

# Stock Price Response to Mandatory Disclosure of Ownership Changes: Evidence from France

Rim ZAABAR\*  
CERAM Business School

January 12, 2009

## Abstract

We analyse how public announcements of shareholders going beyond or above legal thresholds of ownership affect firm value. We use event study methodology to measure the valuation effect of purchases and sales of shares by large shareholders over the period January 1991 to March 2007 for firms listed on the French market. While announcements of increases in ownership concentration do not trigger a significant market response, we find evidence for a negative impact of decreases in ownership concentration on stock price. Besides, we implement a cross sectional analysis of the relationship between changes in firm value and changes in ownership and find no support for the causality.

*JEL Classification:* G32, G38

Key words: Ownership Concentration, Firm value, Mandatory Disclosure, Family shareholders.

---

\*rim.zaabar@ceram.fr, Ceram Business School, Sophia Antipolis, France. This paper is based on my Ph.D dissertation at Toulouse School of Economics. I am particularly grateful to Bruno Biais, Christophe Bisiere, Catherine Casamatta, Denis Gromb, Edith Ginglinger, Ulrich Hege and Thomas Mariotti. I also thank seminar participants at the 10<sup>th</sup> ENTER Jamboree, at the 18<sup>th</sup> Annual Meeting of the European Economic Association, at the 20<sup>th</sup> Annual Meeting of the French Finance Association, at the Asset 2003 Annual Conference. This paper was previously circulated under the title, "How Does the Market Value Ownership Concentration: Evidence from France."

# 1 Introduction

This paper is linked to the empirical literature on the relationship between performance and ownership (Morck et al., 1988, McConnell and Servaes, 1990, 1995, and McConnell et al., 2008). As discussed in McConnell et al., 2008, empirical studies have been criticized for ignoring the endogeneity problem between ownership and performance. Studies that explain firm performance by ownership without considering the reverse causality lead to spurious correlation. This is the view demonstrated by Demsetz (1983) who argues that ownership concentration level is an outcome of the market forces maintaining the ownership at its optimal level. Therefore, any significant effect of ownership on performance detected in some empirical studies is accidental and may signal that ownership is moving towards a new optimal level. Thus, ownership changes may signal the adjustment of the ownership to new market forces but cannot be used to enhance the firm's performance.

In this paper, we are interested in the analysis of the impact of ownership concentration on firm value. In order to address the question of the endogeneity of ownership, we propose an innovative approach and analyse the market response to changes in blockholder ownership. To the best of our knowledge, this method was only used by McConnell et al., 2008 for the analysis of the relationship between managerial ownership and firm value. Empirical studies on corporate control around the world reveal that ownership structure is concentrated in Continental Europe by comparison to UK or US markets. Indeed, the use of managerial ownership as a manager incentives scheme is still limited and concentration of ownership remains the dominant form of corporate governance systems. In general, large shareholders put pressure on managers and intervene in the decision making process. Besides, the ownership structure of firms in France is characterized by the persistence of family control even in listed companies. All these specificities

may affect the extent to which investors interpret the sale of the entire holding by a family shareholder and its disengagement regarding the monitoring activity.

Regarding the theoretical literature, we motivated our investigation of the impact of changes in blockholder ownership by the findings of Burkart et al., 1997. They challenge the conventional wisdom that says that monitoring by shareholders is beneficial for the firm and demonstrate the existence of a non monotonic effect of monitoring on firm value. They argue that monitoring by large shareholders comes with benefits in terms of a reduction in private benefit extractions but also involves costs measured by a reduction in managerial initiatives to come up with new ideas for profitable investments.

We use event study methodology to measure the market response to ownership concentration changes. Over the period January 1991 to March 2007 and for a sample of French listed companies, we collect data on sales and purchases of shares that signal a shareholder going beyond or below a certain fraction of ownership. The fractions of ownership are measured by the following thresholds: 5%, 10%, 20%, 33.33%, 50% and 66.66%. According to the law of mandatory disclosure of change in holding by shareholders, when a shareholder's stake goes beyond or below one or several of these thresholds, he/she has to notify the competent financial authority that has to announce the information to investors on the market. We use data on mandatory disclosures of legal thresholds of ownership and implement an event study to analyse the stock price response to public announcements of changes in blockholder ownership. As mentioned in McConnell et al. 2008, this method has the considerable advantage of addressing the endogeneity problem of the relationship between ownership and firm value. Actually, ownership may be affected by the firm's performance and therefore can not simply be used as an exogenous variable to predict the level of firm's performance. The use of the event study allows us to measure the changes in firm value as a response to a change in blockholder ownership.

Regarding the specificity of our database, McConnell et al., 2008 analyse the market response to purchases by insiders who are officers or members of the board using US data, whereas we conduct our study on French data using both shares and purchases made by blockholders. Shareholders' control is the dominant form of corporate governance in France where family control is widely used and is often strengthened by the use of indirect control, control chains and pyramids. Data on mandatory disclosures of legal thresholds of ownership are updated by information on both direct and indirect control. Thus, information on shareholder holdings is more precise than information we could obtain from other sources.

In a second part of our study and following McConnell et al., 2008, we implement a cross sectional analysis and search for evidence on a curvilinear relationship between changes in corporate value and changes in blockholder ownership. We also include the initial stake of the blockholder as it might impact the market response. All thing being equal, a purchase of 15% of ownership by a shareholder who initially owns more than 20% of voting rights might trigger a stronger market response than the same fraction of ownership bought by a new shareholder who joins the blockholder group. In the first case, as a consequence of the trade, the shareholder will go beyond the blocking minority, whereas in the second case the event signals the emergence of a new blockholder. Is there a difference in the way the market investors react to each event?

The last part of our investigation considers the question of family control. The role of family shareholders is discussed in many theoretical and empirical studies. We analyse sales and purchases of shares by family shareholders and measure their impact on changes in firm value. Besides, we examine situations where a family shareholder sells his/her entire stake and abandons the monitoring activity.

We find evidence for a negative impact of the announcements of a shareholder going below legal thresholds of ownership. The market response is significant and negative. On the other hand, increases in ownership concentration do not trigger

a significant market response. Our results of the cross sectional analysis are not consistent with the findings of McConnell et al., 2008. We find no support for a causal interpretation of the relationship between ownership and firm value.

The remainder of this paper is organized as follows. In Section I, we discuss the theoretical framework and review the empirical work on ownership concentration and firm value. In Section II, we present the implications of the mandatory disclosure law and explain the specificity of our data. Then we describe the criteria used for selecting the sample and the methodology. Section III reports the market response to changes in equity ownership . In Section IV, we use cross sectional estimation to test the equation of McConnell et al., 2008 and we consider the question of whether change in firm value can be explained by changes in ownership. Conclusions are drawn in Section V.

## **2 Related literature**

Literature on ownership structure puts emphasis on the effectiveness of the role of blockholders to discipline management and to solve the collective action problem. Actually, this model of corporate governance dominates much of the world, and especially Continental Europe. Blockholders have an interest in monitoring management and have the power to implement managerial improvements. The benefits of corporate governance by large shareholders were demonstrated in facilitating takeovers (Grossman and Hart, 1980 and Shleifer and Vishny, 1986) and in mitigating the moral hazard problem (Hart, 1995, Hart and Moore, 1998).

An alternative view assumes that there are sufficient market control mechanisms to induce managers to maximize firm value. Holmström and Tirole (1993) argue that ownership concentration reduces the efficiency of the disciplinary role of the market for corporate control by reducing asset liquidity. For a firm whose shares are publicly traded, increasing asset liquidity and reducing ownership concentration is beneficial for the firm. Managerial commitment for a certain level

of effort to maximize firm value is reflected in share price. This information is revised during public trades by investors who actively collect information on manager's actions and the strategic orientation of the company.

An entirely different argument says that the manager who is intensively monitored by a blockholder may lower his/her initiatives to come up with ideas for new profitable projects. This is the perspective taken by Burkart et al., 1997 regarding the trade-off between shareholders' monitoring and manager's initiatives. They argue that while monitoring reduces the manager's discretion and induces him/her to maximize firm value, it comes with costs in terms of reduction of managerial initiatives. According to this view, there exists a risk of over-monitoring that may be detrimental to the firm.

One short step separates the risk of over-monitoring from that of blockholder expropriation of minority shareholders. This finding shows the conflict of interests that may exist for shareholders in concentrated ownership structures. Large shareholders have the power and the incentives to monitor the manager; however they may induce him to take inefficient actions that would not be consistent with the objective of firm value maximisation. For instance, the manager may be influenced by a blockholder to sell at a reduced price an asset of the firm to another company that is indirectly controlled by the same shareholder or by members of his family. This transaction is inefficient from the perspective of shareholder value maximisation but may be optimal from the rent extraction perspective if there is collusion between the manager and the blockholder. This conflict moves the debate on agency conflicts from that which confronts managers with shareholders to another, specific to concentrated ownership structures, which confronts large shareholders with minority shareholders (La Porta et al., 1999, Johnson et al., 2000, Faccio and Lang, 2002).

While all these arguments suggest that ownership structure really matters and has influence on firms' performance, Demsetz (1983) argues that ownership struc-

ture is an outcome of market forces and that no causal relationship is to be found between ownership structure and firm's performance. Thus, ownership structure is optimized and will adjust to changes in the environment and the need for control in order to reach a new optimum. Ownership structure is endogenous, therefore empirical studies that explain firms' value by ownership structure show spurious correlation.

A first generation of empirical studies focuses on the impact of ownership on firm value (Morck et al., 1988, McConnell and Servaes, 1990, 1995, Hermlin and Weisbach, 1991, etc) using cross sectional regressions and finds support for a significant impact of managerial ownership on firm value. These studies do not consider the reverse causality and the argument of Demsetz (1983) regarding the endogeneity of ownership structure. A second generation of empirical studies addresses the question of endogeneity and improves the power of the estimation methods to capture the reverse causality using simultaneous equations or by estimating panel data to account for unobserved firm fixed effects (Demsetz and Lehn, 1985, Agrawal and Knoeber, 1996, Loderer and Martin, 1997, Cho, 1998, Demsetz and Villalonga, 2001, Himmelberg et al., 1999, etc). These studies do not demonstrate a significant effect of ownership on firm value and provides us with results that are consistent with the argument of Demsetz, 1983.

The use of the event study constitutes an innovative approach to measuring the change in firm value following a change in ownership structure and alleviates the question of the endogeneity of ownership. This method was used by McConnell et al, 2008 in an empirical study of the market response to share purchases by insiders who are officers or members of the board of directors. The excess returns are the dependent variable that was regressed against changes in managerial ownership. They found support for the existence of causality between managerial ownership and firm value.

The next section presents the data and the methodology.

### 3 Data and Methodology

In this paper, we use a sample of French companies experiencing changes in ownership concentration. Several recent empirical studies focused on the relationship between firm value and ownership structure, however the French market still retains certain particularities in spite of the recent work on the unification of the main governance rules on financial markets.

Recent studies demonstrate that the ownership structure of listed companies is more concentrated in Continental Europe than in UK or US companies (Laporta et. 1999, Barca and Becht, 2001, Faccio and Lang, 2002). In particular in France, family shareholders hold large stakes in listed companies, they intervene in the decision making process and exert active monitoring on management. Therefore, the sale by a controlling family of its remaining stake is a signal of disengagement and consequent withdrawal from the monitoring activity. Given the importance of some trades, French Law imposes the mandatory disclosure of trades of fractions of ownership for purchases when a shareholder goes beyond legal thresholds of ownership, and for sales when he/she goes below those thresholds.<sup>1</sup> Events are then made public by the competent financial authority, *Autorité des Marchés Financiers*, which we refer to as AMF.

These disclosures are valuable and convey information on changes in ownership. They allow us to analyse the dynamics of ownership for a substantial sample of firms. Since we are interested in the study of market response to a change in ownership concentration, we concentrate on a subsample of public disclosures. In addition, both direct and indirect ownership are included in the computation of shareholder holdings. Indeed, indirect ownership, control chains and pyramidal constructions constitute different ways of hiding the identity of the ultimate controlling shareholder in Continental Europe (Faccio and Lang, 2002). In France, in-

---

<sup>1</sup>Actually, it is the transposition of the European Transparency Directive (French law 89-531 of August, 2nd, 1989). For more details, see Appendix.

direct ownership, control chains and pyramidal constructions are so frequently used by family shareholders, that measuring ownership by direct control would underestimate their real power. Mandatory disclosure obliges shareholders to compute both direct and indirect stakes. This information is verified by the AMF before the public announcement of the change in the fraction of ownership held by the shareholder.

In the next sub-section, we detail the construction of the sample and provide descriptive statistics of the data.

### **3.1 Data and descriptive statistics**

Data on ownership dynamics come from the French database *Dafsaliens* which reports updates to ownership structure for each firm as soon as trades are revealed in the financial press or made public by the AMF.

Since our objective in this paper is to analyse the market response to changes in blockholder ownership and to test the curvilinear relationship reported by McConnell et al. 2008, we focus on a subset of the reported shareholders' change in holding. First, over the period January 1991 to March 2007,<sup>2</sup> we consider shareholder purchases and sales of shares that are made public by the AMF. While all shareholder acquisitions and sales of shares are reported in *Dafsaliens*, the change in ownership is made public by the AMF only when a shareholder goes beyond or below legal thresholds of ownership. For instance, if a shareholder whose initial holding in the firm is 10.20% buys a number of shares resulting in a final holding of 18.00%, no public announcement is made since the holding is still within the 10% – 20% threshold. However, this transaction may be reported in *Dafsaliens* if it is revealed in the financial press.

Second, in order to avoid the problem of thin trading when dealing with non synchronous trades for small size companies, we concentrate on Eurolist firms.

---

<sup>2</sup>This date corresponds to the author's data collection date.

Third, trades made public by the AMF are retained in the sample if they are reported within 90 days. Fourth, we exclude trades when one shareholder reports a purchase and another reports a sale during the same day. In this case, both events, i.e. the sale and the purchase are removed from the analysis since they overlap. This rule guarantees the non overlapping of events and it is important for our analysis since it allows us to focus on cases of changes in ownership concentration. For instance, when a certain fraction of ownership is sold by controlling shareholder A to another controlling shareholder B, then it might be the case that shareholder A goes below one or several legal thresholds and shareholder B goes beyond these thresholds. In this case, there is no change in ownership concentration, changes simply affect the identity of the shareholder. Analysing the impact of change in the identity of a shareholder when maintaining the same level of ownership concentration goes beyond the scope of this paper.

Finally, in order to check the reliability of the trades reported in *Dafsaliens*, we proceed by hand to collect the hard copy of disclosures of shareholders going beyond or above legal thresholds that were made public by the AMF over the period 2000 – 2001.<sup>3</sup> Then we merge both sources over the period 2000 – 2001. All the ownership changes announced by AMF over the period 2000 – 2001 were included in the trades reported by *Dafsaliens*.

Table 1 provides descriptive data on trades per year and distinguishes purchases and sales of shares by shareholders. Of the full sample, there are 1482 trades for 479 firms listed on the French market: 433 events are purchases of shares by shareholders and 1049 are sales of shares. For purchases, the mean value of trades is 13.49% (median 4.6%) whereas the sales show a mean value of trades of 11.58% (median 5.22%). By comparison, McConnell et al., 2008 report that the mean value of the fraction purchased by insiders is 0.42% (median 0.15%). Thus, fractions of ownership sold or purchased in our sample are significantly larger.

---

<sup>3</sup>These data were collected manually and come from the Ph.D dissertation of the author.

Table 1: Descriptive statistics for the sample of sales and purchases over the period January 1991 through the first quarter of 2007 as a percentage of firm shares; N is the sample size; N and mean and median values are computed per year for both sales and purchases. Shareholders trades are excluded from the sample if any of the following occurs: (1) the shareholder does not go beyond or below legal thresholds of ownership; (2) firms are not listed on Eurolist; (3) one shareholder reports a sale and another shareholder reports a purchase during the same event period; (4) the trade is reported more than 90 days after the required reporting deadline. Ownership data come from Dafsaliens.

Year	Number of trades	Number of companies	Fraction of shares purchased (%)			Fraction of shares sold (%)		
			<i>N</i>	Mean	Median	<i>N</i>	Mean	Median
1990	1	1	0	0.00	0.00	1	-11.33	-11.33
1991	16	5	10	25.63	22.98	6	-4.69	-2.96
1992	20	9	11	20.66	8.95	9	-14.55	-11.50
1993	24	5	14	9.21	8.18	10	-15.12	-8.04
1994	27	10	9	9.97	8.93	18	-8.59	-4.13
1995	23	9	10	7.41	6.10	13	-19.25	-11.08
1996	41	16	17	16.45	5.80	24	-21.69	-11.04
1997	60	32	15	17.54	10.26	45	-15.03	-8.85
1998	77	27	24	14.08	4.21	53	-13.44	-8.40
1999	99	33	27	11.63	3.30	72	-14.88	-8.23
2000	105	30	32	7.98	3.70	73	-10.68	-4.99
2001	126	44	37	11.29	3.79	89	-10.50	-5.37
2002	131	40	42	14.63	4.36	89	-9.91	-5.06
2003	138	45	46	11.38	5.68	92	-8.90	-5.06
2004	153	40	41	33.91	5.28	112	-10.47	-5.02
2005	189	55	42	5.69	3.00	147	-8.32	-4.76
2006	217	66	48	7.67	4.36	169	-10.23	-3.36
1 <sup>st</sup> Quarter 2007	35	12	8	7.31	4.62	27	-13.13	-5.23
Total	1482	479	433	13.48	4.6	1049	-11.58	-5.22

Table 2: Summary statistics for sales and purchases of shares of firms listed on the French market by shareholders as reported in Dafsaliens over the period January 1991 to March 2007. Shareholders trades are excluded from the sample if any of the following occurs: (1) the shareholder does not go beyond or below legal thresholds of ownership; (2) firms are not listed on Eurolist; (3) one shareholder reports a sale and another shareholder reports a purchase during the same event period; (4) the trade is reported more than 90 days after the required reporting deadline. Ownership data come from Dafsaliens.

Variable	Mean	Median	25 <sup>th</sup> Percentile	75 <sup>th</sup> Percentile
Fraction of ownership purchased	13.48%	4.60%	2.07%	11.46%
Shareholder ownership before purchase	14.89%	7.01%	3.95%	19.20%
Fraction of ownership sold	-11.06%	-5.22%	-11.41%	-1.91%
Shareholder ownership before sale	20.71%	10.03%	5.81%	24.00%

Given the criteria for the selection of observations, the retained events signal changes in blockholder ownership. We complete this measure by the initial fraction of ownership held by the shareholder prior to the trade. Table 2 provides descriptive statistics on the initial holdings and the fraction of ownership traded. For purchases, the shareholder ownership prior to the trade has a mean of 14.89% (median 7.01%). The average fraction of ownership held by a shareholder prior to the sale is 20.71% (median 10.03%). By comparison, McConnell et al., 2008 report an average percentage of shares owned by managers before the sale of 19.88% (median 13.83%). It appears that while ownership concentration is used in US and UK to align manager and shareholder interests via managerial ownership, blockholder ownership is still the dominant form of corporate governance mechanism in France.

Since the market reaction will be measured around the announcement of a shareholder going beyond or below legal thresholds, we compute the frequency of the events conditional on the first and the last threshold included in the trade. Statistics are provided in Table 3 for purchases and in Table 4 for sales. For instance, our sample includes 21 events (see Table 3) signalling that the initial

Table 3: Ownership stake changes following purchases of shares by shareholders; frequency of events computed conditional on the first and the last thresholds of ownership as reported by the AMF.

	5%	10.00%	Last threshold				Total
			20.00%	33.33%	50.00%	60.66%	
First threshold							
5.00%	125	17	6	9	21	8	186
10.00%	—	100	3	0	0	1	104
20.00%	—	—	47	6	4	3	60
33.33%	—	—	—	19	6	3	28
50.00%	—	—	—	—	23	5	28
60.66%	—	—	—	—	—	27	27
Total	125	117	56	34	54	47	433

stake of a shareholder is below 5% and his final stake is beyond 50%. Thus, the 5%, 10%, 20%, 33.33% and 50% thresholds have been overtaken, and after this trade, the shareholder will finally own the majority of voting rights.

Table 4 provides the same information as Table 3 regarding sales. An interesting fact is the high occurrence of sales representing block dilutions. These events are located on the diagonal in Table 4. For instance, we have 39 sales of blocks exceeding 50.00% when the final holding is below 5%. In this case, the shareholder's fraction of ownership is spread over small investors, since no other block is constituted during the event period.

### 3.2 Event study methodology

The share price response is calculated applying the market model around the date of the AMF report,  $t = 0$ , of a shareholder going beyond or below legal thresholds of ownership. We use the traditional market model to estimate abnormal returns and explain the return on shares by the return on the French market index (*CAC40*) over a pre-event period  $t = -110$  to  $t = -10$ . Abnormal returns are measured over the event period  $[-1, +3]$  as the difference between the arithmetic return and the conditional expected return derived from the regression of the market model over

Table 4: Ownership stake changes following sales of shares by shareholders; frequency of events computed conditional on the first and the last thresholds of ownership as reported by the AMF.

	Last threshold						Total
	5.00%	10.00%	20.00%	33.33%	50.00%	60.66%	
First threshold							
5.00%	517	—	—	—	—	—	517
10.00%	114	107	—	—	—	—	221
20.00%	28	2	64	—	—	—	94
33.33%	18	1	7	34	—	—	60
50.00%	20	2	2	6	39	—	69
60.66%	38	2	0	4	6	38	88
Total	735	114	73	44	45	38	1049

the pre-event period.

The sum of abnormal returns is calculated per event over the event period, then averaged over events of sales and purchases to compute the CARs (Cumulative Abnormal Returns). We estimate the CARs for various subperiods around the announcement date and use several alternative procedures to test whether the CARs are significant. In testing for statistical significance, the null hypothesis is that CARs are equal to zero for each subperiod and for each portfolio (sales and purchases). First, we use the standard Patell (1976) test, which we refer to as the  $t_{Patell}$  statistic. Patell's (1976) test statistic assumes cross-sectional independence in abnormal returns, and it also assumes that there is no event-induced change in the variance of event-period abnormal returns. Second, we use the ordinary cross-sectional test that assumes no cross-sectional dependence in abnormal returns, but allows for event-induced variance changes, which we refer to as  $t_{cs}$ . Third, we use the standardized cross-sectional test developed by Boehmer et al., 1991 which incorporates the information from both the estimation and the event period which we refer to as  $t_{BMP}$ . In addition to these parametric tests, we perform the non parametric sign test which we refer to as  $t_{sign}$ . This assumes that abnormal returns are not cross-correlated and tests the hypothesis that half of abnormal returns are

Table 5: Excess returns in percent for 433 announcements of purchases of shares of shareholder going beyond 5 percent or more of shares of firms listed on the French market, from January 1991 to March 2007, using market model methodology. Abnormal returns are measured on each day within the event period and averaged over all events (AR); Proportion of positive returns in column 3; t-Patell statistics in column 4; t-statistics for cross sectional test in column 5; t-statistics for Boehmer et al., 1991 test in column 6, statistics for sign test in column 7, N is the sample size. Market model parameters are estimated using least squares over the prevent period,  $t=-110$  to  $t=-10$ , and  $t=0$  is the report of the purchase by the AMF.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	$N$	$AR$	Positive Percent $AR$	$T_{Patell}$	$T_{cs}$	$T_{BMP}$	$T_{sign}$
(-1)	433	0.30	52.19	2.02**	1.76*	1.56	0.91
(0)	433	0.11	49.65	-0.34	0.72	-0.22	-0.14
(+1)	433	0.05	50.00	1.26	0.30	0.73	0.00
(+2)	433	0.12	50.70	-0.57	0.84	-0.52	0.29
(+3)	433	0.06	47.43	-1.65*	0.37	-1.42	-1.06

\* Significant at the 10 percent level

\*\* Significant at the 5 percent level

\*\*\* Significant at the 1 percent level

negative.

The next section presents the empirical results for the event study.

## 4 Empirical Results

### 4.1 Market response to purchases of shares

On Table 5 we report event study results for valuation effects of announcements of shareholders going beyond legal thresholds. For each day over the event period, abnormal returns are averaged over events and reported in Table 5. For the full sample of purchases, the average Abnormal Return (AR) on date  $t = 0$  equals 0.11% and is not significant. Besides, statistics are computed for the CARs for different subperiods within the event window and are provided in Table 6. The t-statistics show no significant results and thus we can not reject the null hypothesis of the equality of share price response and zero.

Table 6: Cumulative Excess returns in percent for 433 announcements of purchases of shares of shareholder going beyond 5 percent or more of shares of firms listed on the French market, from 1991 to March 2007, using market model methodology. Abnormal returns are measured for different windows within the event period (CAR); Proportion of positive returns in column 3; t-Patell statistics in column 4; t-statistics for cross sectional test in column 5; t-statistics for Boehmer et al., 1991 test in column 6, statistics for sign test in column 7, N is the sample size. Market model parameters are estimated using least squares over the prevent period,  $t=-110$  to  $t=-10$ , and  $t=0$  is the report of the purchase by the AMF.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	$N$	$CAR$	Positive Percent $CAR$	$T_{Patell}$	$T_{cs}$	$T_{BMP}$	$T_{sign}$
$[-1, 0]$	433	0.41	48.73	1.19	1.61	0.84	-0.53
$[-1, 1]$	433	0.45	50.34	1.70*	1.51	1.42	0.14
$[-1, 2]$	433	0.57	50.57	1.19	1.69*	1.04	0.24
$[-1, 3]$	433	-0.63	51.73	0.32	1.56	0.28	0.72

\* Significant at the 10 percent level

\*\* Significant at the 5 percent level

\*\*\* Significant at the 1 percent level

The announcement of an increase in the holding of a large shareholder has no significant effect on the firm value. This result is not consistent with the view that increased ownership concentration reduces agency conflicts between managers and shareholders. Actually, increases in ownership concentration are less frequent than decreases and are less surprising. We can interpret this finding within the context of control contest. Increase in ownership concentration comes with increase in monitoring activity and disciplines the manager when the ownership structure is diffuse. For instance, if there is a block of 33.33% of ownership, the announcement of a shareholder going beyond the threshold 10% conveys less information than the same event occurring in a more dispersed ownership structure. In France, ownership structures are highly concentrated and it is not very surprising that increases in ownership concentration do not alter the established control of other blockholders.

The next subsection presents the results of the event study for the announcements of sales of shares.

Table 7: Excess returns in percent for 1049 announcements of sales of shares of shareholder going beyond 5 percent or more of shares of firms listed on the French market, from January 1991 to March 2007, using market model methodology. Abnormal returns are measured on each day within the event period and averaged over all events (AR); Proportion of positive returns in column 3; t-Patell statistics in column 4; t-statistics for cross sectional test in column 5; t-statistics for Boehmer et al., 1991 test in column 6, statistics for sign test in column 7, N is the sample size. Market model parameters are estimated using least squares over the prevent period,  $t=-110$  to  $t=-10$ , and  $t=0$  is the report of the purchase by the AMF.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	$N$	$AR$	Positive Percent $AR$	$T_{Patell}$	$T_{cs}$	$T_{BMP}$	$T_{sign}$
(-1)	1049	-0.11	47.00	-2.10**	-1.18	-1.74*	-1.94*
(0)	1049	-1.61	47.23	-2.15**	-0.98	-0.74	-1.79*
(+1)	1049	-0.41	45.26	-5.07***	-4.04***	-3.84***	-3.06***
(+2)	1049	-0.09	47.61	-0.64	-0.83	-0.53	-1.55
(+3)	1049	-0.11	44.66	-2.23**	-0.93	-1.78*	-3.44***

\* Significant at the 10 percent level.

\*\* Significant at the 5 percent level.

\*\*\* Significant at the 1 percent level.

## 4.2 Market response to sales of shares

In Table 7 we report event study results for valuation effects of announcements of a shareholder going below legal thresholds of ownership. Average excess return (AR) is given for a five-day event window. The market response to decreases in ownership concentration is negative. The proportion of positive excess returns is below 50%. The t-statistics show significant results for AR measured on day  $t = +1$ . Table 8 provides the results for CARs measured for various event periods around the announcement date  $t = 0$ . The market response is clearly negative and significantly different from zero. By comparison, the average market response to insiders purchases as measured in McConnell et al., 2008 is around 0.94% (median 0.35%). Expressed in absolute value, we find a stronger market response to sales of shares by shareholders. Investors on the market perceive the sale of a substantial stake and the announcement of a shareholder going below legal thresholds of

Table 8: Cumulative Excess returns in percent for 1049 announcements of sales of shares of shareholder going beyond 5 percent or more of shares of firms listed on the French market, from 1991 to March 2007, using market model methodology. Abnormal returns are measured for different windows within the event period (CAR); Proportion of positive returns in column 3; t-Patell statistics in column 4; t-statistics for cross sectional test in column 5; t-statistics for Boehmer et al., 1991 test in column 6, statistics for sign test in column 7, N is the sample size. Market model parameters are estimated using least squares over the prevent period, t=-110 to t=-10, and t=0 is the report of the purchase by the AMF.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	<i>N</i>	<i>CAR</i>	Positive Percent <i>CAR</i>	$T_{Patell}$	$T_{cs}$	$T_{BMP}$	$T_{sign}$
[-1, 0]	1049	-1.70	46.90	-3.01***	-1.05	-1.34	-2.01**
[-1, 1]	1049	-2.14	46.81	-5.38***	-1.30	-2.75***	-2.07**
[-1, 2]	1049	-2.22	46.62	-4.98***	-1.35	-2.76***	-2.19**
[-1, 3]	1049	-2.33	45.56	-5.45***	-1.41	-3.19***	-2.87***

\* Significant at the 10 percent level.

\*\* Significant at the 5 percent level.

\*\*\* Significant at the 1 percent level.

ownership as bad news. This finding is consistent with the view that monitoring by large shareholders increases the shareholder value and it is not consistent with the view that blockholders expropriate minority shareholders. A further interpretation is that since demand curves for stocks are downward sloping, sales of substantial fraction of equity may simply trigger an excess supply effect on the market.

In the next section, we implement a cross sectional estimation of changes in firm value and test the curvilinear relationship between firm value and ownership structure as proposed by McConnell et al., 2008.

## 5 Test of the Relationship between Changes in Ownership Concentration and Changes in Firm Value

Following McConnell et al., 2008, we assess the effect of changes in ownership concentration on firm value using a cross sectional estimation. For purchases of shares by insiders, they use the 5-day announcement period abnormal return to

proxy for the change in Tobin's Q. This method has the substantial advantage of mitigating the effect of unobserved firm-specific characteristics. Besides, by using excess returns to explain changes in ownership, McConnell et al., 2008, alleviate the endogeneity issue unsolved by regression models that use annual measures of ownership and performance. We adapt the equation proposed by McConnell et al., 2008 for sales and purchases of shares by shareholders as follows:

$$CAR = b_1(\Delta \text{Shareholder ownership}) + b_2(\Delta \text{Shareholder ownership})^2 + b_3(\Delta \text{Shareholder ownership} \times \text{Initial shareholder ownership}).$$

Where  $\Delta$  shareholder ownership is the change in ownership stake of the shareholder and the initial stake is the fraction of ownership held by the shareholder prior to the trade. Regarding the estimated parameters, for purchases of shares by insiders, McConnell et al., 2008 test the hypothesis that  $b_1$  is positive;  $b_2$  is negative and  $b_3$  is negative and twice the size of  $b_2$ . Thus, an increase in ownership concentration has a positive impact on firm value, but the relationship is non monotonic ( $b_2$  negative). An increase in the fraction of ownership held by a shareholder affects the firm value positively up to a point after which the firm value decreases when ownership concentration increases. The non monotonicity of the relationship between ownership concentration and firm value for trades of shares by shareholders can be interpreted within the context of the trade-off between monitoring and initiatives advocated by Burkart et al., 1997. The intensity of the monitoring increases as ownership concentration increases. It raises firm value up to a point after which higher intensity of monitoring becomes detrimental to firm value. Finally, the magnitude of the increase in shareholder stake depends on the initial holding. Thus, the larger the initial stake of the shareholder, the smaller the impact on firm value of an increase in ownership concentration. Hence, the third term is a cross product of the change in ownership concentration and the initial stake of the shareholder. We test the relationship proposed by McConnell et al, 2008 for purchases and sales and predict the opposite signs for estimated parameters, i.e.,  $b_1$  negative,  $b_2$  positive,  $b_3$

positive and twice the size of  $b_2$ .

Table 9 provides results for the regressions of CARs measured over the event period for announcements of purchases of shares by shareholders. In Model (1), we estimate the base case, i.e., Equation ???. The estimated parameters have the predicted sign ( $b_1 > 0$ ;  $b_2 < 0$  and  $b_3 < 0$ ). However, only the parameter measuring the impact of an increase in ownership concentration on firm value is significant (at 10% confidence level). The other parameters  $b_2$  and  $b_3$  show no significant result and the null hypothesis for the test of  $b_3 = 2 \times b_2$  can not be accepted. In the Model (2), we restrict the sample to observations with values of CARs within an interval of three standard deviations from the mean of CARs, in order to exclude outliers that may skew the distribution. The estimated parameters are not significant (except  $b_1$  at 10% level). In Model (3), we include to the base model (Model 1) a dummy variable that takes to value 1 when the shares are bought by a family. The parameter  $b_1$  is significant at 5% ( $P - value = 0.04$ ). Besides, the parameters  $b_2$  and  $b_3$  have the predicted sign but none is significantly different from zero. The dummy variable for family has a negative but non significant impact on firm value. The results of the regression of changes in firm value on increases in fraction of ownership are not consistent with the findings of McConnell et al. 2008 for their study of the impact of managerial ownership on firm value.

Regarding the announcements of sales of shares by shareholders (see Table 10), we estimate Model (1) and show results in column (2). The estimated parameters are non significant and we cannot accept the null hypothesis for the test of  $b_3 = 2b_2$ . In Model (2), we exclude CARs outside three standard deviations from the mean of CARs. We observe a significant and positive effect of a decrease in ownership concentration on excess returns. It might be the case that an event with high market response skews the distribution of CARs. In Model (3), we include a dummy variable to test for a family effect. In Model (4), we consider the effect of the sale of the whole stake and refer to this as the disengagement effect. The

Table 9: Results of ordinary least squares regressions where the CARs measured on period  $t=-1$  to  $t=+3$  for announcements of purchases of shares by shareholders for firms listed on the French market are the dependent variable. Model (1) is the base case regression where the independent variables are the increase in blockholder ownership, the increase in blockholder ownership squared and the cross product of the initial ownership stake held by the blockholder and the increase in the fraction of ownership held. Model (2) is the base case which excludes CARs outside three standard deviations from the mean CAR. Model (3) is the base case including a dummy variable to indicate if the fraction of ownership is bought by a family. Ownership data are taken from Dafsaliens. P-values are in parentheses.

	Model 1	Model 2	Model 3
$\Delta$ Blockholder ownership ( $b_1$ )	0.05*	0.02*	0.05**
	(0.05)	(0.08)	(0.04)
$\Delta$ Blockholder ownership squared ( $b_2$ )	-0.003	0.00	-0.00
	(0.35)	(0.93)	(0.26)
$\Delta$ Blockholder ownership $\times$ Pre-purchase blockholder ownership ( $b_3$ )	-0.09	-0.12	-0.07
	(0.50)	(0.12)	(0.56)
Indicator if the blockholder is a family			-0.01
			(0.36)
P-value on test: $2 \times b_2 = b_3$	0.61	0.13	0.61
Adjusted r-square	0.002	0.002	0.002
Number of observations	433	426	433

\*Significant at the 10 percent level

\*\*Significant at the 5 percent level

\*\*\*Significant at the 1 percent level

effect of decrease in ownership concentration on excess returns may be stronger when the shareholder abandons the monitoring activity and quits by selling his/her entire holding. Model (5) includes two dummy variables for family effect and disengagement effect. Finally, Model (6) adds the cross product of the family and disengagement effects to the previous model. The coefficients are not significant and do not present the predicted signs. Besides, the hypothesis of the equality of  $2 \times b_2$  and  $b_3$  can not be accepted. Our results are not consistent with the findings of McConnell et al., 2008. We find no evidence for a causal interpretation of equation ??.

## 6 Conclusion

We analyse the market response to the mandatory disclosure of sales and purchases of shares by shareholders for a large sample of listed firms on the French market, over the period January 1991 to March 2007. We conduct an event study of the public announcements of shareholders going beyond or below legal thresholds of ownership. We find evidence for a negative market response to sales of shares and thus to decreases in ownership concentration. Our finding is consistent with a valuation effect of the monitoring exerted by large shareholders. However, the market response to purchases of shares is not significant. One possible interpretation of this result could be that increases in ownership are not significant when compared to the remaining blocks.

In the second part of the study, we conduct a cross sectional regression of the relationship between changes in firm value and changes in ownership, as proposed by McConnell et al., 2008. We also include an indicator for a family effect for sales and purchases and an indicator for the sale of the entire holding. For both increases and decreases of ownership concentration, we find no support for a causal interpretation of the relationship. A possible interpretation of the lack of evidence for a causal relationship between changes in firm value and changes in ownership may

Table 10: Results of ordinary least squares regressions where the CARs measured on period  $t=-1$  to  $t=+3$  for announcements of sales of shares by shareholders for firms listed on the French market are the dependent variable. Model (1) is the base case regression where the independent variables are the decrease in blockholder ownership, the decrease in blockholder ownership squared and the cross product of the initial ownership stake held by the blockholder and the decrease in the fraction of ownership held. Model (2) is the base case which excludes CARs outside three standard deviations from the mean CAR. Model (3) is the base case including a dummy variable to indicate if the fraction of ownership is sold by a family. Model (4) is the base case which includes a dummy variable that indicates if the entire holding of a shareholder is sold. Model (5) is the base case including two dummy variables for family and the sale of the entire stake. Model (6) is the model (5) including an additional dummy variable to measure the cross product between family and the sale of the whole stake. Ownership data are taken from Dafsaliens. P-values are in parentheses.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
$\Delta$ Blockholder ownership ( $b_1$ )	-0.26 (0.25)	0.07** (0.04)	-0.25 (0.29)	0.02 (0.94)	0.06 (0.85)	0.07 (0.84)
$\Delta$ Blockholder ownership squared ( $b_2$ )	0.15 (0.78)	-0.02 (0.76)	0.15 (0.77)	-0.04 (0.94)	-0.02 (0.97)	-0.01 (0.98)
$\Delta$ Blockholder ownership $\times$ Pre-sale blockholder ownership ( $b_3$ )	0.96 (0.10)	-0.11 (0.20)	0.96* (0.09)	0.51 (0.44)	0.48 (0.46)	0.50 (0.46)
Indicator if the blockholder is a family			0.003 (0.92)		0.01 (0.73)	0.02 (0.65)
Indicator if the entire holding of the blockholder is sold				0.06 (0.18)	0.07 (0.17)	0.07 (0.16)
Indicator if the entire holding is sold by a family						-0.05 (0.71)
P-value on test: $2 \times b_2 = b_3$	0.32	0.51	0.32	0.35	0.42	0.43
Adjusted r-square	0.02	0.001	0.02	0.02	0.02	0.02
Number of observations	1049	1048	1049	1049	1049	1049

\*Significant at the 10 percent level

\*\*Significant at the 5 percent level

\*\*\*Significant at the 1 percent level

be that changes in ownership are not sufficient to cast doubt on the control of the established shareholders. It may indicate that even when changes in ownership stake are significant, the emergence of a controlling shareholder by purchase of shares on the market is difficult on the French market because of the high level of ownership concentration. Therefore, it might be the case that even when a shareholder goes beyond 10% of ownership, his/her influence remains limited if another controlling shareholder already holds a substantial fraction of ownership in the firm. One limitation of our study is the absence of control for established ownership distribution. Our current investigations address the question of established ownership prior to the trade.

## 7 References

- Agrawal, A. and C. Knoeber, 1996, 'Firm Performance and Mechanisms to Control Agency Problems between Managers and Shareholders', *Journal of Financial and Quantitative Analysis*, 31, 377 – 397.
- Barca, F. and M. Becht, 2001, *The Corporate Control in Europe*, Oxford University Press.
- Boehmer, E., J. Musumeci and A.B. Poulsen, 1991, Event-study Methodology under Conditions of Event-induced Variance, *Journal of Financial Economics*, vol. 30, p. 253 – 272.
- Bolton, P. and E. Von-Thadden, 1998, 'Blocks, Liquidity and Corporate Control', *The Journal of Finance*, vol. 53, p. 1 – 25.
- Burkart, M., D. Gromb and F. Panunzi, 1997, 'Large Shareholders, Monitoring and the Value of the Firm', *The Quarterly Journal of Economics*, vol. 112, p. 693 – 728.

- Campbell, Y.J., A.W. LO and A.C. Mackinlay, 1997, *The Econometrics of Financial Markets*, Princeton University Press.
- Cho, M., 1998, 'Ownership Structure, Investment and the Corporate Value: An Empirical Analysis', *Journal of Financial Economics*, vol. 47, p. 103 – 21.
- Corrado, C.J. and T.L. Zivney, 1992, 'The Specification and the Power of the Sign Test in Event Study Hypothesis Tests using Daily Stock Returns', *Journal of Financial and Quantitative Analysis*, vol. 27, p. 465 – 478.
- Corrado, C.J. 1989, 'A Nonparametric Test for Abnormal Security Price Performance in Event Studies', *Journal of Financial Economics*, vol. 23, p. 385 – 395.
- Demsetz, H., 1983, 'The Structure of Ownership and the Theory of the Firm', *Journal of Law and Economics*, 26, 375 – 390.
- Demsetz, H. and K. Lehn, 1985, 'The Structure of Corporate Ownership: Causes and Consequences', *Journal of Political Economy*, vol. 93, p. 1155 – 77.
- Demsetz, H and B. Villalonga, 2001, 'Ownership Structure and Corporate Performance', *Journal of Corporate Finance*, 7, 209 – 233.
- Franks, J. and C. Mayer, 2001, 'The Ownership and Control of German Corporations', *Review of Financial Studies*, vol. 14, p. 943 – 77.
- Hart, O., 1995a , *Firms, Contracts and Financial Structure*, Oxford University Press.
- Hart, O. et J. Moore, 1998b, 'Cooperatives vs Outside Ownership', NBER Working paper N° w – 6421.
- Hart, O. et J. Moore, 1990, 'Property Rights and the Nature of the Firm', *Journal of Political Economy*, vol. 98, p. 1119 – 58.

- Himmelberg, C.P., R.G. Hubbard et D. Palia, 1999, 'Understanding the Determinants of managerial Ownership and the Link between Ownership Structure and Performance', *Journal of Financial Economics*, vol. 53, p. 353 – 84.
- Holmström, B. and J. Tirole, 1993, 'Market Liquidity and Performance Monitoring', *Journal of Political Economy*, vol. 101, p. 678 – 709.
- Kang, J. and A. Shivdasani, 1995, 'Firm Performance, Corporate Governance and Top Executive Turnover in Japan', *Journal of Financial Economics*, vol. 38, p. 29-58.
- Kaplan, S. and B. Minton, 1994, 'Appointments of Outsiders to Japanese Boards: Determinants and Implications for Managers', *Journal of Financial Economics*, vol. 36, p. 225 – 58.
- Loderer, C. and K. Martin, 1997, 'Executive Stock Ownership and Performance: Tracking faint traces', *Journal of Financial Economics*, 45, 223 – 255.
- Malatesta, P.H. and R. Tompson, 1985, 'Partially Anticipated Events: A Model of Stock Price Reactions with an Application to Corporate Acquisitions', *Journal of Financial Economics*, vol. 14, p. 237 – 250.
- McConnell, J. and H. Servaes, 1990, 'Additional Evidence on Equity Ownership and Corporate Value', *Journal of Financial Economics*, vol. 27, p. 595–612.
- McConnell, J. and H. Servaes, 1995, 'Equity Ownership and the two faces of debt', *Journal of Financial Economics*, 39, 131 – 157.
- McConnell, J., H. Servaes and K.V. Lins, 2008, 'Changes in Equity Ownership and Changes in the Market Value of the firm', Forthcoming *Journal of Corporate Finance*.
- Mitchell, M.L. and E. Stafford, 2000, 'Managerial Decisions and Long Term Stock Price Performance', *Journal of Business*, vol. 73, p. 287 – 330.

- Moore, N.H., D.R. Peretson and P.P. Peterson, 1986, 'Self Registrations and Shareholder Wealth: A Comparison of Self and Traditional Equity Offering', *Journal of Finance*, vol. 41, p. 451 – 63.
- Morck, R., A. Shleifer and R. W. Vishny, 1988, 'Management Ownership and Market Valuation: An Empirical Analysis', *Journal of Financial Economics*, vol. 20, p. 293 – 315.
- Prabhala, N.R., 1997, 'Conditional Methods in Event Studies and an Equilibrium Justification for Standard Event Study Procedures', *The Review of Financial Studies*, vol. 10, p. 1 – 38.
- Shleifer, A. and R. Vishny, 1997, 'A survey of Corporate Governance', *The Journal of Finance*, vol. 52, p. 737 – 83.
- Wruck, K., 1989, 'Equity Ownership Concentration and Firm Value: Evidence From Private Equity Financings', *Journal of Financial Economics*, vol. 23, p. 3 – 28

**Appendix** Mandatory disclosures of change in the holding of shareholders: any person or legal entity, acting by himself or in concert, who goes directly or indirectly beyond five per cent, ten per cent, twenty per cent, one third, fifty percent or two third of the capital or voting rights of a listed company, or goes below these thresholds, must notify the company itself within fifteen days and the competent authority *Autorité des Marchés Financiers* (AMF) within five active stock market days. Then, the statement is made public by the AMF. In the case of a purchase, the shareholder shall specify whether he/she is considering stopping or pursuing his/her purchases, and whether he/she considers taking the control of the concerned firm, asking to be appointed as member of the board or of the supervisory board. In all cases, the buyer shall specify whether he/she is acting independently or in Co-operation with one or more persons.

Shareholders have the possibility to act individually or with other shareholders under an agreement. In the latter case, they are said to take concerted action. The concept of concerted action was defined by article 356 – 1 – 3 of the French Business Law. Persons taking concerted action have been entered into either written, verbal or tacit agreement in order to purchase or sell voting rights or exert their voting rights with a view to a common policy towards the company. Such an agreement may exist between first a company, the chairman and the executives, second between a company and other companies controlled by the first, i.e. it may be a vertical agreement and third between companies controlled by the same person, i.e. it may be a horizontal agreement.