ASYMMETRIC INFORMATION AND MONITORING BEHAVIOUR IN BLOCK TRADES: AN EMPIRICAL ANALYSIS FOR SPAIN

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Abstract

The aim of our study is to analyse if the purchase of share blocks in the Spanish capital market is due to any of the two factors that have justified block transactions in financial literature: monitoring or information advantage. Our results show that the control group, institutional investors and insiders have a higher probability to buy a block when an increase in value creation is expected due to the higher monitoring of managers carried out by these investors. A higher probability of purchase, only by insiders, is also observed when there is more asymmetric information and therefore the acquirers can benefit from their position of better informed investors.

Keywords: partial control market, corporate governance, asymmetric information

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1. Introduction

The factors that justify stock acquisitions in the control market have been broadly studied. However, the causes of partial acquisitions or of small block purchases have been less analysed. Although most of the research about this topic has been developed in the US, recently some studies have been focused on the Spanish market, where the corporate control market has little importance (only 13 takeover bids were accomplished in 1999, and 133 in the period 1993-1999).

In Spain, previous studies about block acquisitions have focused on two topics: on the one hand, the consequences of such acquisitions or the existence of abnormal returns; on the other hand, the causes of such acquisitions. In relation to the first question, Blanco Fernández and García Martin's study (2000) analyses value creation due to partial acquisitions of shares and the causes that motivate these abnormal returns in the period 1987-1995. However, our study is focused on the second question.

In particular, our objective consists in testing if block acquisitions in the Spanish market, that are not due to a takeover bid, are caused by any of the two factors that have traditionally justified block transactions in the financial literature: monitoring or informative advantage. On the one hand, the probability to acquire a block will be higher when the investors/purchasers develop a monitoring role over management behaviour and thus, an increase in value is expected. The possibility for the acquirers to develop such a monitoring role depends on the ownership structure of the firm before the acquisition. In particular, in those firms with a more disperse ownership structure, or with a small percentage of shares in the hands of insiders or institutional investors[1], it is possible to increase value thanks to the participation of certain groups of investors who can develop a monitoring role in the firm.

On the other hand, the purchase of a block is justified by the informative advantage of the acquirers and insider trading. In this sense, information asymmetry in the firm gives rise to the appearance of better-informed investors who will increase their participation in the firm with the aim of taking advantage of such information. Therefore, the probability of acquisition of a block by an investor or group of investors whose relationship with the firm lets us

[1] Insiders and institutional investors are considered as active investors who can develop a monitoring role in the firm.

consider them better-informed will be higher the greater the information asymmetry in the firm is.

The information advantage of certain groups of investors in the firm, such as main shareholders, insiders and institutional investors has been shown in different studies that suggest that transactions accomplished by this kind of shareholders are an important source of information. In this sense, when a firm makes an announcement, such as dividend payment or investment projects, their consideration as good or bad news and the reaction of stock prices are conditioned by the purchases or sales of stocks accomplished by this kind of shareholders. In summary, these transactions can increase the credibility of the news or give more information to other investors. There are several works according to this idea such as John and Mishra (1990) for investment news, John and Land (1991) for dividend news and Udpa (1996) for earnings news that are accompanied by insiders' transactions.

To analyse these two factors that justify block acquisitions (monitoring and information advantage), we distinguish acquisitions according to the type of investors, considering the purchase by the control group, by institutional investors and by insiders. The literature about corporate governance has shown that not only the level of ownership concentration is relevant to exercise managerial monitoring, but also the kind of shareholders has a different effect over value creation, as we will explain in the following Section. Therefore, it is necessary to consider block acquisitions accomplished by different kind of shareholders separately. This distinction will allow us to obtain relevant evidence in the analysis of block acquisitions in the Spanish market, because previous studies, such as the one of Crespí and Gispert (1999), only analyse acquisitions that increase ownership concentration, without considering the kind of investor that carries out the acquisition or if such acquisition is due to a takeover-bid.

The existence of insider trading and the protection of minority investors' interests has become a topic of special relevance in the Spanish stock market. In this sense, and with the objective of achieving a bigger transparency of the transactions accomplished in the market, the regulation tries to safeguard the interests of minority investors (see Real Decreto 1370/2000 of 19th of July). However, more than the search for ex-post solutions, the establishment of preventive measures seems necessary to avoid the use and abuse of private information and to detect such situations. It is also necessary to carry out more empirical studies in this field, considering the different recommendations of good governance codes and ways to protect minority shareholders that are applied in different countries.

The paper is structured as follows. Firstly, in Section 2, we analyse the theoretical and empirical evidence previously considered in the literature, in the analysis of small blocks acquisitions. This review allows us to define the hypotheses of our study. In Section 3 we describe the sample, methodology and variables considered in the empirical analysis. In Section 4 we point out the main results and lastly we outline the main conclusions.

2. Block trading: definition of the hypotheses

The monitoring function of the corporate control market through takeover bids has been broadly studied. However, there exists a partial control market where acquisitions of shares in a percentage less than the limits settled down by law to execute takeover bids are carried out. This type of transactions has a great importance not only because they are a way to convey information, but also because they can be considered as the first step for a later takeover bid (Barclay and Holderness, 1991).

Therefore, block trading has been traditionally justified according to three hypotheses: the monitoring or reduction in agency costs hypothesis, private benefits hypothesis and the information hypothesis.

a) Monitoring hypothesis vs. Private benefits hypothesis

The conflict of interest between managers and shareholders derived from the separation between ownership and control has given rise to the search for control or monitoring mechanisms with the aim of maximising firm value. In this context, ownership concentration and the type of shareholders of a firm can be considered as governance mechanisms that monitor management decisions and help to create value in the firm. However, there is not a consensus about this topic in the financial literature. The results achieved in different studies that analyse the influence of ownership structure over value creation do not always find a positive relationship, which would show the monitoring ability of these shareholders, but in some cases, the relationship found becomes negative, which shows the possible search for private benefits by the investors who have enough voting power, decreasing minority investors' wealth.

In the context of our study we have distinguished three types of shareholders: main shareholders, insiders and institutional investors.

Firstly, main shareholders[2] may play an important role in the control and supervision of the firm, as they have enough voting power and an important incentive to accept the necessary fixed cost to carry out their control role. Franks and Mayer (1994), Gorton and Schmid (1996), Kang and Shivdasani (1995), Wruck (1989), Zechauser and Pound (1990) among others, support the idea that big shareholders play an active role in corporate governance and their results support the hypothesis that ownership concentration

[2] We consider "main shareholders" not only majority shareholders who own more than 50% of a firm but also no-majority shareholders whose ownership is big enough in comparison with other shareholders in the firm to exercise control.

improves business performance. On the contrary, McConnell and Servaes (1990) and Holderness and Sheehan (1988) do not find a significant relationship between business profitability and the existence of a dominant shareholder in the firm[3].

Secondly, according to the interest convergence hypothesis suggested by Jensen and Meckling (1976), insiders' ownership[4] is positively related to value creation, because the higher insiders' ownership is, the higher the alignment of interest between managers and shareholders will be. However, a significant holding would allow managers to avoid control mechanisms and to follow their own objectives (entrenchment hypothesis). Therefore, the relationship between insiders' ownership and firm profitability is not necessarily positive, but it can become negative once insiders' ownership goes above a certain level (Mork et al. (1988), McConnell and Servaes (1990) and Curcio (1994)).

Thirdly, institutional investors[5] can play and important role in the control of managerial decisions. However, while some studies show the disciplinary role of institutional investors, others suggest the expropriation hypothesis. According to this hypothesis, institutional investors search for private benefits in the firm increasing their business in it (by loans) and influencing investment decisions to assure the repayment of their loans, causing an under-investment problem in the firm. Empirical results that support the supervisory role of institutional investors are shown in the studies of Lichtenburg and Pushner (1992), McConnell and Servaes (1990), Nickell, Nicolitsas and Dryden (1997). On the contrary, Duggal and Millar (1999) and Ang, Cole and Lin (2000) question the supervisory superiority that has been traditionally given to institutional investor to reduce agency costs.

As a consequence, in stock block acquisitions, the control power of the different groups of shareholders- purchasers to achieve their objectives affects not only the acquisition price but also the reaction in share prices after the acquisition.

If we assume the monitoring role of the previously mentioned different types of investors and thus their positive influence over value creation, stock prices will increase when the purchaser of a block is a better supervisor or manager than the one who sells the block. Therefore, the buyer of a block will be willing to pay a premium over the price that the shares have before the acquisition when he considers that using his voting power he can improve firm management and value creation. In summary, the premium paid for acquisitions in the partial control market points out the improvement expected in firm management (Barclay and Holderness, 1989, 1992).

Monitoring hypothesis also explains the positive reaction of stock prices caused by a change in ownership announcement due to the higher and better monitoring developed by the new majority shareholder, which will decrease agency costs (Bethel, Porter and Opler, 1998).

This potential gain derived from an increase in monitoring has been shown in different operations developed in the capital markets through stock transactions that change a dispersed ownership structure into a concentrated structure. The payment of a premium or positive abnormal returns have been observed in private placements of shares (Hertzel and Smith, 1993), going private transactions (Lehn and Poulsen, 1989), corporate control market (Gómez Ansón, 1997) and partial control market (Bethel, Porter and Opler, 1998).

On the contrary, different groups of shareholders can use their voting power with the aim of increasing their private benefits, as we have previously outlined. In this case, the price that the purchaser is eager to pay for a block will be higher than the price achieved after the acquisitions, because the presence of these shareholders in the firm does not increase firm value.

Most of the existent literature about stock block transactions tests the monitoring hypothesis and the private benefits hypothesis, analysing the price the purchaser is eager to pay and the abnormal returns derived from block acquisitions (see table 1). In our study we try to go further and we analyse if the shareholder-purchaser of a block is able to advance the effect of the new ownership structure over firm value and therefore if the existence of a specific ownership structure increases the probability of block acquisitions.

[3] This lack of relationship between ownership concentration and business performance could be due to the endogenous character of ownership, this means, to the fact that ownership could be explained by different variables, such as size, which could provoke that firms with a different ownership structure are equally efficient. Even, it has been suggested that ownership structure can be explained by firm performance and financial decisions. However, empirical evidence has shown the existence of a one-way relationship, being ownership structure the variable that influences financial decisions (Bathala, Moon y Rao, 1994; Eckbo y Verma, 1994; Jensen, Solberg y Zorn, 1992).

[4] Insiders are the members of the Board of Directors in our study.

[5] Institutional investors are considered being banks, savings banks, insurance companies and pension and mutual funds.

Table 1. Stock blocks transactions: evidence for monitoring hypothesis, private benefits hypothesis and information hypothesis

Research	Hypotheses	Sample and Methodology	Block transactions	Results
Holderness y Sheehan (1988)	Private benefits Hyp.: rejected	114 firms (31 transactions) Event study and mean differences	Transactions with majority stock blocks that generally cause changes in majority owners' identity but not in ownership concentration	Firm value increases 12% when a block acquisition is announced
Barclay y Holderness (1989)	Private benefits Hyp.: accepted	63 transactions OLS	Transactions with majority stock blocks that generally cause changes in majority owners' identity but not in ownership concentration	Block acquisitions have a premium of 20% over the share price after the announcement
Barclay y Holderness (1991)	Monitoring Hyp.: accepted Information Hyp.: rejected	97 firms (106 transactions) Event study and mean differences	Transactions with majority stock blocks that generally cause changes in majority owners' identity but not in ownership concentration	Firm value increases when ownership is transferred to those with higher monitoring and managerial skills. Cumulated annual return of 5.6%
Barclay y Holderness (1992)	Monitoring Hyp.: accepted Private benefits Hyp.: accepted	97 firms (106 transactions) Event study and OLS	Transactions with majority stock blocks that generally cause changes in majority owners' identity but not in ownership concentration	Stock price after the acquisition is increased but not as much as the paid premium
Shome y Singh (1995)	Monitoring Hyp.: rejected	92 firms Event study and OLS	Analyse the effects of new stock blocks	Stock block acquirers do not play a valuable role in reducing managerial discretion over free cash flows
Bethel, Porter y Opler (1998)	Monitoring Hyp.: accepted Information Hyp.: rejected	425 firms Wilcoxon test and logistic regression	Analyse block purchases by majority active investor, institutional majority owner, strategic investors and insiders	Active investors purchase blocks in firms with low yields, and their intervention is associated with an improvement in yields
Crespí y Gispert (1999)		113 firms Probit and Tobit	Analyse block acquisitions that increase ownership concentration	Higher probability of acquisition in small and disperse ownership firms. Low previous yields are not significant to explain acquisition probability
Fernández Blanco y García Martín (2000)	No support to any theory	132 firms Event study	Analyse stock block purchases from the point of view of the buyer and the seller	Size of block informative effect is confirmed. Abnormal returns in the target firm and in the purchaser firm when it invests in the same sector.
Fernández Blanco y Baixaiulli (2000)	Cause of the acquisition: synergies. No support for the agency hypothesis	58 acquisitions Event study	Analyse inter-firm acquisitions	Abnormal positive returns for both target and purchaser firms.

In particular, if the firm has an ownership structure that guarantees the monitoring of managerial decisions, the probability of block acquisitions by those shareholders that can exercise a monitoring role or who look for private benefits in the firm will be smaller. In the first case, the reason is based on the fact that the expected profit derived from the higher monitoring exercised by the purchasers is smaller. In the second case, the reason is based on the fact that the private benefits that shareholders can obtain in those highly monitored firms will be lower. On the contrary, if the firm has an ownership structure that affects value creation negatively, the probability of block acquisitions by those shareholders who can exercise a monitoring role will be higher, as well as the probability of acquisition by those who search for private benefits.

Thus, we can define our first hypothesis as follows:

H1 - "Monitoring Hypothesis": the probability of stock block acquisitions by those shareholders who can exercise a monitoring role in the firm (control group, insiders and institutional investors) is negatively related to the ownership of those who exercise a supervision role before the acquisition.

Therefore, the expected relationship between the probability of acquisition and the ownership variables requires the accomplishment of a previous

analysis in which we test the relationship between ownership structure and value creation in the firm. If the relationship obtained is positive, it would show the monitoring role carried out by shareholders and if the relationship is negative, it would show the search for private benefits.

Information hypothesis

The possession of private information about the firm by insiders, or by those who can have an easier access to it, such as majority and institutional investors, has been shown in different situations in the markets. In this sense, the following operations have been observed, among others: executives receive stock options just before good news announcements (Yermack, 1997) and insiders sell stocks three months before bad news, like a bankruptcy (Seyhun and Bradley, 1997).

On the contrary, other authors question the information superiority of certain groups of investors. If the investors who take part in block trading have better information about firm value than other investors in the market, we can underline two possible consequences. Firstly, the blocks that are valued with a discount on the sale price should cause a decrease of the share value and, secondly, blocks that are valued with a premium over the sale price should cause an increase of the share value. However, this behaviour is not observed in the research of Barclay and Holderness (1991). Also, if a group of investors is considered to have better information and they decide to buy a block, we would expect an increase in stock prices. However, the biggest improvement in firm yield is observed two or three years after the purchase of the block, as Bethel, Porter and Opler (1998) observe.

In this sense, the analysis of the information superiority of shareholders, considering the influence of their purchases over stock prices, is not conclusive. However, previous studies do not distinguish the different information asymmetry in each firm. It is obvious that in those firms with higher information asymmetry, shareholders who can have a higher and better access to information will obtain a benefit derived from it. Moreover, in those firms with higher information asymmetry, the information effect or abnormal return derived from block purchases is higher and, therefore, the gain obtained by the shareholder-purchaser is higher (Han and Suk, 1998). Therefore, those shareholders who can be considered as better-informed in the firm will have an incentive to increase their ownership when the information asymmetry is higher. If that were the case, it would show the information advantage of these shareholders.

In this sense, we outline the following hypothesis:

H2 - *"Information Hypothesis": the probability of stock block acquisitions by those shareholders who have better information (control group, insiders and institutional investors) is positively related to information asymmetry in the firm.*

3. Sample, variables and methodology

3.1. Sample

The study is based on a sample of 93 non-financial firms listed on Madrid Stock Exchange for the period 1994-1998. This sample is obtained from the database of firms provided by the Comisión Nacional del Mercado de Valores (CNMV). We eliminated from the initial database those firms that did not quote in the stock market at least since 1992, because the Initial Public Offering of firms can affect ownership structure, and thus the results that we could obtain in the test of the "monitoring hypothesis" could be biased. We also eliminated those firms that were in a bankruptcy process and those excluded from quotation during the sample period. We excluded those observations (firm-year) in which a takeover bid was produced, leaving the final number of observations in 452 (Koipe, Saltos del Nansa, SABA and Sociedad Española Acumulador Tudor in 1994, Agroman, Cementos Alfa and Tableros de Fibras in 1995, Compañía Sevillana de Electricidad, FECSA, Unión Resinera Española in 1996, Asturiana de Zinc and Vidriera Leonesa in 1997 and Estacionamientos Subterráneos in 1998).

For the firms that had been target of a takeover bid we also analysed the transactions realised in the year before the bid. Only in 3 out of the 13 firms analysed an acquisition of a block was observed during the previous year (FECSA, Unión Resinera Española and Vidriera Leonesa). Thus, we found no significant relationship between block acquisitions and a takeover bid in the following year in our sample. (Evidence in this sense is also found in the study of Fernández-Blanco and García Martín (2000). Therefore, we decided to eliminate only the observation that corresponded to the year of the takeover bid.

Then, we analysed the cases (firm-year) in which an acquisition of a block was produced, considering as a block acquisition the purchase of stocks in a percentage equal to or over 5% and less than 25%, as we excluded takeover-bids. We observed 135 cases (corresponding to 73 firms) in which an acquisition by the control group (or 3 main shareholders), institutional investors or insiders was produced.

Table 2 shows the composition of the sample, where we can observe the number of firms grouped by sector, their size and value, as well as the number of acquisitions accomplished in each case.

Firstly, the variable "ACQUISITION" considers the acquisitions carried out by any of the three groups of shareholders considered in this study: the control group (or the group formed by the 3 biggest shareholders in the firm), insiders or members of the Board and institutional investors. In this variable we

also included the transaction of a block from one majority shareholder to another without changing ownership concentration, but producing changes in the identity of the shareholder who has control. We did not include those cases in which there was both a change in the identity of the majority shareholder and a reduction in ownership concentration, because the higher ownership dispersion can reduce the benefits derived from the monitoring carried out by the new shareholder. This variable is therefore a dichotomous variable that takes value 1 when the ownership of the 3 biggest shareholders, of insiders or of institutional investors increases more than 5% in a year or when there is a change in the identity of the majority shareholder without changing ownership concentration.

Then, we divided such acquisitions according to the type of shareholder who made the purchase, because, as we outlined previously in the theoretical argument, not all the shareholders have the same ability to monitor, and even, they can look for different objectives in the firm. Moreover, although we could think that the three categories of shareholders considered in the study (control group, insiders and institutional investors) have the same access to firm information, it can happen that one category is better informed than other.

In this sense, we can define the three dependent variables. Firstly, the dummy variable GROUP.ACQ takes value 1 if the control group acquires more than 5% of the stocks during the year under consideration or if there is a change in the identity of the control shareholder. Secondly, the dummy variable INSIDER.ACQ takes value 1 if insiders' ownership increases more than 5% during the year. Thirdly, the dummy variable INSTIT.ACQ takes value 1 if institutional investors increase their ownership in the firm more than 5%.

Table 2. Sample description according to the industry classification

Industry classification	*Number firms* 1994-1998	Size*	Value*	ACQUISITION	INSIDER ACQ	INSTIT. ACQ	GROUP ACQ
Building	12	667,48	877,91	12	5	3	6
Electrics	13	4392,41	5256,78	16	1	7	13
Food	10	254,08	428,46	18	8	7	10
Mechanical	16	258,03	318,90	26	10	9	13
Chemical	9	828,18	1639,87	17	4	9	9
Communication and transports	8	4071,83	5055,24	10	2	3	7
Other industries and services	11	422,74	773,90	15	11	3	9
Real state	14	212,48	267,89	21	9	8	8
TOTAL	93	1101,72	1462,06	135	50	49	75

* Mean value for the size of the firm (total assets) and market value of the firm. Millions of euros.

The data used in the study are obtained from the public information provided by the Comisión Nacional del Mercado de Valores (the Spanish SEC – CNMV-) and Madrid Stock Exchange.

Variables to explain block acquisitions

To test the monitoring hypothesis, ownership variables are referred to investors' holdings in the firm at the end of the year before the one the acquisition takes place (it means, from 1993 to 1997). The variables considered to measure the monitoring in the firm before the acquisition are: ownership concentration, measured by the percentage of ownership owned by the highest external or no Board member shareholder (EX.OWN); insiders' ownership, measured by a dummy variable that takes value 1 when insiders' ownership is higher than 20% (INSID.OWN); institutional ownership, measured by a dummy variable that takes value 1 when institutional ownership is higher than 20% (INST.OWN).

The informative advantage of investors is proxy through two variables: the size of the firm and merger and takeover announcements. The size of the firm has traditionally been considered in financial literature as a good proxy for asymmetric information, being those bigger firms the ones with less information asymmetry (Grossman and Stiglitz, 1976; Vermaelen, 1981; Han and Suk, 1998, Hertzel and Smith, 1993).

In this sense, if in those firms with a smaller size the information asymmetry is higher, it will be more probable that the shareholders who are more joined to this kind of firms have a higher access to information and thus an information advantage. Therefore, the probability of acquisition of a block by any of the three groups of investors we are considering in this study, who could be considered as better informed (control group, institutional investors and insiders) is positively related to information asymmetry, or in other words, is negatively related to the size of the firm. However, the results obtained for the variable "size" as a proxy for asymmetric information could be conditioned by the restrictions of wealth of the investors who make the acquisition. Thus, the bigger the firm is, the more expensive the acquisition of an additional percentage of at least 5% of the shares will be. In this sense, we consider the variable M&A to control for the informative effects of merger and acquisition announcements communicated to Madrid Stock Exchange. This variable takes the value 1 in the year the announcement takes place independently

of the fact that finally the operation takes place or that during the same year several announcements of this type take place for the same company. The expected increase in firm value due to these announcements should have a similar incidence on the investment behaviour of any shareholder, since it is public information that appears in the Official Quoting Bulletin of Madrid Stock Exchange. That is why if there is a block acquisition by a specific group of investors when there is an announcement, we could suggest that such group has at least more exact information about the results of the decisions adopted by the company.

Two control variables are also considered in the model. Firstly, in insiders' acquisitions we include the number of members in the Board, and therefore, the smaller wealth restriction of insiders to acquire shares is considered, since we make reference to acquisitions accomplished by the whole Board. Secondly, in acquisitions carried out by institutional investors we introduce bank leverage as a control variable. On the one hand, we expect a higher probability of acquisition by institutional investors in firms with higher leverage, so these investors can protect their creditor position in the firm. On the other hand, acquisition probability and leverage could be negatively related if we considerer debt as governance mechanism that reduce free cash flows and agency problems (Jensen, 1986).

In summary, the variables used to contrast hypotheses 1 and 2 are presented in table 3. Table 4 shows descriptive statistics for the variables.

Table 3. Variables for the analysis of the hypotheses

Dependent variable	
Stock Block purchase	• ACQUISITION = 1 if any of the three variables defined below are equal to 1. • GROUP.ACQ = 1 if the group of the 3 majority shareholders in the firm increases their ownership more than 5% between year t and t-1 or if the identity of main shareholder changes (without changing ownership concentration) • INSIDER.ACQ = 1 if insiders ownership increases more than 5% between year t and t-1 • INSTIT.ACQ = 1 if institutional ownership increases more than 5% between year t and t-1
Independent variables	
Ownership structure in t-1	• EX.OWN = % of ownership of majority external shareholder • INSID.OWN = 1 if insider ownership is > 20% • INSTIT.OWN = 1 institutional ownership is > 20% • INSTIT.OWN*LEV = % institutional ownership * (Bank debt / total liabilities)
Asymmetric information	• SIZE = ln (equity market value + accounting debt value) • M&A = 1 if firm i communicates to Madrid Stock Exchange a relevant fact related to merger or acquisitions of other firms or business in year t
Control Variables	• Size of the Board = mean number of members in the Board for firm i. • LEVERAGE = Bank debt / Total liabilities

Table 4. Descriptive statistics of the variables

	INSID.OWN = 1	INST.OWN = 1	EX.OWN	SIZE	M&A = 1	LEVERAGE	Size Board
ACQUISITION = 1 (# observat. = 135)	35,55%	23,70%	24,188 (23,68)	10,666 (1,89)	11,85 %	0,16 (0,14)	10,60 (5,06)
ACQUISITION = 0 (# observat. = 317)	33,43%	27,76%	34,37 (29,89)	10,814 (1,82)	13,56 %	0,13 (0,15)	11,05 (5,109)
INSIDER.ACQ = 1 (# observat. = 50)	46%	20%	20,17 (23,7)	9,97 (1,315)	18%	0,178 (0,148)	9,32 (3,99)
INSIDER.ACQ = 0 (# observat. = 402)	32,58%	27,36%	32,72 (28,8)	10,86 (1,87)	12,43 %	0,140 (0,155)	11,12 (5,18)
INSTIT.ACQ = 1 (# observat. = 49)	24,48%	28,57%	23,91 (17,46)	10,93 (2,14)	12,24 %	0,143 (0,153)	10,898 (5,95)
INSITI.ACQ = 0 (# observat. = 403)	35,23%	26,30%	32,23 (29,4)	10,75 (1,8)	13,15 %	0,144 (0,155)	10,928 (4,98)
GROUP.ACQ = 1 (# observat. = 75)	36%	24%	24,05 (25,08)	10,81 (1,95)	12%	0,174 (0,144)	11,13 (5,25)
GROUP ACQ = 0 (# observat. = 377)	33,68%	27,05%	32,78 (28,99)	10,76 (1,82)	13,26 %	0,138 (0,156)	10,88 (5,06)

The columns for INSID.OWN, INST.OWN and F&A show the percentage of observation in which this variable takes value 1 and summarise the values obtained in the contingency tables. Columns for EX.OWN, SIZE LEVERAGE and Size of the board, show the mean value for the variables and in brackets the standard deviation.

Methodology

To test the hypotheses we outline a logistic regression model[6], in which we explain the purchase of a stock block in function of the initial ownership structure and of the asymmetric information. In general terms the model can be defined as:

$$Block\ purchase_{it} = \beta_0 + \beta_{OS}\ Ownership\ structure_{i\,t-1} + \beta_{AI}\ Asymmetric\ information_{it} + \beta_{CV}\ Control\ Variables_{it} + u_{it}$$

In particular, we consider three models according to the different groups of investors who make the acquisition

$$GROUP.ACQ_{it} = \beta_0 + \beta_1\ EX.OWN_{i\,t-1} + \beta_2\ INSID.OWN_{i\,t-1} + \beta_3\ INST.OWN_{i\,t-1} + \beta_4\ SIZE_{it} + \beta_5\ M\&A_{it} + u_{it}$$

$$INSIDER.ACQ_{it} = \beta_0 + \beta_1\ EX.OWN_{i\,t-1} + \beta_2\ INSID.OWN_{i\,t-1} + \beta_3\ INST.OWN_{i\,t-1} + \beta_4\ SIZE_{it} + \beta_5\ M\&A_{it} + \beta_6\ Size\ of\ Board_{i} + u_{it}$$

$$INSTIT.ACQ_{it} = \beta_0 + \beta_1\ EX.OWN_{i\,t-1} + \beta_2\ INSID.OWN_{i\,t-1} + \beta_3\ INST.OWN_{i\,t-1} + \beta_4 SIZE_{it} + \beta_5 M\&A_{it} + \beta_6\ LEVERAGE_{it} + u_{it}$$

Then, we consider a model in which we introduce the interaction between the variables that consider information advantage: size of the firm (SIZE) and merger and acquisition announcements (M&A). In particular, we introduce the variable $M\&A*SIZE_i$ (being i = 1, 2 and 3 according to the mean size of the firm during the five years under study. SIZE1 is the third of firms of less size and SIZE3 is the third of firms of bigger size).

The model outlined has the following structure:

$$Block\ purchase_{it} = \beta_0 + \beta_{OS}\ Ownership\ structure_{i\,t-1} + \beta_2 M\&A*SIZE1_{it} + \beta_3\ M\&A*SIZE2_{it} + \beta_4\ M\&A*SIZE3_{it} + \beta_{AI}\ Asymmetric\ information_{it} + \beta_{CV}\ Control\ Variables_{it} + u_{it}$$

In this case, the informative advantage of the shareholder/purchaser is shown through the coefficient and significance of the variable M&A*SIZE1 in explaining block acquisitions should be higher than M&A*SIZE2, which should also be higher than M&A*SIZE3. Han and Suk (1998) also consider interaction variables to control for the asymmetric information in the firm (measured through the size) and the informative signal transmitted by insiders' ownership. They explain abnormal returns of splits considering these interaction variables, and observe greater abnormal returns in firms with higher information asymmetry, where the signal transmitted by insiders' ownership is more relevant. This means that the information advantage of different shareholders is shown through their purchaser behaviour when there is news about smaller firms, and thus, information asymmetry is higher.

As the expected relationship between the probability of acquisition and ownership structure in the firm in the year previous to the purchase depends on the relationship between ownership structure and value creation (as we outlined in the definition of hypothesis 1), it is necessary to test previously the relationship between ownership and value creation.

To do this we carry out an analysis of the influence of ownership concentration (three main shareholders), insiders' ownership and institutional ownership over value creation, using panel data methodology.

$$Value\ Creation_{it} = \beta_0 + \beta_{CGO}\ Control\ Group\ Ownership_{i\,t} + \beta_{IO}\ Insiders'ownership_{i\,t} + \beta_{IO}\ Institutional\ Ownership_{i\,t} + \beta_{CV}\ Control\ Variables_{i\,t} + u_{it}$$

The three ownership variables are measured by the percentage of ownership in the hands of each type of shareholders. To avoid multicollinearity problems we consider them separately in the model. The control variables are the size of the firm, dummy variables for sector of activity and time dummy variables. When we analyse the influence of ownership concentration (control group) over value creation, dummy variables that consider the category of these investors are also included, because as we outlined in the theoretical argument, not only ownership concentration affects value creation, but also the identity of the one who has the control. In this sense, we introduce four dummy variables to differentiate the type of majority investor: insider, national firm, foreign firm or institutional. In sum, table 5 shows the expected relationship between the different variables considered to test the "monitoring hypothesis" and the "information hypothesis" in block acquisitions. In the case of the "monitoring hypothesis", the expected relationship between the probability of block acquisitions and ownership variables is conditioned by the relationship found between the ownership variables and value creation.

[6] Logistic regression is a model of binary election that allows to determine the significance of the independent variables when the dependent variable takes values 1 or 0, as the fact that we want to contrast is accomplished or not (in our study the purchase of a block between year t and t-1 or the change of majority shareholder's identity). In this case, the usual significance contrasts, which are based on the supposition of normal distribution of the error term, are not applicable since the error term has a discrete probability distribution. Therefore, the lineal estimation methods, such as Ordinary or Generalised Least Squares can be improved in terms of efficiency by non-lineal methods. In this sense, the logistic regression model requires less conditions than discriminate analysis, such as multivariable normality and equality of variance-covariance matrices, also, even when these conditions are completed, the logistic regression still behaves properly.

Table 5. Expected relationship between stock block acquisition and previous ownership structure and asymmetric information

		Dependent Variables		
	Independent Variables	GROUP.ACQ	INSIDER.ACQ	INSTIT. ACQ
Monitoring Hypothesis (H1)*	EX.OWN	Negative	Negative	Negative
	INSID.OWN	Negative	Negative	Negative
	INST.OWN	Negative	Negative	Negative
Information Hypothesis (H2)	SIZE	Negative	Negative	Negative
	M&A	Positive	Positive	Positive

* If ownership concentration, insiders' ownership and institutional ownership affect firm value positively (exercise a monitoring role), their absence in the firm increases the probability of acquisition by the three categories of investors considered, according to the monitoring hypothesis.

Partial control market acquisitions: results obtained in the empirical analysis

To test hypotheses 1 and 2 three different kinds of acquisitions are pointed out. Firstly, purchases by the control group, which include increases in ownership concentration and transfers of stocks from one investor to another without changing concentration. Secondly, purchases by insiders and, thirdly, purchases by institutional investors.

Results for the monitoring hypothesis in block acquisitions

The probability of block acquisitions depends, according to hypothesis 1, on the expected value creation in the firm derived from the monitoring of managers' decisions by shareholders/buyers. However, this supervisory role of shareholders has not always been supported, since the control power of some shareholders can drive them to look for private benefits in the firm. Therefore, firstly it is necessary to test if shareholders really monitor managers and increase firm value or, on the contrary, if shareholders look for their own private benefits in the firm and decrease the value of the company.

Thus, the influence of investors in value creation in the firm is an empirical question, which we solve applying panel data methodology to the sample of 93 firms during the period 1994-1998 as it is shown in table 6.

Table 6. Results of the analysis of the influence of ownership structure on value creation

	(1)	(2)	(3)	(4)
Constant	-0.3607 (-2.82)***	-0.309 (-2.5)***	-0.322 (-2.5)***	-0.232 (-1.8)***
Size (Ln assets)	0.0321 (2.905)***	0.0318 (2.88)***	0.0326 (2.91)***	0.0298 (2.68)***
3 main shareholders ownership	0.00119 (2.213)**			
Insiders' ownership		0.106E-2 (2.38)***	0.16E-2 (1.135)	
(Insiders' ownership)^2			-0.76E-5 (-0.429)	
Institutional ownership				-0.0019 (-3.1)***
Identity Dummies	Yes			
Sector Dummies	Yes	Yes	Yes	Yes
Time Dummies	Yes	Yes	Yes	Yes
Adjusted R^2	0.5605	0.5561	0.5549	0.5657
Hausman	3.071 (0.799)	0.624 (0.731)	0.607 (0.894)	4.268 (0.118)

Dependent variable: Cash flow over equity = (Added value – salaries – financial costs) / equity. Generalised Least Squares Estimates. Number of observations 465. In brackets Student t values. Significance Levels: *** 99%, ** 95% y * 90%. For simplicity we do not transcribe the values for identity dummies (which consider main shareholder identity: insider, national enterprise, foreign enterprise and institutional investor), temporal dummies (from 1994 to 1998) and sector dummies also considered in the analysis.

On the one hand, we observe a positive influence of the control group ownership and insiders' ownership over value creation (equation 1 and 2, table 6). This positive relationship is due to the monitoring derived from a higher ownership concentration and to the alignment of interests between managers and shareholders derived from a greater insiders' ownership. So, we can expect a higher probability of block acquisition by the control group or by insiders when the ownership of such categories of investors is small. This would show that these investors are able to foresee an increase in firm value due to the monitoring they are going to accomplish.

On the other hand, we observe a negative relationship between institutional ownership and value creation. This shows the search for private benefits by these investors in the firm (equation 4, table 6). The probability to obtain such benefits will be higher the more disperse the ownership structure in the firm is, or in other words, in absence of a majority owner

who exercises control and who reduces institutional discretion.

The results we obtained in the logistic regressions (tables 7 and 8) show a significant negative relationship between external ownership concentration and either acquisitions by insiders, acquisitions by institutional investors and by the control group. External ownership concentration is considered a good proxy for the supervision due to the higher independence of these investors in the exercise of control. In this sense, and according to hypothesis 1, a higher probability of acquisition is observed in more disperse ownership structure firms. This shows the expected gains derived from an improvement in management when ownership structure is reorganised to a more concentrated one, aligning interests of managers and shareholders and reducing agency costs.

Table 7. Results of the logistic regression that explains block acquisitions

	INSIDER.ACQ, Purchases = 50, No purchases = 402			
Period = 1994 - 1998	Eq.1	Eq.2	Eq.3	Eq.4
Constant	1.8667 (2.683)	1.581 (2.275)	1.313 (1.412)	-1.670 (58.22)***
EX.OWN	-0.0192 (5.40)**	-0.0168 (5.68)**	-0.017 (6.172)**	-0.0193 (7.547)***
INSID.OWN	-0.2528 (0.466)			
INST.OWN	-0.1070 (0.074)			
SIZE	-0.339 (9.482)***	-0.3294 (9.35)***	-0.265 (4.018)**	
M&A	0.8789 (4.20)**	0.8704 (4.20)**	0.834 (3.826)**	
Size of the Board			-0.0346 (0.692)	
M&A*SIZE1				1.814 (8.764)***
M&A*SIZE2				1.178 (3.605)*
M&A*SIZE3				-6.774 (0.149)
Model Chi-square	23.26 (0.0003)	22.757 (0.000)	23.463 (0.000)	25.97 (0.000)

Number of observations: 452. In brackets Wald test. Significance levels: *** 99%, ** 95% and * 90%. Model Chi-square contrasts the null hypothesis that all the parameters except the constant are zero, in brackets its significance.

Table 8. Results of the logistic regression that explains block acquisitions

	GROUP.ACQ, Acquisitions or change of identity = 75, No purchases =377		INSTIT.ACQ, Purchases = 49, No purchases =403			
Period = 1994 - 1998	Eq.1	Eq.2	Eq.1	Eq.2	Eq.3	Eq.4
Constant	-1.743 (4.029)**	-2.125 (7.33)***	-1.317 (1.66)	-2.542 (7.44)***	-2.505 (6.92)***	-1.267 (18.1)***
EX.OWN	-0.0157 (6.76)***	-0.013 (6.313)**	-0.022 (9.18)***	-0.0125 (4.00)**	-0.012 (4.036)**	-0.025 (10.4)***
INSID.OWN	-0.3132 (0.963)		-1.115 (7.80)***			-1.098 (7.87)***
INST.OWN	-0.118 (0.153)		0.098 (0.079)			
SIZE	0.067 (0.793)	0.083 (1.27)	0.014 (0.024)	0.074 (0.713)	0.073 (0.698)	
M&A	-0.066 (0.027)	-0.082 (0.043)	0.032 (0.004)	-0.046 (0.009)	-0.045 (0.009)	
LEVERAGE					-0.186 (0.034)	
INST.OWN*LEV						0.0617 (8.27)***
Model Chi-square	8.632 (0.12)	7.575 (0.05)	13.362 (0.020)	4.745 (0.19)	4.780 (0.310)	20.58 (0.0001)

Number of observations: 452. In brackets Walt test. Significance levels: *** 99%, ** 95% and * 90%. Model Chi-square contrasts the null hypothesis that all the parameters except the constant are zero, in brackets its significance.

We also tested if the probability of block acquisition depends on insiders' ownership and institutional ownership during the previous year. The analysis we carried out in table 6 to show the relationship between ownership structure and value creation allowed us to conclude, in general terms, the positive effect of insiders' ownership in value creation and the expropriation of minority shareholders' wealth by institutional investors. That is why the probability of block acquisition by insiders, institutional investors and the control group is explained in function of the percentage of ownership that belongs to the insiders and the institutional shareholders during the previous year.

According to hypothesis 1 we expect the following relationships. When insiders' ownership is small three possible effects can be expected: a bigger acquisition probability by insiders with the aim of gaining control in the firm; a bigger purchase probability by the control group with the objective to increase ownership concentration and managers monitoring; a higher acquisition probability by institutional investors, since there is less internal control and they can act with greater discretion to achieve their private benefits. The only significant relationship (at 99% of confidence) is the one between the institutional investor block acquisition and insiders' ownership (equations 1 and 4, table 8).

We also considered the relationship between block acquisition probability and institutional ownership in the firm. When institutional ownership is small we expect a high purchase probability by insiders and by the control group, since institutional ownership affects firm value in a negative sense (as we observed previously) and these investors wish to participate in more valuable firms and in those where they can exercise control. However, this variable is not significant in the estimations accomplished. Only when we considered the interaction variable between institutional ownership and bank leverage during the year previous to the acquisition, we find a greater probability of acquisition by institutional investors. When institutional investors have enough power in the firm to influence its decisions, one of the aims they can pursue is the increase of their business volume through an increase in bank leverage in the company. In this sense, it is observed how firms with higher institutional ownership and bank leverage show greater acquisition probability by institutional investors (equation 4, table 8).

Results for the information hypothesis in block acquisitions

Hypothesis 2 points out a greater acquisition probability by those who potentially have better information about the firm when information asymmetry is high. In this sense, we considered two variables to proxy for such asymmetries in information: the size of the firm and merger and acquisitions (M&A) announcements. The results of our empirical analysis are only significant for the purchases by insiders. A higher acquisition probability can be observed in smaller firms (or with more information asymmetry) and in those that convey merger and acquisitions announcements.

The negative relationship between size and the probability to purchase a block by insiders can be conditioned by wealth restrictions. However, if wealth restrictions were the justification for this negative relationship, we could expect the same relationship between size and the acquisitions accomplished by any kind of investor. In our empirical analysis we do not find support for this statement since the probability of block purchases by the control group or by institutional investors is not significantly related to firm size.

Also, with the aim of contrasting the informative advantage of insiders, we introduce the variable M&A that represents merger and acquisition announcements. Every investor has access to this kind of information, since they are published in the official Quoting Bulletin of Madrid Stock Exchange. But, purchaser behaviour is only observed in the case of insiders. This fact can be due to three possible explanations. Firstly, this behaviour could be due to the better information about business decisions that insiders have, and therefore, they buy stocks because they expect an increase in value. Secondly, the merger or acquisition process can provoke changes in who owns the control in the firm, and thus, since insiders wish to maintain control in the firm they increase their ownership. Thirdly, the aim of insiders could be just the conveyance of a positive signal to the market about the confidence they have in the adopted decisions.

The results obtained in equation 4 in table 7 support the hypothesis established, since we observe a greater purchase probability by insiders in firms with higher information asymmetry, and this purchaser behaviour is not shown in the analysis of control group acquisitions or institutional investors acquisitions.

In sum, some information advantage by insiders is observed, which leads to increase their ownership in the firm when a decision that can increase firm value is accomplished (M&A). This behaviour is mainly observed in smaller firms or those with more asymmetric information.

Conclusions

In summary, the results obtained allow us to observe, on the one hand, the smaller the ownership concentration the higher the probability of block acquisition is (in both acquisitions made by insiders and by the control group). This means that it is possible to foresee and improvement in firm management derived from the monitoring the purchaser is going to exercise. In the case of institutional investors, a higher probability of acquisition is observed when the control/monitoring exercised by an external shareholder

is lower and thus, institutional investors can obtain private benefits. On the other hand, block acquisitions by insiders are observed in firms with more information asymmetry so these investors can benefit from their better access to information.

In general, these results look similar to the ones obtained for the Spanish market by Crespí and Gispert (1999) during the period 1990-1995. They obtained a higher probability of acquisition in firms with more disperse ownership and smaller size. However, in our case, the fact of differentiating the type of shareholder who purchases allows us to distinguish the monitoring ability of each group or their private interests in the firm. Thus, the results obtained in the analysis of the causes of block acquisitions carried out by any kind of shareholder, as in the study of Crespí and Gispert (1999), can no longer stay when we consider the category of shareholders who purchase. In fact, in our results, it is observed that the size of the firm is not a significant variable in acquisitions accomplished by the control group or by institutional investors.

The different types of investors are partially considered in the study of Fernández Blanco and García Martín (2000). However, in their study the analysis is based in acquisitions of blocks carried out by other firms, without considering acquisitions made by other types of shareholders. Moreover, the aim of their study differs from ours, since they analyse the Spanish Stock market reaction to block acquisition announcements, considering the effects produced in both the acquiring firm and the target firm. Their results show abnormal returns for the target firm and for the acquirer when they belong to the same sector of activity. Our analysis has focused on the study of the factors that cause a block acquisition ex ante.

To summarise, the results obtained allow us to observe how in the Spanish capital market, the probability of acquisition depends on the monitoring or control exercised in the firm before the acquisition (monitoring hypothesis) and of the possible information advantage of some investors (information hypothesis). Although insider trading is regulated in the Spanish Stock Market Law and the Olivencia Code (the Spanish Corporate Governance Code) suggests the application to majority owners of the confidentiality duty, an informative advantage by insiders is observed. However, this fact does not necessarily have adverse effects over firm value. According to Leland (1992) these acquisitions can be an informative complement for other signals in the firm, incorporating information to stock prices. However, the debate is still open, since the benefit or cost of the transactions carried out by insiders will depend on the characteristics of the markets.

In this sense it is necessary to carry out more empirical analysis in this field, so we can specify other causes for block acquisition. In particular, it would be relevant to observe if the purchase of a block by a shareholder depends on the purchases or sales carried out by those that are considered as better- informed (insiders).

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