 observations report less than 10 percent bank ownership. La Porta *et al.* (1999) show that several countries exist in which banks take important stakes in firms. While the sample average of financial institution-controlled firms is 5%, financial institutions control 30% of firms in Belgium, 15% of the firms in Germany, Portugal or Sweden and 10% in Spain and Greece if we say that a corporation has a controlling share when its direct and indirect voting rights in the firm exceed 20%. These percentages are strongly increased if we consider control to exist when the voting rights in the firms exceed 10%.

Spanish firms are characterised by concentration ownership, in fact the mean (median) percentage of equity held by the major shareholder is 39.98 (33.70) %. This increases to 54.28 (54.70) % and 58.81 (59.77) % when we considerer the top three or five major shareholders, respectively. These figures are similar to those reported by Becht and

[3] The test of the informativeness of earnings requires price data for a previous year, in this case 1990.

Röell (1999) for Spain. In fact, the median largest voting block for 193 Spanish firms is 34.2%. In many parts of continental Europe, there are generally large blockholders present who can and do exercise control over management (Becht and Röell, 1999). The median largest voting blocks are, for example, 54.53% in Italy, 52.1% in Germany, 52.0% in Austria, 50.6% in Belgium and 43.5% in The Netherlands (Becht and Röell, 1999).

The following model is formulated to test for differential informativeness of earnings conditional on bank ownership:

$$R_{it} = a_0 + a_1 NI_{it} + a_2 NI_{it} * SIZE_{it} + a_3 NI_{it} * MB_{it} + a_4 NI_{it} * LEV_{it} + a_5 NI_{it} * BANKOWN_{it} + a_6 NI_{it} * OWN_{it} + a_7 NI_{it} * PUBDEBT + \sum_{t=1991}^{2003} Y_t + \upsilon_i + \varepsilon_{it}$$

where $R_{i,t}$ is the return of firm i minus the stock market return for the period t, $NI_{i,t}$ is the net earnings at year t divided by the market value of equity at the beginning of year t, $SIZE_{i,t}$ is a dummy variable that takes the value of 1 if the natural logarithm of the market value of equity in thousands of Euros is higher than the median value and 0 otherwise, $MB_{i,t}$ is the market value of equity divided by the book value of total assets at the beginning of year t, $LEV_{i,t}$ is the total liability divided by total assets at the beginning of year t, BANKOWN is the percentage of bank ownership at the beginning of year t, OWN are different ownership variables that measure the ownership concentration, PUBDEBT is a dummy variable that takes the value of 1 if the firm has public debt and 0 otherwise, $\sum_{t=1991}^{2003} Y_t$ is a set of dummy time variables, u_i is the individual effect and ε_{it} is the error term at year t. Fixed-effects of calendar years are included in the regressions, although for the sake of simplicity, I omit reporting them. The 1991 dummy is omitted from the regressions. The description of the variables is reported in Appendix A.

The a_5 parameter measures the joint relation between bank ownership and earnings informativeness, and reflects the extent to which the informativeness of earnings is affected by bank ownership level. The effect of NI_{it} on R_{it} is positively (inversely) related to bank ownership if a_5 is significantly greater (less) than zero. Previous literature has used a pooled cross-sectional time series regression model to investigate the information content of earnings conditional on several variables. In the present paper, I employ both a panel data estimation and a pooled cross-sectional time series regression model. The panel data estimation allow us to correct for unobserved firm-specific and time-specific effects.

We include a set of variables to control for observed variations in the earnings-return relation that are likely due to causes other than bank ownership. The market-to-book ratio (MB) is included to control for the effects of growth on the earnings-return relation (Kormendi and Lipe, 1987; Collins and Kothari, 1989; Easton and Zmijewski, 1989; and Lipe, 1990). High growth firms may be more risky, which weakens the earnings-return relation. On the other hand, growth opportunities are likely to be positively associated with future earnings levels and/or earnings persistence (Collins and Kothari, 1989). In such an environment, the net effect of growth on the earnings-return relation is an empirical issue.

As managers have greater incentives to manage accruals in the presence of covenant constraints attached to leverage, earnings quality and consequently the earnings response coefficient are expected to be lower for firms with higher leverage (Watts and Zimmerman, 1986; Sweeney, 1994). Leverage could also be a proxy for the riskiness of debt or default risk (Dhaliwal *et al.*, 1991). Highly levered firms are associated with high risk and hence their earnings-return relation is weakened. I also incorporate a measure of the existence of public debt (PUBDEBT) in the regression. This variable allows us to test the special nature of public debt, since it usually implies more covenant constraints (Smith and Warner, 1989). In addition, I include firm size (SIZE) as a control for other missing factors that may affect the earnings-return relation. In this respect, the prior literature (Atiase, 1985; Freeman, 1987) has reported that public disclosure and private development of non-earnings information are increasing functions of firm size. However, Collins *et al.* (1987) showed that the information content of earnings is inversely related to firm size.

Since different papers have revealed that ownership concentration exerts an influence on the informativeness of earnings, I have controlled for this variable. I have used the percentage of ownership of the major shareholder, the three major shareholders and the five major shareholders.

The summary statistics of the dependent and independent variables of the regression are reported in Table 2. The mean cumulative net-of-market 12-month stock return is 11.45% and the mean NI is 131.72%[4]. The table also shows the descriptive statistics according to the existence of bank ownership or not. The differences only are significant for the variables SIZE and PUBDEBT between both subsamples. In fact, firms with bank ownership are larger and have more public debt. The correlations between the independent variables are reported in Appendix B; these are generally small, except for the measures of ownership concentration, suggesting that colinearity is not a serious problem.

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[4] This value is affected for few high observations; in fact the median value is 6.00%.

4. Explanatory power of earnings conditional on bank ownership

Tables 3 and 4 present the results of a panel data estimation and a pooled time-series cross-sectional regression estimation respectively. Since the results do not vary regardless of the method of estimation, only the results shown in Table 3 will be discussed.

The coefficient of NI is significantly positive in all the contrasts, which suggests that earnings are informative. It takes values of between 0.10 and 0.22, except when measures of ownership concentration or public debt are included. These values are similar to those found by Warfield *et al.* (1995), who in fact report a coefficient of between 0.13 and 0.17.

Parameter estimates on other determinants are consistent with theoretical expectations and/or prior literature. In Column (1) it can be seen that larger firms earnings are more informative, as indicated by the significantly positively estimated coefficient of NI*SIZE. The positive relation between size and informativeness is consistent with evidence reported by Chaney and Jeter (1992). In fact, the market perceives the earnings of larger firms as being more relevant due to increased scrutiny of these firms' accounting choices. This result is also reported by Warfield *et al.* (1995) and Fan and Wong (2002).

The coefficients of NI*MB and NI*LEV are significantly negative. As for the influence of market-to-book ratio on earnings-return sensitivity, this is consistent with the argument that the risk associated with growth firms weakens the informativeness of earnings. This effect seems to be greater than that of the growth opportunities associated with high levels of future earnings, though different from the evidence reported by Warfield *et al.* (1995) and Fan and Wong (2002). In fact, the coefficient of NI*MB is positive in the former paper and insignificant in the latter.

The estimated coefficient of NI*LEV is significantly negative in a way that is consistent with the existence of greater incentives to manage accruals in the presence of covenant constraints attached to leverage. A similar result has been reported by Jiambalvo *et al.* (2002). The same effect exists for firms with public debt (Column (7)). Since public debt –NI*PUBDEBT– usually implies severe restrictions (James and Warner, 1979), it also creates incentives to manage accruals.

The results in Columns (2) to (7) show the role of bank ownership in the informativeness of earnings and indicate that earnings exhibit greater explanatory power for returns as bank ownership increases. Specifically, this result is evidence in favour of the hypothesis that the monitoring of banks taking stakes in firms increases earnings informativeness. In line with this result, Jiambalvo *et al.* (2002) have shown that for firms with higher levels of institutional ownership, relatively more future earnings information is impounded in stock prices in comparison to firms with lower institutional ownership. The positive relation between earnings and returns conditional on bank ownership is likewise demonstrated if bank ownership is measured as a dummy variable (DBANKOWN) that takes the value of 1 if a bank has a percentage of equity in the firm and zero otherwise (Column (3)).

I also investigate whether the influence of bank ownership on earnings informativeness is upheld when we consider the ownership concentration of the firm. In this respect, the percentages of shares held by the main, the three main and the five main shareholders are considered. It can be seen from Columns (4) to (6) that the effect on the informativeness of earnings is negative irrespective of the measure of ownership concentration. This result is similar to those reported by Fan and Wong (2002) for East Asia and Bona-Sánchez *et al*. (2004) for Spain, and is consistent with both the information effect, i.e. that high voting rights are associated with secrecy and low earnings informativeness, and the entrenchment effect. Both arguments predict that concentrated ownership leads to weak earnings informativeness.

Several papers have reported that the influence of ownership on the informativeness of earnings is a non-linear relationship. Yeo *et al.* (2002) show that the informativeness of earnings does not always increase with managerial ownership, in contrast to Warfield *et al.* (1995). At low levels of management ownership, the informativeness of earnings increases with managerial ownership. However, at higher levels of managerial ownership, the entrenchment effect sets in and high managerial ownership becomes ineffective in aligning managers to take value-maximizing actions. Similar effects are shown by Gul and Wah (2005) for the relationship between earnings informativeness and insider shareholding. At medium levels of shareholding, where the interest-alignment effect is dominant, earnings informativeness is positively associated with increases in shareholding. At high levels of shareholding, where the entrenchment effect is dominant, earnings informativeness is negatively associated with increases in shareholding.

Taking into account the previous evidence, in the present study I have considered that the influence of bank ownership on informativeness of earnings may result in a non-linear relationship. In order to test this working hypothesis, three additional variables to

BANKOWN were constructed. BANKOWN1 is a variable that takes the percentage of shares held by banks if this percentage is less than 5% and zero otherwise. BANKOWN2 is a variable that takes the percentage of shares held by banks if this percentage is between 5% and 25% and zero otherwise. Finally, BANKOWN3 is a variable that takes the percentage of shares held by banks if this percentage is higher than 25% and zero otherwise[5].

Column (8) in Tables 4 and 5 report the results obtained. It can be observed that the three variables of bank ownership are significantly positive, thus indicating that there is a positive relationship between bank ownership and the informativeness of earnings regardless of the level of bank ownership. This lends support to the bank monitoring argument and is not consistent with the existence of an entrenchment effect in bank ownership.

4.1. Informativeness of earnings and the level of major shareholder ownership

Agency theory predicts that insider shareholding is an important interest-alignment device. Managers owning shares in their firms are less likely to act opportunistically, as non-firm-value-maximizing behaviour is costly for them (Jensen and Meckling, 1976). Since they share in the increase in firm value, their interest is closely aligned with the shareholders. However, previous evidence suggests that when insider shareholding is very high, the insiders may become entrenched. Morck *et al.* (1988) show that entrenched managers have incentives to pursue self-interest non-value maximizing actions at the expense of shareholder wealth. These non-value maximizing actions may include, among others, earnings management with direct wealth effects for management

[5] These three levels of ownership have been identified in accordance with prior studies (Morck *et al.*, 1988; Rosenstein and Wyatt, 1997).

or control owner. In this context, it is an important issue to distinguish between the convergence-of-interests effect and the entrenchment effect of the major shareholder on the informativeness of earnings.

To test the influence of the level of major shareholder ownership on the informativeness of earnings, three additional variables to OWN1 were constructed. OWN11 is a variable that takes the percentage of shares held by the major shareholder if this percentage is less than 5% and zero otherwise. OWN12 is a variable that takes the percentage of shares held by the major shareholder if this percentage is between 5% and 25% and zero otherwise. Finally, OWN13 is a variable that takes the percentage of shares held by the major shareholder if this percentage is higher than 25% and zero otherwise.

The results are shown in Table 5 and they are qualitatively similar to prior estimations. In fact, the variables NI, NI*SIZE, NI*MB, NI*LEV and NI*BANKOWN variables show the same signs and similar significance. However, it can be seen in Table 6 that there is a non-linear relation between the informativeness of earnings and the ownership of the major shareholder. The variable NI*OWN12 is significantly positive and the variable NI*OWN13 is significantly negative. These results indicate that at a medium level of ownership of the major shareholder the interest-alignment effect is dominant, but at a high level of major shareholder ownership the entrenchment effect is dominant. These results are similar to those reported by Yeo *et al.* (2002) and Gul and Wah (2005).

4.2. Informativeness of earnings according to the sign of earnings

Hayn (1995) hypothesizes that because shareholders hold a liquidation option, the informativeness of losses with respect to future cash flows of the firm is limited. Therefore, pooling profitable and loss observations in samples used by researchers to estimate the information content of earnings leads to a downward bias in the estimated earnings response coefficient and the return-earnings association. This author reports that the earnings-response coefficient is low and not stable when earnings are negative; in fact, the earnings response coefficient almost triples when loss cases are excluded. However, Collins *et al.* (1999) show that earnings-response coefficients on negative earnings are negative. Moreover, when the book value of equity is included in the price-earnings relation, the coefficient on earnings for loss firms is significantly positive. These results suggest that book value is an important value attribute for loss firms, and that it plays a role as a proxy both for expected future normal earnings and for abandonment value.

Since previous evidence has reported different earnings response coefficients depending on the sign of the earnings, I have estimated the model separately for profit and loss firms. The results for the total sample and the two subsamples are reported in Table 6.

The results for positive earnings are qualitatively similar to those reported for the total sample. As in the total sample, earnings and NI*SIZE variables are positive, whereas NI*MB, NI*LEV are negative. The coefficient on the bank ownership variable (NI*BANKOWN) is positive and significant, indicating that the higher the holdings of the banks, the more informative the earnings are. This result is in line with the hypothesis that monitoring by banks increases earnings informativeness.

At a medium level of major shareholder ownership, the informativeness of earnings increases with ownership, in line with the predictions of agency theory. However, at higher levels of major shareholder ownership, the informativeness of earnings decreases with ownership. The latter result is consistent with the entrenchment effect as indicated by Morck et al (1988). Summing up, the only differences with respect to the results of the total sample are the higher coefficients and t-statistics observed for the positive earnings.

The results for negative earnings are also similar for the control variables. The coefficient of NI*MB is significantly negative, highlighting a strong influence of growth on the informativeness of earnings of firms with losses. This result is consistent with a negative valuation of growth when the firms obtain losses. As for the variables bank ownership (NI*BANKOWN) and ownership concentration (NI*OWN1 / NI*OWN2 / NI*OWN3), these are not significant. This seems to suggest that variables of ownership structure are not useful in explaining the informativeness of earnings in firms with losses.

Table 1. Summary statistics of ownership variables

The table presents the characteristics of ownership concentration and bank ownership for Spanish Stock Exchange listed firms over the 1991-2003 period. OWN1 / OWN3 / OWN5 measure ownership concentration and are the percentages of shares held by the first / third / fifth major shareholder/s, respectively. BANKOWN is the percentage of bank ownership. All variables are expressed in percentages.

Variables	Mean	Standard Deviation	First Quartile	Median	Third Quartile
OWN1 (%)	39.98	26.58	17.58	33.70	57.90
OWN3 (%)	54.28	24.95	33.60	54.70	72.66
OWN5 (%)	58.81	24.06	41.10	59.77	75.82
BANKOWN (%)	10.50	16.50	0	3.46	15.00

Table 2. Summary statistics of the dependent and independent variables

The table presents the summary statistics of the dependent and independent variables for Spanish Stock Exchange listed firms over the 1991-2003 period. $R_{i,t}$ is the return of firm i minus the stock market return for the period t, $NI_{i,t}$ is the net earnings at year t divided by the market value of equity at the beginning of year t, $SIZE_{i,t}$ is the natural logarithm of the market value of equity in thousands of Euros, $LEV_{i,t}$ is the total liability divided by total assets at the beginning of year t, PUBDEBT is the percentage of public debt divided by total assets at the beginning of year t, $MB_{i,t}$ is the market value of equity divided by the book value of total assets at the beginning of year t.

Variables		Mean	Standard deviation	First Quartile	Median	Third Quartile
$R_{i,t}$ (%)	Total sample	11.45	119.44	-32.01	-5.16	24.24
	Firms with bank ownership	11.52	111.38	-29.32	-2.25	27.34
	Firms without bank ownership	10.82	130.65	-35.35	-8.32	19.09
$NI_{i,t}$	Total sample	1.32	40.74	0.01	0.06	0.11
	Firms with bank ownership	-0.03	75.59	0.01	0.06	0.10
	Firms without bank ownership	3.07	60.40	0.01	0.06	0.13
SIZE	Total sample	18.35	2.11	16.96	18.26	19.73
	Firms with bank ownership	18.82	2.02	17.42	18.67	20.15
	Firms without bank ownership	17.84	2.09	16.43	17.72	19.26
LEV (%)	Total sample	42.82	23.45	23.81	42.30	57.55
	Firms with bank ownership	43.58	24.53	23.22	43.50	57.54
	Firms without bank ownership	42.85	21.70	27.97	41.52	57.43
PUBDEBT (%)	Total sample	1.21	4.32	0	0	0
	Firms with bank ownership	1.56	5.04	0	0	0
	Firms without bank ownership	0.79	3.23	0	0	0
Market-to-book	Total sample	0.95	1.43	0.29	0.60	1.06
	Firms with bank ownership	0.97	1.27	0.36	0.68	1.13
	Firms without bank ownership	0.91	1.52	0.22	0.50	0.97

Table 3. Informativeness of earnings conditional on bank ownership (panel data estimation)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Constant	-0.10	-0.09	-0.10	-0.09	-0.08	-0.08	-0.10	-0.09
	(-1.00)	(-0.95)	(-1.00)	(-0.88)	(-0.82)	(-0.83)	(-1.03)	(-0.92)
NI	0.09***	0.17***	0.18***	0.50***	0.71***	0.58***	0.52***	0.42***
	(3.27)	(5.30)	(5.60)	(5.14)	(5.73)	(4.39)	(8.44)	(4.28)
NI*SIZE	0.04*	0.13***	0.15***	0.34***	0.28***	0.24***	0.45***	0.31***
	(1.88)	(4.72)	(5.28)	(5.30)	(6.50)	(5.50)	(8.12)	(4.86)
NI*LEV	-0.08**	-0.37***	-0.45***	-0.40***	-0.42***	-0.39***	-0.43***	-0.52***
	(-2.63)	(-5.95)	(-6.65)	(-6.35)	(-6.65)	(-6.21)	(-6.88)	(-7.39)
NI*MB	-0.17***	-0.28***	-0.29***	-0.33***	-0.38***	-0.35***	-0.96***	-0.35***
	(-3.23)	(-4.86)	(-5.02)	(-5.52)	(-6.17)	(-5.70)	(-8.17)	(-5.97)
NI*BANKOWN		2.66***		2.30***	2.07***	2.21***	2.14***	
		(4.27)		(3.65)	(3.27)	(3.46)	(3.45)	
NI*DBANKOWN			0.41***					
			(5.05)					
NI*OWN1				-0.55***				-0.37**
				(-3.55)				(-2.28)
NI*OWN3					-0.66***			
					(-4.48)			
NI*OWN5						-0.51***		
						(-3.18)		
NI*DPUBDEBT							-0.40***	
							(-6.60)	
NI*BANKOWN1								11.38***
								(2.99)
NI*BANKOWN2								5.99***
								(4.72)
NI*BANKOWN3								0.65**
								(1.98)
Calendar effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-Sq Within (%)	14.32	16.24	16.64	16.97	17.40	16.83	18.72	17.78
Number of obs.	1,733	1,680	1,680	1,680	1,680	1,680	1,680	1,680
F	15.44***	16.29***	16.80***	16.21***	16.70***	16.04***	18.26***	15.40***

t-statistics are shown in brackets. “***”, “**” and “*” denote significance at the 1%, 5% and 10% levels respectively.

Table 4. Informativeness of earnings conditional on bank ownership (ordinary least-squares estimation)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Constant	-0.11	-0.11	-0.12	-0.11	-0.11	-0.11	-0.09	-0.11
	(-1.19)	(-1.26)	(-1.33)	(-1.23)	(-1.21)	(-1.19)	(-1.07)	(-1.20)
NI	0.09***	0.16***	0.16***	0.46***	0.64***	0.53***	0.40***	0.44***
	(3.58)	(5.28)	(5.52)	(5.62)	(6.17)	(4.89)	(8.22)	(5.18)
NI*SIZE	0.04**	0.11***	0.13***	0.31***	0.24***	0.21***	0.34***	0.30***
	(2.06)	(4.46)	(4.93)	(5.61)	(6.61)	(5.68)	(7.72)	(5.43)
NI*LEV	-0.07***	-0.29***	-0.35***	-0.32***	-0.33***	-0.30***	-0.38***	-0.39***
	(-2.85)	(-5.61)	(-6.32)	(-6.13)	(-6.30)	(-5.80)	(-7.04)	(-6.76)
NI*MB	-0.17***	-0.26***	-0.27***	-0.31***	-0.36***	-0.33***	-0.73***	-0.32
	(-3.55)	(-4.97)	(-5.07)	(-5.71)	(-6.17)	(-5.94)	(-8.02)	(-5.96)
NI*BANKOWN		1.96***		1.80	1.49***	1.57***	1.51***	
		(4.24)		(3.90)	(3.19)	(3.32)	(3.27)	
NI*DBANKOWN			0.32***					
			(5.12)					
NI*MSOWN1				-0.52***				-0.44***
				(-3.98)				(-3.27)
NI*MSOWN3					-0.59***			
					(-4.86)			
NI*MSOWN5						-0.46***		
						(-3.58)		
NI*DPUBDEBT							-0.29***	
							(-6.27)	
NI*BANKOWN1								8.11**
								(2.30)
NI*BANKOWN2								3.19***
								(4.44)
NI*BANKOWN3								0.41
								(1.49)
Calendar effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-Sq Within (%)	13.46	14.85	15.28	15.65	16.04	15.50	16.82	16.05
Number of obs.	1,733	1,680	1,680	1,680	1,680	1,680	1,680	1,680
F	16.67***	17.05***	17.66***	17.12***	17.63***	16.93***	18.66***	15.86***

t-statistics are shown in brackets. "***", "**" and "*" denote significance at the 1%, 5% and 10% levels respectively.

Table 5. Informativeness of earnings according to the level of ownership of the major shareholder and the sign of the earnings (panel data estimation)

	Total sample	Positive earnings	Negative earnings
Constant	-0.09 (-0.88)	-0.22** (-2.16)	-0.27 (-1.16)
NI	0.17*** (5.23)	0.51*** (3.60)	0.40*** (4.59)
NI*SIZE	0.14*** (4.89)	0.53*** (3.45)	0.73** (2.18)
NI*LEV	-0.41*** (-6.17)	-1.59*** (-3.49)	-0.44*** (-5.54)
NI*MB	-0.27 (-4.72)	-0.75*** (-3.62)	-3.29*** (-5.09)
NI*BANKOWN	4.06*** (3.73)	15.27*** (6.40)	1.26 (0.91)
NI*OWN1	-13.09 (-0.61)	273.78 (1.29)	-26.33 (-1.28)
NI*OWN3	6.84*** (8.09)	18.79*** (13.14)	0.79 (0.70)
NI*OWN5	-2.65** (-2.35)	-7.92*** (-4.47)	-0.08 (-0.05)
Calendar effects	Yes	Yes	Yes
R-Sq Within (%)	20.74	31.57	32.63
Number of obs.	1,680	1,347	333
F	18.62***	25.56***	4.67***

t-statistics are shown in brackets. "***", "**" and "*" denote significance at the 1%, 5% and 10% levels respectively.

Appendix A. Summary of variable definitions

Variable name	Definition
RETURN	The cumulative net-of-market 12-month stock return
NI	The net earnings before extraordinary items divided by the market value of equity
SIZE	Dummy variable that takes the value 1 if the natural logarithm of the market value of equity in thousands of Euros is higher than the median value and 0 otherwise
MB	The market value of equity divided by the book value of total assets
LEVERAGE	The total liability divided by total assets
PUBDEBT	Dummy variable that takes the value of 1 if the firm has public debt and 0 otherwise
BANKOWN	The percentage of bank ownership
BANKOWN1	The percentage of shares held by banks if this percentage is less than 5% and zero otherwise
BANKOWN2	The percentage of shares held by banks if this percentage is between 5% and 25% and zero otherwise
BANKOWN3	The percentage of shares held by banks if this percentage is higher than 25% and zero otherwise
DBANKOWN	Dummy variables that takes the value of 1 if a bank has equity in the firm and 0 otherwise
OWN1 / OWN2 / OWN3	Percentage of equity of the first / three / five major shareholder/s
OWN11	The percentage of shares held by the major shareholder if this percentage is less than 5% and zero otherwise
OWN12	The percentage of shares held by the major shareholder if this percentage is between 5% and 25% and zero otherwise
OWN13	The percentage of shares held by the major shareholder if this percentage is higher than 25% and zero otherwise

Appendix B. Correlations between independent variables

	NI	SIZE	MB	LEVERAGE	PUBDEBT	OWN1	OWN3	OWN5
SIZE	-0.0286	1.0000						
MB	-0.0130	0.2836	1.0000					
LEVERAGE	-0.0140	-0.1184	-0.1505	1.0000				
PUBDEBT	-0.0140	0.1584	-0.0727	0.1062	1.0000			
OWN1	0.0223	0.1217	-0.0130	-0.0016	-0.0402	1.0000		
OWN3	0.0210	0.0510	-0.0201	-0.0162	-0.0852	0.9040	1.0000	
OWN5	0.0156	0.0063	-0.0317	-0.0250	-0.1126	0.8282	0.9734	1.0000
BANKOWN	-0.0219	0.1057	-0.0227	-0.0029	-0.0223	0.0002	0.0503	0.0554

Conclusions

The main aim of this paper was to analyse the relation between earnings informativeness, measured by the earnings-return relation, and bank ownership. Since banks are often characterized as being sophisticated investors who have advantages in acquiring information, they may be considered as monitoring institutions that scrutinize management. This scrutiny may result in less opportunity for accruals management or earnings manipulation. The paper examines the relations between earnings informativeness and bank ownership for Spanish Stock Exchange listed firms over the 1991-2003 period. The institutional setting in which the contrast is carried out is characterized by weak protection of minority shareholders and high ownership concentration, a situation which, as La Porta *et al.* (1999) have pointed out, is common to many countries. The present paper tests the bank monitoring hypothesis versus the entrenchment hypothesis. According to the entrenchment hypothesis, when the ownership of the controlling shareholder increases, the opportunistic incentives to expropiate minority shareholders also increases and the market expects the owner not to report high-quality accounting information.

The results show a positive relation between bank ownership and the informativeness of earnings. Moreover, this relationship seems to be linear in nature. The greater explanatory power for returns as bank ownership increases is maintained when the ownership concentration of the firm is considered.

The paper also highlights a non-linear relation between the informativeness of earnings and the ownership of the major shareholder. The results indicate that at a medium level of ownership of the major shareholder the interest-alignment effect is dominant, but that the entrenchment effect is dominant at a high level of major shareholder ownership. These results are in line with the previous evidence reported by Yeo *et al.* (2002) and

Gul and Wah (2005). Moreover, size has a positive relationship with the informativeness of earnings in keeping with the deep scrutiny of larger firms. Leverage has a negative influence on the informativeness of earnings that is consistent with the existence of greater incentives to manage accruals in the presence of covenant constraints attached to leverage. Finally, the market-to-book ratio has a negative influence on the informativeness of earnings, thus highlighting that the growth (risk) of firms weakens the quality of accounting information.

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