OWNERSHIP STRUCTURE AND STOCK MARKET PERFORMANCE OF ACQUIRING FIRMS: THE CASE OF FRENCH MERGERS

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Abstract

This study examines the short- and long-term relationship between the shareholder structure (family, institutional, managerial ownership) and stock market performance of acquiring firms. To explore this issue, we use a sample of 84 acquisitions undertaken by French firms operating in the real estate and financial sectors over the period 2008-2012. To compute short-term stock performance we used the standard event study methodology while we estimated the CAR and BHAR to study long horizon up to 36 months. The results show a curvilinear relationship between the manager's ownership and stock market performance. We provide evidence that increasing managerial ownership up to 16% has a negative impact on a firm performance after which it becomes positive. Moreover, the separation between ownership and control does not seem to affect the performance of initiators firms due to a lack of significance of the coefficients suggesting the absence of expropriation of minority shareholders. Finally, examining the links between the shareholding nature and performance shows that family and institutional shareholders have a positive influence on performance. Our research tried to fill the gap in the existing literature by studying concurrently the impact of ownership structure variables on the short as on the long post-merger performance.

Keywords: Ownership Structure, Stock Market Performance, Acquiring Firms, French Mergers

1. INTRODUCTION

The link between ownership structure and financial performance of acquiring firms has been given an extensive attention in the academic literature.

Previous studies provide mixed results, which are explained by various ownership structure mechanisms. In the French context, shareholding is characterized by the abundant presence of families and institutional investors, as well as a high level of concentration, to which we point out the weak legal protection of investors.

Jensen and Meckling (1976) define the agency relationship as a contract under which one party (the principal) engages another (the agent) to perform some service on their behalf. However, the agents do not communicate all the information to the principals (asymmetric information). The latter are then forced to develop proper corporate governance mechanisms to efficiently monitor the management and guarantee value maximization.

The ownership structure acts as an important governance system. Thus, the proportion held by a shareholder influences his interest in the monitoring. As a consequence, his investment in the governance is greater as his ownership stake increases. Moreover, Demsetz and Lehn (1985), Shleifer and Vishny (1986) document the disciplinary role of shareholders over managers and anticipate the achievement of a better performance. Fama and Jensen (1983) suggest an opportunistic behaviour by controlling shareholders that use mergers and acquisitions in order to extract private benefits. According to Shleifer and Vishny (1997), the entrenchment of the large shareholder is detrimental to financial performance whereas Ellili (2012) shows that managerial entrenchment is not always harmful to shareholder's wealth. Thus, it is difficult to

conclude on the links between the shareholder concentration and the firm performance. In addition, the involvement of controlling shareholders in governance may also vary depending on their nature. For instance, family shareholders prefer to intervene on rather long horizons and set strategic and governance objectives. In contrast, the institutional investors favour the short term and are not tempted to become involved in governance.

The nature of the concentrated ownership was highlighted by Labelle and Schatt (2005), who awarded the first shareholder a 29% stake. As far as family control is concerned, Faccio and Lang (2002) affirm that families control for at least 20% of the firm's equity. It should be noted that the French legal system, which belongs to the civil law group, is not able to provide a legal framework protecting shareholders, as are the regulations offered to the countries of customary law (United States, United Kingdom).

Moreover, a large part of the empirical literature shows wealth destruction following mergers and acquisitions arising from the agency conflicts. Therefore, it seems interesting to us to address the question of the relationship between the ownership structure and the performance of the initiating firms. This study investigates the link between performance and concentrated ownership as well as between the performance and the shareholder nature. Thus, we have used three shareholding characteristics: concentration of capital, the owner type and separation between voting and cash flow rights. This research contributes to the literature by shedding light on the lack of studies addressing this relationship for French companies. Numerous studies analyse the impact of ownership structure on acquisition performance around the announcement date. Nonetheless, a little has been done on the impact of ownership structure variables on the long-term post-merger performance (Shim Okamuro, 2011; Bouzgarrou, 2013). To our knowledge, this paper is among the very few which studies concurrently the short-term and the long-term stock performance of acquiring French companies. Our research contributes to the acquisition literature by examining the interaction between owner type, concentration and its effects on the announcement date performance and long-run stock performance. The first main result was that increasing managerial ownership up to 16% had a negative impact on firm performance then this effect became positive. Second, we found that family and institutional ownership has a positive effect on firm performance. Finally, the separation between ownership and control did not seem to affect significantly the financial performance.

The remainder of this paper is organized as follows. Section 2 presents the literature review and different hypothesis. Section 3 describes the empirical method. Section 4 reports and presents the empirical results while the last section concludes the paper.

2. LITERATURE REVIEW AND HYPOTHESIS

The relationship between ownership structure and firm performance is addressed by Jensen and Meckling (1976). These authors highlight the interest alignment hypothesis by predicting an increase in short-term abnormal profitability of firms as a result of the increase in managerial ownership to the extent where any loss generated by a detrimental acquisition will affect the wealth of that manager. These results are consistent with those of Shinn (1997) and Lewellen et al. (1985), which show a positive correlation between the proportions of shares held by managers and short-term stock market performance.

Another research trend undermines previous findings in the context of high managerial participation. When the proportion of shares held is high, managers tend to reject profitable investments because of their growing risk and undertake less risky ones (Mugbo et al., 2016; Hubbard & Palia, 1995; Zhang, 1998). We thus can proclaim a nonlinear relationship between the ownership of managers and the performance of acquiring firms.

H1: There is a point of inflexion between the shares held by the managers and the performance of the acquiring firms.

The surplus of voting rights with respect to cash flow rights is referred by the property-control separation. The latter is favoured in the French context thanks to complex pyramid structures and dual class pyramid shares. This mechanism intensifies the agency costs by influencing the decisions of the dominant shareholders in the wrong direction. Bebchuk et al. (2000) and Claessens et al. (2002) argue that the ownership structures, where the dominant shareholder maintains control over voting rights while holding a small fraction of the cash flow rights, generates the minority expropriation problem. This fact occurs when controlling shareholders pursue personal objectives by engaging in a non-wealth maximizing activity, which can be detrimental to minority shareholder interest. As a result, they will continue to engage in unprofitable mergers and acquisitions as long as their personal interests exceed their impoverishment within the acquiring firm.

Several studies confirm the negative relationship between the firm profitability and the separation of ownership and control (Cronqvist & Nilson, 2003; Bigelli & Mengoli, 2004; Belot, 2010). Thus, the following hypothesis predicts a negative relationship between ownership and control separation and the performance of acquiring firms.

H2: The separation between voting and cash flow rights has a negative effect on the performance of the acquiring firms.

Block-holders such as institutional investors have adequate means of monitoring and influencing the controlling shareholders (André et al., 2004; De Andrade et al., 2016). The latter is forced to make the riskiest investments they would never have made in the absence of control (Wright et al., 2002). Previous empirical studies show a positive relationship between the level of participation of block holders and the performance of acquiring firms (Maury & Pajuste, 2005). Thus we can develop the following hypothesis:

H3: The presence of block holder positively affects the performance of the acquiring firms.

Given the importance of invested capital in the firm, family shareholders have a better incentive to minimize agency conflicts and better manage their

companies to create value (Anderson & Reeb, 2003). In addition, the shareholder's experience gained over time gives him the ability to select the most promising projects (Allouche, 2002).

Nevertheless, previous studies examining the relationship between family ownership and the firm value show mixed results. For instance, Ab Razak and Palahuddin (2017), Portal and Basso (2015) and Shim and Okamuro (2011) find that family ownership negatively affects the performance of the firm especially when it is in the hands of the successors to the founders. Other authors such as Anderson and Reeb (2003), Barontini and Caprio (2006) and Ben-Amar and André (2006) have succeeded in asserting the existence of a positive relationship between family control and the value of the firm. We believe that agency conflicts will be less present in family firms than in other firms, which leads us to assume that their performance has improved as a result of mergers and acquisitions.

H4: Family ownership has a positive impact on the performance of acquiring firms.

Finally, it should be noted that the majority of studies addressing the impact of concentration on the performance of acquiring firms did not find unanimous support while some studies predict improvements in post-merger returns (Carline et al., 2002; Yen & André, 2007), others assert the contrary, notably when there is a strong separation between ownership and control (Ben Amar & André, 2006; Faccio & Stolin, 2006). Our research hypothesis predicts a positive relationship between the concentration of ownership and the performance of acquiring firms.

H5: A concentrated ownership affects positively the performance of the acquiring firms.

The purpose of our research is to examine empirically the relationship between ownership structure and acquiring firm performance in France around the announcement and on the long run horizon. The French framework is a field of investigation conducive to the analysis of such a question since most companies have a concentrated shareholding characterized by a strong separation between ownership and control and the vast majority of companies are family controlled. Following Hanson and Song (1996), Bigelli and Mengoli (2004) and Ben Amar and André (2006), we examine the performance of acquisitions carried out by firms with an ownership structure deemed by an acute discrepancy between voting and cash flow rights.

3. DATA AND METHODOLOGY

3.1. Data

The sample of corporate acquisitions is drawn from completed deals undertaken by French listed acquirers between January 2008 and December 2012. We decided to examine the firms operating in the financial and real estate sector corresponding to the SIC codes (60, 61, 62, 63, 64, 65 and 67) given the scarcity of work dealing with this subject in these sectors in France. This original sample contained 97 transactions corresponding to the totality of acquisitions occurring in the French context; nevertheless, after restatement of the data, our final sample included 87 transactions for which we compute the stock market performance in the short- and the long-term. The data on takeover transactions are sourced from the Thomson One Banker deals database.

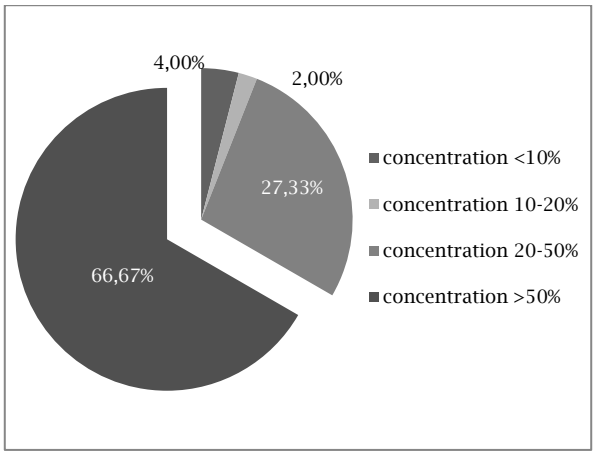
The accounting data are compiled from financial statements and activity reports available on the websites of the companies engaged in takeovers. In addition, we manually extract the shareholder and governance data, based on the annual reports of the firms involved published online. On the other hand, we were forced to remove certain operations for insufficient data.

Table 1 and the graph below describe the distribution of the sample according to the degree of concentration of the first shareholder.

Table 1. Distribution by concentration

Type of concentration	*Number*[9]	*Percentage*
concentration <10%	6	4.00%
concentration 10-20%	3	2.00%
concentration 20-50%	41	27.33%
concentration >50%	100	66.67%
Total	*150*	*100.00%*

Figure 1. Distribution by concentration



As shown in this table, we note that 66.67% of our study sample, the largest shareholder has a concentration exceeding 50%. For the remainder of the sample, 27.33% have a concentration ranging between 20 and 50%. Firms with a low concentration (below 20%) account for only 6% of the entire sample. It is worth noting the highly concentrated nature of the shareholding in our sample.

Table 2 identifies the nature of the majority shareholders in our sample. This table shows that the institutional investors rank first, accounting for 76.67%. The second rank is allocated to the leading shareholders (11.33%) followed by the family shareholders representing 7.33%. The state shareholder represents 4.67% of the entire sample. We can thus deduce the importance of institutional ownership and the weakness of state shareholding in the considered sample.

[9] Number reflects cumulative information of 3 years: one year before the acquisition date (N-1), the year of the acquisition (N) and one year after (N+1).

Table 2. Distribution by majority shareholder nature

NATURE	*Number*	*Percentage*
Family	11	7.33%
Manager	17	11.33%
Institutional	115	76.67%
Public	7	4.67%
Total	*150*	*100.00%*

3.2. Variable measures

3.2.1. Independent variables related to ownership structure

In order to analyse the impact of the ownership structure on the stock market performance of the initiating firms, we use two independent variables: those related to the capital concentration and those related to the shareholder nature.

3.2.1.1. Ownership concentration

We consider two variables for the measurement of shareholder concentration. The first one provides a measure of the percentage of shares held by the top five controlling shareholders (Karaca & EKSI, 2012). The second uses the logistic transformation based on the measure developed by Demsetz and Lehn (1985):

$$\text{Log}\ \frac{\%\ concentration}{100-\%\ concentration} \qquad (1)$$

3.2.1.2. Managerial ownership

Following Jensen and Meckling (1976), managerial ownership favours the alignment of interests between managers and shareholders. The general opinion is that the present high proportion held by managers can reduce agency problems. To study the impact of this variable, we used two measures. The first measures the percentage of shares detained by officers, directors and executive officers as used by of Classens et al. (2002) and Wahla et al. (2012). The second measure is a dummy variable that assigns the value of 1 when the majority shareholder is a manager and 0 otherwise.

3.2.1.3 Institutional ownership

They are large shareholders, Blockholders, who do not have the right to participate in the active management but are better able to control executives than other shareholders, constituting as a consequence an effective system of governance. They will, therefore, have a strong influence on their choices, particularly with regard to takeover decisions (Bozec & Laurin, 2008). For this purpose, we have used two estimation variables. The first measure calculates the percentage of shares held by managers, directors and corporate officers, while the latter is a dummy variable that takes on the value one if the majority shareholder is institutional and zero otherwise.

3.2.1.4. Family ownership

The family property is estimated by the percentage of shares held by family members.

3.2.1.5. Separation between ownership and control

The separation between ownership and control topic is addressed by several empirical studies. The majority of the work (Bigelli & Mengoli, 2004; Ben Amar & André, 2006, among others) identified three estimators:

- A binary variable (SEP) having a value 1 when there is a separation between voting and participation rights and a value 0 otherwise.
- The difference (C-O) between the level of control rights (C) and the ownership rights (O).
- The quotient O/C that is the ratio of cash flow right to control rights.
- The difference (C-O) measures the excess control offered by the voting rights to managers, while the O/C ratio corresponds to the level of alignment between control and ownership rights. Thus, when the control is put forward the ratio O/C (C-O) will have a reduced (excessive) value and the assets of the executives will not have to bear the consequences of a bad acquisition.

In this study, we identify the separation between ownership and control using the (C-O) difference.

3.2.2. Control variables

It is worth noting that other variables may influence the performance of acquiring firms. Thus, we should complete our study by those discussed in the financial literature. Three kinds of variables can be defined (variables related to the acquiring firm, variables related to target firm and variables related to the merger and acquisition transaction).

3.2.2.1. Variables related to the acquiring firm

(i) Leverage: The majority of previous studies document a positive impact of indebtedness on the profitability of acquiring firms (Maloney et al., 1993). Indeed, these studies highlight the governance role of leverage since it dissuades managers from making destructive valuable acquisitions (Jensen, 1986; Stulz, 1990). Moreover, a neutral impact of indebtedness on the profitability of acquiring firms has been found by a small number of researchers (Faccio & Stolin, 2006). In this study, we compute and compare the acquirer total debt by the book value of assets.

(ii) Profitability of Assets (ROA): Dong et al. (2006) suggest that achieving important performance prior to acquisition affects negatively the short term post-acquisition performance.

3.2.2.2. Variables related to the target firm

To capture the influence of the regulation in force, we consider a binary variable, which takes the value of 1 if the target is non-European and 0 otherwise. Rossi and Volpin (2004) and Hagendorff et al. (2008) attest that when the target belongs to a country whose current regulations are unable to protect its investors, the abnormal returns of shareholders will be very high.

3.2.2.3. Variables related to the operation

(i) Cross-border acquisitions: Most empirical work suggests that the acquisition of foreign targets should produce more gains than buying domestic targets. Moreover, they are supposed to facilitate access to international markets and consequently increase their turnover via new technologies (Kang, 1993). However, cultural and regulatory difficulties between the two countries can lead to the failure of such operations and consequently generate negative abnormal returns (Conn et al., 2005).

In order to measure the potential impact of cross-border transactions on performance, we have created a dichotomous variable that takes the value of 1 when the target firm is not French and 0 otherwise.

(ii) Related acquisitions: Generally, horizontal acquisitions generate more value than conglomerates through economies of scale, increased market power, and familiarity with the industry (Sudarsanam & Mahate, 2003; Bae et al., 2002).

We introduce a dummy variable equals to one 1 when the companies involved displaying the same first two digits of the SIC code and 0 otherwise.

Table 3. Variable description

	Measure	*Expected sign*
Panel A: Exogenous variables		
Concentration (INDCON)	Log $(\frac{\%\ concentration}{100-\%\ concentration})$	+
(ACT5)	The % of shares held by the top 5 shareholders	+
Managerial ownership (MANAG OWN)	% of shares held by executive officers and agents	+ / -
Majority manager (MAJ MANAG)	MAJ DIRIG = 1 if the controlling shareholder is an officer	+ / -
Institutional ownership (INST OWN)	% of shares held by institutional investors	+
Majority institutional (MAJ INST)	MAJ INST = 1 if the majority shareholder is an institutional investor	+
Familial ownership (FAM OWN)	% of shares held by family members	+
Separation (SEP)	The difference between voting rights and ownership rights C-O	-
Panel B: Control variables		
Variables related to the target firm		
Leverage (LEV)	Ratio of total debts to total assets	+
Return on Assets (ROA)	Ratio of net income to total assets	+
Variables related to the acquiring firm		
Non-European target (NON EURO)	NON EURO = 1 if the target is part of Europe and 0 otherwise	+ / -
Variables related to the transaction features		
Cross-border acquisition (NON FRENCH)	NON FRENCH = 1 if the target company is non-French and 0 otherwise.	+
Related Acquisition (RELATED)	RELATED FIRMS = 1 if both companies have the same two-digit SIC code and 0 otherwise.	+

Sources: ownership structure characteristics are obtained from the financial statements and activity reports of involved firms published online. Transaction characteristics are collected from the Thomson One Banker deals database.

3.3. Model specification

To the best of our knowledge, our paper is one of the few studies that analyses simultaneously the short and the long-term performance of French acquirer firms. We contribute to the acquisition literature by using financial measurements of performance whereas the majority of the previous studies examine the impact of ownership structure using accounting measurements. Pooled regression models, using the Mackinnon and White (1985) OLS heteroskedasticity-consistent standard errors and covariance procedure, are employed over the 2008-2012 period. Our models aim to explain stock market performance around and following acquisitions. Consequently, we run the following GLS models:

$$Perfor_i = \alpha_0 + \alpha_1\ INDCON_i + \alpha_2\ MANAG\ OWN_i + \alpha_3\ INST\ OWN_i + \alpha_4\ FAM\ OWN_i + \alpha_5\ SEP_i + \varepsilon_i \quad (2)$$

$$Perfor_i = \alpha_0 + \alpha_1\ INDCON_i + \alpha_2\ MANAG\ OWN_i + \alpha_3\ INST\ OWN_i + \alpha_4\ FAM\ OWN_i + \alpha_5\ SEP_i + \alpha_6\ LEV_i + \alpha_7 ROA_i + \alpha_8\ NON\ EURO_i + \alpha_9\ NON\ FRENCH_i + \alpha_{10}\ RELATED_i + \alpha_{11}\ MAJ\ MANAG_i + \alpha_{12}\ MAJ\ INST_i + \alpha_{13}\ ACT5_i + \varepsilon_i \quad (3)$$

The first model examines the impact of ownership level on stock performance of acquiring firms in short- and long-term. The second model uses the same variables while integrating the previously defined control variables. The dependent variable of both models is the acquiring firm performance or the abnormal returns. Our model aims to explain stock performance around and following acquisitions.

A) Short-term stock performance: In order to compute cumulative abnormal returns, we use the standard event study's methodology adopted by Brown and Warner (1985) on three event windows [-2.2], [-5.5] and [-10.10]. In addition, normal return estimations are based on a 250-day window prior to the announcement using simultaneously GARCH, EGARCH and the market models.

According to the market model, we can write for a firm i at the date t:

$$RN_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it} \quad (4)$$

where:

RN_{it}: normal return of firm i on day t;

R_{mt}: market return on day t (corresponds to market index SBF250 on day t);

ε_{it}: error term;
α: intercept;
β_i: volatility, $\beta_i = \text{cov}(RN_{it}, R_{mt})/\delta^2 R_{mt}$;
α and β are the coefficients.

This model assumes a time-invariant variance and also supposes that the stock risk is not affected by the new information. GARCH models resolve this problem.

B) Long-term stock market performance:

In order to estimate the long-term stock market performance of French firms, we use the time-based approach. This method implies the absence of the notion of time for all the companies. The latter defines a new temporal scale by adopting as the date of origin the date of an event, here the date of the merger and acquisition. The time axis will end with the fixed time horizon, here equal to three years and will be used to calculate the abnormal returns.

i. *Abnormal return measures:* This approach is based on the abnormal return measure relative to a benchmark that did not realize the takeover event before and during our study period. We will present successively the formulation of the two techniques forming part of the transversal approach: the Buy-and-Hold Abnormal Returns method and the Cumulative Abnormal Returns method.

The method of cumulative abnormal returns (CARs): This method consists of adding the monthly abnormal returns of the firms that took control over the 12, 34 and 36 months of the study horizon. The anomalous return is obtained by differentiating between the observed performance of the sampled firm and the performance of a benchmark (Market Index). Thus, the CAR of each firm belonging to the sample (assuming monthly rebalancing of the portfolio) is obtained as follows:

$$CAR_i = \sum_{t=1}^{T}\left[R_{it} - R_{Benchmark_t}\right] \quad (5)$$

Moreover, the average CAR of the N firms is specified as follows:

$$CAAR = \sum_{i=1}^{N} \frac{CAR_i}{N} \quad (6)$$

The BHAR method: This method consists of comparing two portfolios, one belonging to the acquiring firm and the other relating to a benchmark assuming the purchase of the two portfolios on the day of the acquisition and their resale to the fixed study horizon. BHARS is the difference between the expected compound returns and the observed compound returns during the event period. Thus, the BHAR of each firm is calculated as follows:

$$BHAR_a = \prod_{t=1}^{\tau}[1 + R_{at}] - \prod_{t=1}^{\tau}\left[1 + R_{benchmark,t}\right] \quad (7)$$

Moreover, the average BHAR of the N firms can be determined by the following formula:

$$\overline{BHAR} = \sum_{a=1}^{N} \frac{BHAR_a}{N} \quad (8)$$

where:

R_{at}: The acquiring company returns during month t;

$R_{benchmark,t}$: market return;

τ: Time horizon (12, 24 and 36 months);

N: The acquisition number studied (here equal to 87).

The main advantage of the BHARs is the consideration of investor strategies via the different capitalizations carried out (Barber & Lyon, 1997).

ii. *Choice of benchmark and statistical tests:* We consider the market index as a benchmark when calculating expected long-term returns. This choice is justified by the representativeness of this index in economic activity since it attributes a greater weight to the returns relative to large firms. In addition, taking into account the weight of each security composing the market portfolio is essential when calculating its return. However, this benchmark has been strongly criticized for the biases that generate in particular the bias of the survivor and asymmetry. Once, the abnormal returns are calculated for each of the two techniques cited above, it is essential to test their statistical significance. For this purpose, we use Student's parametric test to check the significance of the means of returns and the nonparametric test of Wilcoxon ensuring the significance of the return medians.

4. EMPIRICAL RESULTS

Table 4 presents the descriptive statistics of the independent variables used in our study. The description distinguishes between managerial, family and institutional ownership.

Table 4. Descriptive statistics of independent variables

Variable	*Mean*	*Median*	*Max.*	*Min.*	*Std. Dev.*	*Skew.*	*Kurt.*	*J--Bera*	*Prob*	*Obs*
INDCON	-0.21	0.00	1.95	-2.36	0.98	-0.89	3.59	12.32	0.00	85
MANAG OWN	0.03	0.00	0.64	0.00	0.10	4.28	23.57	1737.45	0.00	85
INST OWN	0.51	0.59	1.00	0.00	0.32	-0.32	1.79	6.55	0.04	85
FAM OWN	0.01	0.00	0.30	0.00	0.04	6.25	40.05	5351.75	0.00	85
SEP	0.02	0.00	0.49	0.00	0.07	4.74	28.05	2510.79	0.00	85
LEV	0.21	0.18	0.72	0.00	0.18	0.52	2.28	5.69	0.06	85
ROA	0.72	0.00	59.28	-0.07	6.47	9.00	82.01	22980.97	0.00	85
NON EURO	0.83	1.00	1.00	0.00	0.37	-1.79	4.20	49.84	0.00	85
NON FRENCH	0.55	1.00	1.00	0.00	0.50	-0.19	1.04	14.00	0.00	85
MAJ MANAG	0.18	0.00	1.00	0.00	0.39	1.68	3.82	41.78	0.00	85
MAJ INST	0.67	1.00	1.00	0.00	0.47	-0.71	1.50	14.88	0.00	85
RELATED	0.40	0.00	1.00	0.00	0.49	0.39	1.15	14.08	0.00	85
ACT5	0.47	0.50	0.99	0.00	0.29	-0.02	1.80	5.04	0.08	85

Note: Variable are as defined in Table 3.

The autocorrelation matrix related to the cross-sectional design adopted in our study makes it possible to confirm the absence of multicollinearity problems between the independent variables. Examination of the correlation matrix between the different independent variables shown in Table 7 makes it possible first to verify the existence of a correlation problem between the various explanatory variables and then to clarify some of the relationships between these variables. As expected, the concentration index is strongly linked to the institutional investors (0.8). We can also find negative correlations between the shareholdings of different natures (managerial ownership, family ownership and institutional investor).

In addition, the analysis of the correlation matrix highlights a negative relationship between managerial ownership and debt financing, reflecting the reluctance of managers to finance debt and their recourse to the issue of new shares. On the other hand, when ownership is concentrated in the hands of families or institutional investors the relationship becomes positive. Indeed, this type of ownership favours the indebtedness that preserves them against the arrival of new shareholders and avoids them consequently the dilution of their capital. In addition, we can point to the negative impact of the three types of shareholders on the return on assets (ROA). Finally, as expected, the separation between ownership and control is negatively related to the return on assets (ROA).

Table 5. Descriptive statistics of dependent variables (short-term performance)

	[-2 +2]			*[-5 +5]*			*[-10 +10]*		
	CAR-MARKET	***CAR-GARCH***	***CAR-EGARCH***	***CAR-MARKET***	***CAR-GARCH***	***CAR-EGARCH***	***CAR-MARKET***	***CAR-GARCH***	***CAR-EGARCH***
Mean	0.001559	0.001121	0.000939	-0.000169	0.002891	0.002847	-0.004408	-0.006696	-0.000332
Median	0.003200	0.002200	-0.004900	-0.005500	-0.003700	0.003300	-0.011600	-0.010100	-0.011300
Maximum	0.320100	0.312800	0.321800	0.305400	0.314200	0.316200	0.323100	0.291000	0.310000
Minimum	-0.208100	-0.208300	-0.150600	-0.155900	-0.147000	-0.203900	-0.309100	-0.320400	-0.309400
Stand. Dev	0.063008	0.062519	0.068325	0.068384	0.066563	0.062059	0.085560	0.085462	0.084589
Skewness	2.580007	2.423944	2.259009	1.837950	2.230865	2.557581	0.707577	0.287780	0.521228
Kurtosis	17.43983	16.64770	12.65024	10.82659	12.48118	17.35592	7.899612	6.873471	7.471330
Jarque-Bera	832.7682	742.9064	402.1196	264.8024	388.8743	822.5778	92.11471	54.31163	74.65658
Prob.	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Observations	85	85	85	85	85	85	85	85	85

Note: The table presents the cumulative abnormal returns (CAR) on acquirer for the three windows of events studied according to the three models of expected returns: Market model, GARCH and EGARCH. CAR [-2;+2] is cumulative abnormal stock returns five-day around the announcement; CAR [-5;+5] is cumulative abnormal stock returns eleven CAR [-10;+10] is cumulative abnormal stock returns twenty-one-day around the announcement.

Table 6. Descriptive statistics of dependent variables (long-term performance)

	CAR12	***CAR24***	***CAR36***	***BHAR12***	***BHAR24***	***BHAR36***
Mean	-0.066140	-0.091759	-0.105707	-0.051812	-0.084762	-0.108446
Median	-0.001303	-0.040647	-0.067048	-0.028358	-0.130762	-0.144414
Maximum	0.562095	0.918736	0.904643	0.770058	1.783630	1.846751
Minimum	-1.423007	-1.060968	-2.028299	-0.622213	-0.821043	-1.238038
Stand. Dev	0.307468	0.351141	0.413367	0.230825	0.386467	0.461100
Skewness	-1.674181	-0.112621	-1.361049	0.350458	1.994401	1.587453
Kurtosis	8.062658	3.627305	9.006286	4.318524	10.56214	9.183051
Jarque-Bera	102.8507	1.240186	121.3964	6.224825	204.0611	134.8658
Prob.	0.000000	0.537895	0.000000	0.044493	0.000000	0.000000
Observations	67	67	67	67	67	67

Notes: Abnormal return is calculated by taking as a standard the market index return. Two calculation methods are used: cumulative abnormal returns (CARs) and buy and hold abnormal returns (BHAR); CAR (12 months), CAR (24 months) and CAR (36 months) represents respectively cumulative abnormal stock returns one, two and three years following the completion. BHAR (12 months), BHAR (24 months) and BHAR (36 months) represent respectively buy and hold abnormal returns one, two and three years following the completion.

Table 7. Correlation matrix

Variable	***INDCON***	***PROP MANG***	***INV-INST***	***PROP-FAM***	***SEP***	***LEV***	***ROA***	***NON-EURO***	***NON-FRANC***	***MAJ-DIRIG***	***MAJ-INST***	***Relates***	***ACT5***
INDCON	1.00	0.00	0.80	0.03	0.18	0.10	0.02	0.14	0.45	-0.69	0.61	0.09	0.93
MANAG OWN	0.00	1.00	-0.09	-0.05	-0.02	-0.19	-0.04	-0.03	-0.17	0.28	-0.45	0.15	-0.07
INST OWN	0.80	-0.09	1.00	-0.07	0.04	0.21	-0.01	0.18	0.39	-0.66	0.39	0.00	0.80
FAM OWN	0.03	-0.05	-0.07	1.00	0.04	0.25	-0.02	0.07	0.14	-0.07	-0.22	0.19	0.01
SEP	0.18	-0.02	0.04	0.04	1.00	0.07	-0.04	-0.07	0.07	-0.10	0.17	-0.02	0.12
LEV	0.10	-0.19	0.21	0.25	0.07	1.00	0.16	0.38	0.45	0.11	0.02	-0.21	0.28
ROA	0.02	-0.04	-0.01	-0.02	-0.04	0.16	1.00	0.05	0.10	-0.05	0.08	0.13	0.01
NON EURO	0.14	-0.03	0.18	0.07	-0.07	0.38	0.05	1.00	0.49	0.21	0.02	-0.28	0.35
NON FRENCH	0.45	-0.17	0.39	0.14	0.07	0.45	0.10	0.49	1.00	-0.20	0.37	-0.23	0.55
MAJ MANAG	-0.69	0.28	-0.66	-0.07	-0.10	0.11	-0.05	0.21	-0.20	1.00	-0.66	-0.19	-0.49
MAJ INST	0.61	-0.45	0.39	-0.22	0.17	0.02	0.08	0.02	0.37	-0.66	1.00	-0.03	0.58
RELATED	0.09	0.15	0.00	0.19	-0.02	-0.21	0.13	-0.28	-0.23	-0.19	-0.03	1.00	-0.04
ACT5	0.93	-0.07	0.80	0.01	0.12	0.28	0.01	0.35	0.55	-0.49	0.58	-0.04	1.00

Note: Variable are as defined in Table 3.

It is worth noting that the number of firms in our sample is less than the number of mergers and acquisitions. The ordinary least squares technique may be biased if the observations of the firms involved in several takeover operations prove to be dependent. We then used the Breusch-Pagan test to check for heteroscedasticity of errors in the estimates. The results obtained do not reject the null hypothesis of homoscedasticity. We, therefore, ensure that the assumptions related to the OLS model are respected.

4.1. The relationship between the ownership structure and the performance of the acquiring firms around the announcement date

Based on Table 8, we show a positive and insignificant relationship between the level of ownership held by managers and the cumulative abnormal returns observed on the three windows of events and according to the three estimation models.

Even after we add control variables, the results remain unchanged (Table 9). Thus, the conclusions of the short-term study are unable to detect the non-linear relationship between returns and managerial ownership under hypothesis 1. A complementary study is required later. This will focus on a quadratic transformation of the managerial variable. In addition, the presence of a major shareholder who not participating in management (institutional investor) seems to have a positive effect on short-term stock market performance. Further, we identify positive and significant CARs on the windows (-2, +2) and (-5, +5) and insignificant on the window (-10, +10). Control variables within model 2 were able to improve the results in terms of value and significance on the three study windows. These findings confirm our hypothesis 3 by attesting that the presence of an institutional investor improves the acquiring firm returns in the short term by exercising a disciplinary role on managers who are forced to adopt the best projects (Maury et al., 2005).

Table 8. Acquirer short-term performance regressions (Model 1)

Variable	*[-2 +2]*			*[-5 +5]*			*[-10 +10]*		
	MARKET	***GARCH***	***EGARCH***	***MARKET***	***GARCH***	***EGARCH***	***MARKET***	***GARCH***	***EGARCH***
C	-0.042613*	-0.045255*	-0.042742*	-0.047677*	-0.051662**	-0.046500*	-0.045513	-0.051465	-0.040834
INDCON	-0.014253	-0.015171	-0.015444	-0.020193	-0.022144	-0.021354	-0.018306	-0.020952	-0.018590
MANAG OWN	0.045526	0.054787	0.052474	0.059186	0.074238	0.070755	0.080251	0.096296	0.088351
INST OWN	0.075602**	0.078744**	0.076773**	0.080808*	0.084707**	0.080028**	0.068987	0.073751	0.064898
FAM OWN	0.120439	0.121563	0.124923	0.010463	-0.003135	0.011079	0.068501	0.073932	0.088825
SEP	0.018268	0.022541	0.031856	0.015898	0.019373	0.038505	-0.101777	-0.097750	-0.061202
R-squared	0.061347	0.067129	0.063348	0.052377	0.059688	0.054986	0.040445	0.046784	0.033949
Adjusted R-squared	0.001177	0.007329	0.003307	-0.008368	-0.000588	-0.005592	-0.021065	-0.014320	-0.027977
S.E. of regression	0.063349	0.062663	0.062329	0.068411	0.068172	0.066512	0.085454	0.084971	0.084685
Sum squared resid	0.313021	0.306281	0.303020	0.365049	0.362496	0.345060	0.569581	0.563169	0.559386
Log likelihood	115.6859	116.6001	117.0496	109.2278	109.5227	111.5930	90.54335	91.01887	91.30194
F-statistic	1.019567	1.122562	1.055072	0.862241	0.990244	0.907683	0.657541	0.765651	0.548219
Prob (F-statistic)	0.411995	0.355439	0.391783	0.510398	0.429254	0.480539	0.656665	0.577328	0.739181

Note: The cumulative abnormal returns (CAR) on acquirer for the three windows of events studied according to the three models of expected returns: Market model, GARCH and EGARCH; independent variables are as defined in Table 3.
****, ** and * denote significance level at 1%, 5% and 10%, respectively.*

Moreover, our second hypothesis predicts a negative relationship between the separation of ownership and control and the acquiring firm performance. However, the regressions in Table 8 show a positive and non-significant relationship on the first two intervals and a contrary sign on the interval (-10, 10). The results presented in Table 9 reveal that the separation between ownership and control does not seem to have a significant impact on acquiring firm announcement CAR on the three study windows and for the three adopted models.

Our findings do not support the theoretical predictions (Bigelli & Mengoli, 2004; Belot, 2010) that managers or dominant shareholders use takeovers to extract wealth at the expense of minority shareholders. Hypothesis 2 will, therefore, be rejected in the short term. We have also tested the hypothesis 4, which foresees a positive influence of family ownership on the acquiring firm performance. The results of the first model (Table 8) revealed no significant impact whereas the introduction of the control variables in the model 2 showed a positive and significant impact of family ownership on announcement CAR exclusively at the interval (-2, 2). These results are consistent with arguments made by Barontini and Caprio (2006) and Ben Amar and André (2006). Such an allegation is based on the willingness of families to reduce agency problems in order to maximize firm value and to transfer these assets to future generations.

We also investigate the relationship between ownership concentration and the value creation in mergers and acquisitions. Table 8 does not allow us to arrive to any conclusions concerning the nature of our relationship insofar as all the coefficients of the regression are not significant. The introduction of the control variables (Table 9) revealed a negative and significant relationship exclusively in the interval (-2, 2) between the concentration, measured by INDCON and ACT5, and the performance. The control variables are not significant except the binary variables such as MAJ INST (majority shareholder is an institutional investor) whose coefficient asserts the positive relationship between institutional ownership and performance.

Table 9. Acquirer short-term regressions (Model 2)

Variable	*[2 +2]*			*[-5 +5]*			*[-10 +10]*		
	MARKET	***GARCH***	***EGARCH***	***MARKET***	***GARCH***	***EGARCH***	***MARKET***	***GARCH***	***EGARCH***
C	-0.038617	-0.036553	-0.034243	-0.095967*	-0.088436	-0.080687	-0.108654	-0.097576	-0.083826
INDCON	0.082598**	0.081756**	0.083945**	0.023189	0.023618	0.030321	0.036150	0.034569	0.047079
MANAG OWN	0.023485	0.022475	0.022456	0.062917	0.055460	0.056726	0.121055	0.095328	0.098759
INST OWN	0.271939***	0.270813***	0.271676***	0.225866***	0.222593***	0.223246***	0.251002**	0.239634**	0.240794**
FAM OWN	0.598482**	0.577932**	0.587883**	0.365889	0.307413	0.334713	0.569033*	0.488992	0.529129*
SEP	-0.045689	-0.040635	-0.032358	-0.018083	-0.014345	0.002213	-0.143495	-0.137401	-0.105058
ROA	0.000343	0.000419	0.000339	2.13E-05	2.88E-05	-7.93E-05	-0.000726	-0.000754	-0.000965
NONEURO	0.005615	0.002415	0.005846	-0.008063	-0.013320	-0.006251	0.014947	0.004164	0.017924
NON FRENCH	-0.004319	-0.002703	-0.001953	-0.002874	0.001033	0.002046	-0.027741	-0.020998	-0.019531
MAJ MANAG	0.223680***	0.221541***	0.224259***	0.166104**	0.163186**	0.167140**	0.186302**	0.180005*	0.186238**
MAJ INST	0.113225***	0.107742**	0.110240***	0.089930**	0.079555*	0.084199*	0.126558**	0.105902*	0.115317**
RELATED	-0.002210	-0.000646	-0.001394	0.014148	0.017907	0.015736	0.013164	0.019846	0.016405
ACT5	-0.433141***	-0.426570***	-0.439176***	-0.225935	-0.222106	-0.251132	-0.303718	-0.280679	-0.333527
R-squared	0.198846	0.202373	0.206025	0.127647	0.134921	0.132582	0.118533	0.115477	0.107668
Adjusted R-squared	0.063439	0.067563	0.071832	-0.019793	-0.011289	-0.014024	-0.030448	-0.034020	-0.043149
S.E. of regression	0.061343	0.060732	0.060148	0.068798	0.068535	0.066790	0.085845	0.085792	0.085308
Sum squared resid	0.267168	0.261877	0.256862	0.336053	0.333493	0.316727	0.523229	0.522584	0.516699
Log likelihood	122.3383	123.1784	123.9905	112.7039	113.0251	115.1916	94.10838	94.16016	94.63582
F-statistic	1.468512	1.501174	1.535286	0.865754	0.922790	0.904342	0.795627	0.772435	0.713899
Prob (F-statistic)	0.156814	0.144185	0.131956	0.584378	0.529332	0.546959	0.653417	0.676251	0.733039

Note: The cumulative abnormal returns (CAR) on acquirer for the three windows of events studied according to the three models of expected returns: Market model, GARCH and EGARCH. Independent variables are as defined in Table 3.
****, ** and * denote significance level at 1%, 5% and 10%, respectively.*

4.2. The relationship between the structure of the property and the long-term stock market performance of the acquiring firms

Table 10 shows a negative and significant relationship between managerial ownership and stock market performance over a 36-month horizon using both the CAR and BHAR methods. However, this relationship is reversed by the introduction of the control variables in Table 11. Indeed, we show a single significant result of a positive sign relative to the $BHAR_{24}$. Thus, we have not been able to verify the curvilinear relation between managerial ownership and the performance of the acquiring firm as predicted by the hypothesis 1. It should be noted that these results will be developed in the next paragraph in order to verify the first hypothesis.

In addition, Table 11 fails to support significant evidence on the relationship between managerial ownership and long-term stock market performance since all calculated coefficients are non-significant.

In line with our short-term results, the use of model 2 improved the significance of the coefficients, which show the positive impact that the presence of an institutional investor can have on the CARs and BHARs (calculated on 12, 24 and 36 months).

Regarding the impact of the separation between voting rights and cash flow rights on CARs and BHARs, we fail to support our research hypothesis suggesting a negative effect on performance due to the lack of significance of the coefficients in the two regression models. We can, therefore, confirm the absence of expropriation of minority shareholders. Our results differ from those of Bae et al. (2002) and Belot (2010) but concur with Ben Amar and Andre (2006) studies which suggest that extracting private benefits by controlling shareholders does not seem to be the major concern in the French context, often criticized by the weakness of its laws, which appears more effective in protecting investors than other environments, particularly in Italy (Bigelli & Mengoli, 2004).

In addition, model 1 (Table 10) shows a significant explanatory power over a 12-month horizon with a positive sign of family ownership variable. The results of model 2 enable the generalization of our findings on all horizons and for both the CARs and the BHARs with the exception of the $BHAR_{24}$ which remains positive but not significant.

In order to examine the impact of the concentration on long-term stock market performance, we use the INDCON concentration index variable. The latter shows a positive and significant relationship with $BHAR_{36}$ and CAR_{36} over a 36-month horizon. However, when we include the control variables, the variable INDCON become insignificant, hence the use of variable ACT 5, which measures the percentage of shares held by the top 5 shareholders and having the same information content. The results in Table 11 show a negative and significant relationship between concentration and stock performance (CARs and BHARs) for all horizons.

We should note the positive impact of the control variable (NON EURO) on performance for the 24 and 36-month horizons. Indeed, the acquisition of a non-European target may act positively on the stock market performance via the regulatory provisions as well as the facilities of access to non-European markets.

Table 10. Acquirers long-term performance regressions (Model 1)

Variable	*CAR12*	*CAR24*	*CAR36*	*BHAR12*	*BHAR24*	*BHAR36*
C	-0.105191	0.008554	-0.093811	-0.107009	-0.110796	-0.148726
INDCON	-0.000803	-0.018628	-0.157900***	0.004572	-0.064405	-0.141001**
MANAG OWN	0.095863	-0.539345	-0.963716*	-0.227737	-1.017067	-1.675120**
INST OWN	0.042305	-0.092866	0.108429	0.082982	0.117323	0.186726
FAM OWN	0.590191***	-0.017999	-0.214433	0.440675***	0.084522	-0.132796
SEP	0.062282	-0.162539	0.147384	0.185656	0.217431	0.331448
R-squared	0.009718	0.025797	0.145026	0.024039	0.046495	0.108133
Adjusted R-squared	-0.075651	-0.058186	0.071321	-0.060096	-0.035704	0.031248
S.E. of regression	0.325118	0.335535	0.328392	0.242923	0.385492	0.444117
Sum squared resid	6.130695	6.529850	6.254781	3.422671	8.619058	11.43989
Log likelihood	-15.75366	-17.77210	-16.39488	2.898715	-26.65503	-35.71523
F-statistic	0.113832	0.307166	1.967666	0.285717	0.565636	1.406424
Prob (F-statistic)	0.988862	0.906686	0.097056	0.919065	0.725895	0.235492

Notes: Abnormal return is calculated by taking as a standard the market index return. Two calculation methods are used: cumulative abnormal returns (CARs) and buy and hold abnormal returns (BHAR); CAR (12 months), CAR (24 months) and CAR (36 months) represents respectively cumulative abnormal stock returns one, two and three years following the completion. BHAR (12 months), BHAR (24 months) and BHAR (36 months) represent respectively buy and hold abnormal returns one, two and three years following the completion. Independent variables are as defined in Table 3.

****, ** and * denote significance level at 1%, 5% and 10%, respectively.*

Table 11. Acquirers long-term performance regressions (Model 2)

Variable	*CAR12*	*CAR24*	*CAR36*	*BHAR12*	*BHAR24*	*BHAR36*
C	-0.203172	-0.669600**	-0.534158**	-0.402547**	-0.894552***	-0.900876***
INDCON	0.269990*	0.155663	0.011638	0.070813	-0.069044	-0.192485
MANAG OWN	0.054141	1.182473	0.021203	0.664964	1.291987*	0.500469
INST OWN	0.985610**	1.298218***	1.140774**	0.741348*	1.172977**	1.012674*
FAM OWN	2.114266*	3.530153***	2.115004**	2.260621**	3.276011	2.342184*
SEP	0.026001	-0.077249	0.207671	0.206789	0.342035	0.475585
ROA	0.000573	-0.000836	-0.001894	0.001818	-0.000664	-0.002327
NON EURO	0.037461	0.207207**	0.190156**	0.021866	0.150683*	0.173749*
NON FRANCAISE	0.184453	0.046774	0.079194	0.040003	0.069329	0.111638
MAJ INST	0.443226*	0.959416***	0.664944***	0.455898**	0.872555***	0.734997**
RELATED	0.019403	-0.030667	0.000555	-0.058535	-0.067650	-0.032065
ACT5	-1.916537**	-2.256198***	-1.834807**	-0.992573	-1.433770*	-1.105653
R-squared	0.119523	0.239728	0.264576	0.132337	0.206793	0.215168
Adjusted R-squared	-0.066732	0.078901	0.109006	-0.051207	0.038999	0.049145
S.E. of regression	0.323767	0.313047	0.321660	0.241902	0.371330	0.439995
Sum squared resid	5.450907	5.095921	5.380180	3.042871	7.170070	10.06697
Log likelihood	-11.99283	-9.837902	-11.57491	6.662544	-20.76510	-31.62413
F-statistic	0.641717	1.490597	1.700686	0.721010	1.232421	1.296017
Prob (F-statistic)	0.784750	0.163493	0.099282	0.713262	0.290118	0.253194
Prob (Wald F-	0.000003	0.000000	0.000000	0.000001	0.000000	0.000000

Notes: Abnormal return is calculated by taking as a standard the market index return. Two calculation methods are used: cumulative abnormal returns (CARs) and buy and hold abnormal returns (BHAR); CAR (12 months), CAR (24 months) and CAR (36 months) represents respectively cumulative abnormal stock returns one, two and three years following the completion. BHAR (12 months), BHAR (24 months) and BHAR (36 months) represent respectively buy and hold abnormal returns one, two and three years following the completion. Independent variables are as defined in Table 3.

****, ** and * denote significance level at 1%, 5% and 10%, respectively.*

Table 12. Summary results

	Short term relationship between ownership structure and stock market performance	*Long-term relationship between ownership structure and stock market performance*
Hypothesis 1: Existence of nonlinear relationship between managerial ownership and performance	(+) Insignificant	(-) Significant (36-month horizon) model1 (+) Significant (24-month horizon) model 2
Hypothesis 2: Separation between ownership and control negatively affects performance	Neutral	Neutral
Hypothesis 3: Institutional investor presence positively affects performance	(+) Significant	(+) Significant
Hypothesis 4: Family Ownership Positively Affects Performance	(+) Significant on (-2,+2)	(+) Significant (12-month horizons) model 1 (+) Significant model 2
Hypothesis 5: Concentrated ownership improves performance	(-) Significant on (-2 ,2)	(+) Significant 36-month horizons model 1 (-) significant model 2

4.3. Quadratic transformation of the variable PROP MANAG

Given the inability to detect the nonlinear relationship between the managerial ownership and the acquiring firm performance, we have opted for a quadratic transformation of the variable MANAG OWN. The latter will be reintroduced to the regression model based on its initial value and its squared value. The use of such model will make easy the calculation of the inflexion point of the relationship between the managerial ownership and

the acquiring firm returns (Wright et al., 2002; Mard et al., 2014). We recovered the values of $BHAR_{36}$ and CAR_{36}. The choice of these two measures of performance is justified by the fact that they present the only regressions where the coefficients of the managerial ownership variables were significant. The inflexion point can be determined by a deriving performance from the managerial variable. Mathematically, this point corresponds to:

$$\text{Perfor}_{i} = \alpha_0 + \alpha_1 \text{ INDCON}_{i} + \alpha_{2,1} \text{MANA GOWN}_{i} + \alpha_{2,2} \text{ MANAG OWNi}^2 + \alpha_3 \text{ INST OWN}_{i} + \alpha_4 \text{ FAM OWN}_{i} + \alpha_5 \text{ SEP}_{i} + \varepsilon_i \quad (9)$$

$$\text{Inflection point} = -\frac{\alpha_{2,1}}{2\alpha_{2,2}} \quad (10)$$

Table 13. Regressions of the quadratic model

Variable	CAR_{36}	$BHAR_{36}$
C	-0.148550	-0.230875
INDCON	-0.217300	-0.230144
MANAG OWN	-3.598489	-5.629256
MANAG OWN^2	11.26939	16.91254
INST OWN	0.233128	0.373867
FAM OWN	-0.195090	-0.103767
SEP	0.186448	0.390073
R-squared	0.166910	0.136244
Adjusted R-squared	0.079216	0.045322
Heteroskedasticity Test: Breusch-Pagan-Godfrey	0.830214	8.909203
Prob. Chi-Square (6)	0.3866	0.1787
Prob (F-statistic)	0.095933	0.195198
Prob (Wald F-statistic)	0.000000	0.000000

Note: This table reports coefficients estimates from cross-sectional regressions of CAR_{36} and $BHAR_{36}$ for model 1. Dependent Variables are as defined in Table 10 whereas independent ones are described in Table 3.

The inflexion point is the level where the impact of ownership stakes on value creation changes[10].

The quadratic effect of this variable is evident as indicated by the significance of 16% level of both MAN OWN and MAN OWN^2 coefficients. The sign of coefficients shows that the relationship between insider ownership and performance is negative until ownership reaches a value equals to 16%, after which an increase in ownership level is associated with better performance. We can, therefore, conclude that the effect of more aligned interests prevails after a certain ownership level. Our results appear inconsistent with previous literature (Bigelli & Mengolli, 2004) suggesting that at a high level of ownership, the entrenchment effect becomes dominant.

5. CONCLUSION

This paper examines the relationship between ownership structure and the acquiring firm performance on the short and the long-term horizon. The French context offers an interesting setting since it has a high level of ownership concentration, a prevalence of family or institutional controlled firms as well as a weak legal protection of minority shareholders. Using a sample of 84 French acquisitions undertaken during 2008-2012, we find different interesting conclusions. First, we observe a non-monotonic relationship between cash flow rights owned by controlling shareholders and value creation. We find evidence that increasing managerial ownership up to 16% has a negative impact on firm performance after which it becomes positive. Our results suggest that at a very low level of ownership, managers engage in a non-wealth maximizing activity, as they are not motivated to enhance the stock market performance of the firm. As a consequence, many agency problems may arise with large shareholders. Nonetheless, this impact is mitigated by the incentive effect, which occurs when managers increase their ownership stake in the company describing a curvilinear relationship and refuting the previous assertions. Our results also indicate that the presence of institutional ownership has the expected positive impact on short and long-term stock returns. In addition, we show a positive effect of family ownership on announcement CAR (-2, 2 window). Further, we find the same impact on long-term performance (BHAR and CAR at 12 months). Moreover, we obtain no significant results when evaluating the impact of separation between ownership and control. Overall, we can conclude that, in French institutional setting, a discrepancy between voting and cash flow rights does not seem to lead to value destroying acquisition and does not enhance minority expropriation. Even though legal protection of French minority shareholders is weaker than other European countries, the obtained results can be explained by the important role played by the extra-legal institutions such as media, public opinion pressure, organized labour, internal policing through social norms, tax compliance … Finally, the impact of concentration on the acquiring firm performance remains ambiguous given that the relation presents a negative sign around the announcement (-2,2) and a positive sign over a 36-month horizon.

The limitations of this study should be examined thoroughly to inform future research.

One of the limits of our research is the omission of some internal corporate governance mechanisms like remuneration committee, the board of directors, nomination committee, audit committee…It is also advised for further studies to incorporate other ownership structures such as governmental and foreign ownership since it could affect the acquiring firm performance. Moreover, we

[10] Ben Amar and Andre (2006) find an inflexion point of 49,2% whereas it reaches 44% for Italian firms according to Bigelli and Mengoli (2004).

considered a five-year duration (2008- 2012). These time series may be unstable because the global financial crises occurred during this period. Further researches examining longer and different time series can be carried out. Finally, this paper used only stock market measurement of firm performance; it is suggested to take into account other accounting measurements in order to determine operating performance of the acquiring firm.

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APPENDIX

Table A.1. Number of control operations per year

Year	*Announcement date*	*Effective date*
2012	16	17
2011	20	23
2010	20	20
2009	16	15
2008	17	22
2007	7	-
2006	1	-
Total	*97*	*97*

The above table reports the annual distribution of mergers and acquisitions announced and realized by the firms. The announcement of the events began in 2006 but their actual realization did not take place until 2008. The transactions are distributed uniformly between 2008 and 2012. Table 2 identifies the sectors in which companies participate.

Table A.2. Breakdown of transactions by SIC category

Sector	*Number of operations*
Finance	43
Real estate	54

Table A.3. Breakdown of operations by target sector

Sector	*Number of operations*
CPS	4
Energy	1
Financial	32
Private Households	1
Health care	7
Industry	1
Media	1
Real estates	46
Retail	4
Total	*97*